

# Safety Data Sheet

acc. to OSHA HCS






Printing date 12/26/2013

Reviewed on 12/26/2013

## 1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 3040 LIQUID
- **Article number:** 14652(L)
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
    -  **Toxic**  
Toxic by inhalation, in contact with skin and if swallowed.
    -  **Irritant**  
Irritating to respiratory system and skin. May cause sensitisation by skin contact.
    -  **Highly flammable**  
Highly flammable.  
Danger of cumulative effects.
  - **Information concerning particular hazards for human and environment:**  
The product has to be labeled due to the calculation procedure of international guidelines.
  - **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- 
- **Label elements**
  - **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with directives on hazardous materials.
  - **Code letter and hazard designation of product:**
    -   Toxic  
Highly flammable
  - **Hazard-determining components of labeling:**  
methyl methacrylate

(Contd. on page 2)

USA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 1)

*N,N*-dimethyl-*p*-toluidine

· **Risk phrases:**

*Highly flammable.*

*Toxic by inhalation, in contact with skin and if swallowed.*

*Danger of cumulative effects.*

*Irritating to respiratory system and skin.*

*May cause sensitisation by skin contact.*

· **Safety phrases:**

*Keep away from living quarters.*

*Wear suitable protective clothing, gloves and eye/face protection.*

*In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).*

*This material and its container must be disposed of as hazardous waste.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

80-62-6	methyl methacrylate	⚠ H225; ⚠ H315; H317; H335	50-100%
99-97-8	<i>N,N</i> -dimethyl- <i>p</i> -toluidine	⚠ H301; H311; H331; ⚠ H373; H227	2.5-10%

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

*Immediately remove any clothing soiled by the product.*

*Remove breathing apparatus only after contaminated clothing have been completely removed.*

*In case of irregular breathing or respiratory arrest provide artificial respiration.*

· **After inhalation:**

*Supply fresh air or oxygen; call for doctor.*

*In case of unconsciousness place patient stably in side position for transportation.*

· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

· **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*

· **After swallowing:** *Do not induce vomiting; immediately call for medical help.*

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 2)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

USA

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 3)

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 80-62-6 methyl methacrylate

PEL	Long-term value: 410 mg/m <sup>3</sup> , 100 ppm
REL	Long-term value: 410 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 410 mg/m <sup>3</sup> , 100 ppm Long-term value: 205 mg/m <sup>3</sup> , 50 ppm (SEN) NIC-DSEN, RSEN

### 99-97-8 N,N-dimethyl-p-toluidine

WEEL	Long-term value: 0.5 ppm
------	--------------------------

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

USA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Light yellow
· <b>Odor:</b>	Ester-like
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· <b>Melting point/Melting range:</b>	-48 °C (-54 °F)
· <b>Boiling point/Boiling range:</b>	101 °C (214 °F)

· **Flash point:** 10 °C (50 °F)· **Flammability (solid, gaseous):** Not flammable.· **Ignition temperature:** 430 °C (806 °F)· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

· <b>Lower:</b>	2.1 Vol %
· <b>Upper:</b>	12.5 Vol %

· **Vapor pressure at 20 °C (68 °F):** 47 hPa (35 mm Hg)· **Density at 20 °C (68 °F):** 0.94 g/cm<sup>3</sup> (7.844 lbs/gal)· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with**· **Water at 20 °C (68 °F):** 1.6 g/l· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**· **Organic solvents:** 0.0 %

(Contd. on page 6)

USA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 5)

· **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

80-62-6 methyl methacrylate

Oral LD50 7872 mg/kg (rat)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

80-62-6 methyl methacrylate

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 1 (Self-assessment): slightly hazardous for water
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**





(Contd. of page 6)

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>   | <p>UN1992</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>   | <p>Flammable liquids, toxic, n.o.s. (Methyl methacrylate monomer, stabilized, N,N-dimethyl-p-toluidine )</p> <p>1992 Flammable liquids, toxic, n.o.s. (Methyl methacrylate monomer, stabilized, N,N-dimethyl-p-toluidine)</p> <p>FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )</p> |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>   | <div style="display: flex; align-items: center; gap: 10px;">   </div>   |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p>3 Flammable liquids.</p> <p>3+6.1</p>  |
| <ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <div style="display: flex; align-items: center; gap: 10px;">   </div>   |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p>3 Flammable liquids</p> <p>3+6.1</p>   |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>   | <p>II</p>   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>   | <p>No</p>   |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> </ul> | <p>Warning: Flammable liquids</p> <p>336</p> <p>F-E,S-D</p>   |

(Contd. on page 8)

USA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 7)

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

80-62-6 methyl methacrylate

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

80-62-6 methyl methacrylate

NL

- **TLV (Threshold Limit Value established by ACGIH)**

80-62-6 methyl methacrylate

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Hazard symbols:**



Toxic  
Highly flammable

- **Hazard-determining components of labeling:**

methyl methacrylate

N,N-dimethyl-p-toluidine

- **Risk phrases:**

Highly flammable.

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 8)

*Toxic by inhalation, in contact with skin and if swallowed.*

*Danger of cumulative effects.*

*Irritating to respiratory system and skin.*

*May cause sensitisation by skin contact.*

· **Safety phrases:**

*Keep away from living quarters.*

*Wear suitable protective clothing, gloves and eye/face protection.*

*In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).*

*This material and its container must be disposed of as hazardous waste.*

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

USA

**Safety data sheet**  
according to 1907/2006/EC, Article 31





Printing date 26.12.2013

Revision: 26.12.2013

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** TECHNOVIT 3040 LIQUID
- **Article number:** 14652(L)
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  **Toxic**  
Toxic by inhalation, in contact with skin and if swallowed.
-  **Irritant**  
Irritating to respiratory system and skin.
-  **Sensitising**  
May cause sensitisation by skin contact.
-  **Highly flammable**  
Highly flammable.  
Danger of cumulative effects.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

(Contd. on page 2)

-AU-

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 1)

· **Code letter and hazard designation of product:**



Toxic  
Highly flammable

· **Hazard-determining components of labelling:**

methyl methacrylate  
N,N-dimethyl-p-toluidine

· **Risk phrases:**

Highly flammable.  
Toxic by inhalation, in contact with skin and if swallowed.  
Danger of cumulative effects.  
Irritating to respiratory system and skin.  
May cause sensitisation by skin contact.

· **Information concerning particular hazards for human and environment:**

· **Safety phrases:**

Keep away from living quarters.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
This material and its container must be disposed of as hazardous waste.

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

80-62-6	methyl methacrylate	50-100%
99-97-8	N,N-dimethyl-p-toluidine	2.5-10%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.  
Remove breathing equipment only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 4)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 3)

· **Control parameters**· **Ingredients with limit values that require monitoring at the workplace:****80-62-6 methyl methacrylate**

NES	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 208 mg/m <sup>3</sup> , 50 ppm

· **Additional information:** The lists valid during the making were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Ester-like
<b>Odour threshold:</b>	Not determined.

(Contd. on page 5)

-AU

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 4)

· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	-48 °C
<b>Boiling point/Boiling range:</b>	101 °C
· <b>Flash point:</b>	10 °C
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	430 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Self-igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	2.1 Vol %
<b>Upper:</b>	12.5 Vol %
· <b>Vapour pressure at 20 °C:</b>	47 hPa
· <b>Density at 20 °C:</b>	0.94 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water at 20 °C:</b>	1.6 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>VOC (EC)</b>	0.00 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

-AU-

(Contd. on page 6)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 5)

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

**80-62-6 methyl methacrylate**

Oral	LD50	7872 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic

Irritant

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- **Water hazard class 1 (German Regulation) (Self-assessment):** slightly hazardous for water
- **Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
- **Must not be disposed together with household garbage. Do not allow product to reach sewage system.**
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
- **ADG, IMDG, IATA** UN1992

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 6)

<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADG</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine)</p> <p>FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )</p>
---	---

- **Transport hazard class(es)**

- **ADG, IMDG, IATA**



<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p>3 Flammable liquids.</p> <p>3+6.1</p>
--	--

- **Packing group**

- **ADG, IMDG, IATA**

II

- **Environmental hazards:**

- **Marine pollutant:**

No

- **Special precautions for user**

Warning: Flammable liquids.

- **Danger code (Kemler):**

336

- **EMS Number:**

F-E,S-D

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

- **Transport/Additional information:**

- **ADG**

- **Limited quantities (LQ)**

1L

- **Transport category**

2

- **Tunnel restriction code**

D/E

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Australian Inventory of Chemical Substances**

All ingredients are listed.

- **Standard for the Uniform Scheduling of Drugs and Poisons**

80-62-6 | methyl methacrylate

S6+APPENDIX

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

(Contd. on page 8)

-AU-



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 7)

**· Code letter and hazard designation of product:**

Toxic  
Highly flammable

**· Hazard-determining components of labelling:**

methyl methacrylate  
N,N-dimethyl-p-toluidine

**· Risk phrases:**

Highly flammable.  
Toxic by inhalation, in contact with skin and if swallowed.  
Danger of cumulative effects.  
Irritating to respiratory system and skin.  
May cause sensitisation by skin contact.

**· Safety phrases:**

Keep away from living quarters.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
This material and its container must be disposed of as hazardous waste.

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

## 1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 3040 LIQUID
- **Article number:** 14652(L)
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

H225 Highly flammable liquid and vapour.



GHS07

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Toxic

Toxic by inhalation, in contact with skin and if swallowed.



Irritant

Irritating to respiratory system and skin. May cause sensitisation by skin contact.



Highly flammable

Highly flammable.

Danger of cumulative effects.

- **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

(Contd. on page 2)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 1)

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Code letter and hazard designation of product:**



Toxic  
Highly flammable

· **Hazard-determining components of labeling:**

methyl methacrylate  
N,N-dimethyl-p-toluidine

· **Risk phrases:**

Highly flammable.  
Toxic by inhalation, in contact with skin and if swallowed.  
Danger of cumulative effects.  
Irritating to respiratory system and skin.  
May cause sensitisation by skin contact.

· **Safety phrases:**

Keep away from living quarters.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
This material and its container must be disposed of as hazardous waste.

· **Hazard description:**

· **WHMIS-symbols:**

B2 - Flammable liquid  
D1A - Very toxic material causing immediate and serious toxic effects  
D2B - Toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3  
Fire = 3  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3  
Fire = 3  
Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 2)

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

80-62-6	methyl methacrylate	⚠ H225; ⚠ H315; H317; H335	50-100%
99-97-8	N,N-dimethyl-p-toluidine	⚠ H301; H311; H331; ⚠ H373; H227	2.5-10%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 3)

See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
 Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.  
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
 Keep ignition sources away - Do not smoke.  
 Protect against electrostatic charges.  
 Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
 Keep receptacle tightly sealed.  
 Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

### 80-62-6 methyl methacrylate

EL	Short-term value: 100 ppm Long-term value: 50 ppm
S	
EV	Short-term value: 100 ppm Long-term value: 50 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.  
 Avoid contact with the skin.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 5)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 4)

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Light yellow
<b>Odor:</b>	Ester-like
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	-48 °C
<b>Boiling point/Boiling range:</b>	101 °C

· **Flash point:** 10 °C

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:** 430 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

<b>Lower:</b>	2.1 Vol %
<b>Upper:</b>	12.5 Vol %

· **Vapor pressure at 20 °C:** 47 hPa

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 5)

· <b>Density at 20 °C:</b>	0.94 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water at 20 °C:</b>	1.6 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

80-62-6 methyl methacrylate

Oral	LD50	7872 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Irritant

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

80-62-6	methyl methacrylate	3
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

CA

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 6)


## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |   |
|---|---|
| <b>UN-Number</b>  | UN1992  |
| <b>DOT, TDG, IMDG, IATA</b>   |   |
| <b>UN proper shipping name</b>  | Flammable liquids, toxic, n.o.s. (Methyl methacrylate monomer, stabilized, N,N-dimethyl-p-toluidine )     |
| <b>DOT</b>  | 1992 Flammable liquids, toxic, n.o.s. (Methyl methacrylate monomer, stabilized, N,N-dimethyl-p-toluidine) |
| <b>TDG</b>  | FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )      |
| <b>IMDG, IATA</b>   |   |
| <b>Transport hazard class(es)</b>   |   |
| <b>DOT</b>  |   |
|  |   |
| <b>Class</b>  | 3 Flammable liquids.  |

(Contd. on page 8)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 7)

· **Label** 3+6.1  
 · **TDG, IMDG, IATA**



· **Class** 3 Flammable liquids  
 · **Label** 3+6.1

· **Packing group**  
 · **DOT, TDG, IMDG, IATA** II

· **Environmental hazards:**  
 · **Marine pollutant:** No

· **Special precautions for user** Warning: Flammable liquids  
 · **Danger code (Kemler):** 336  
 · **EMS Number:** F-E,S-D

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **UN "Model Regulation":** UN1992, Flammable liquids, toxic, n.o.s. (Methyl methacrylate monomer, stabilized, N,N-dimethyl-p-toluidine), 3 (6.1), II

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
 · **Sara**

· **Section 355 (extremely hazardous substances):**  
 None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**  
 80-62-6 methyl methacrylate

· **TSCA (Toxic Substances Control Act):**  
 All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**  
 None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**  
 None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**  
 None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**  
 None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**  
 80-62-6 methyl methacrylate

NL

(Contd. on page 9)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 8)

· **TLV (Threshold Limit Value established by ACGIH)**

80-62-6	methyl methacrylate	A4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

80-62-6	methyl methacrylate
---------	---------------------

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Toxic  
Highly flammable

· **Hazard-determining components of labeling:**

methyl methacrylate  
N,N-dimethyl-p-toluidine

· **Risk phrases:**

Highly flammable.  
Toxic by inhalation, in contact with skin and if swallowed.  
Danger of cumulative effects.  
Irritating to respiratory system and skin.  
May cause sensitisation by skin contact.

· **Safety phrases:**

Keep away from living quarters.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
This material and its container must be disposed of as hazardous waste.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)

(Contd. on page 10)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 12/26/2013

Reviewed on 12/26/2013

**Trade name: TECHNOVIT 3040 LIQUID**

(Contd. of page 9)

*NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**WHMIS: Workplace Hazardous Materials Information System (Canada)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent*

CA

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** TECHNOVIT 3040 LIQUID
- **Article number:** 14652(L)
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.



Xi; Irritant

R37/38: Irritating to respiratory system and skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.



F; Highly flammable

R11: Highly flammable.

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 1)

R33: Danger of cumulative effects.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



T Toxic  
F Highly flammable

- **Hazard-determining components of labelling:**

methyl methacrylate  
N,N-dimethyl-p-toluidine

- **Risk phrases:**

11 Highly flammable.  
23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
33 Danger of cumulative effects.  
37/38 Irritating to respiratory system and skin.  
43 May cause sensitisation by skin contact.

- **Safety phrases:**

4 Keep away from living quarters.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
60 This material and its container must be disposed of as hazardous waste.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 80-62-6	methyl methacrylate	50-100%
EINECS: 201-297-1	Xi R37/38;  Xi R43;  F R11 Flam. Liq. 2, H225;  Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 2)

CAS: 99-97-8  
EINECS: 202-805-4N,N-dimethyl-p-toluidine  
T R23/24/25  
R33-52/53

2.5-10%

Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT RE  
2, H373; Aquatic Chronic 3, H412

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Remove breathing equipment only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 3)

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
 Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.  
 Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
 Keep ignition sources away - Do not smoke.  
 Protect against electrostatic charges.  
 Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
 Keep container tightly sealed.  
 Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**80-62-6 methyl methacrylate**

WEL	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 208 mg/m <sup>3</sup> , 50 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.  
 Avoid contact with the skin.  
 Avoid contact with the eyes and skin.
- **Respiratory protection:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 4)

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Light yellow
Odour:	Ester-like
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	-48 °C
Boiling point/Boiling range:	101 °C

- **Flash point:** 10 °C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 430 °C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower:	2.1 Vol %
Upper:	12.5 Vol %

- **Vapour pressure at 20 °C:** 47 hPa

Density at 20 °C:	0.94 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 1.6 g/l

- **Partition coefficient (n-octanol/water):** Not determined.

(Contd. on page 6)



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 5)

- |                            |  |
|----------------------------|--|
| · <b>Viscosity:</b>        |  |
| <b>Dynamic:</b>            | Not determined.                            |
| <b>Kinematic:</b>          | Not determined.                            |
| · <b>Solvent content:</b>  |  |
| <b>Organic solvents:</b>   | 0.0 %                                      |
| <b>VOC (EC)</b>            | 0.00 %                                     |
| · <b>Other information</b> | No further relevant information available. |

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values relevant for classification:</b>		
80-62-6 methyl methacrylate		
Oral	LD50	7872 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Toxic  
Irritant

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**


(Contd. of page 6)

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

· <b>UN-Number</b>	
· <b>ADR, IMDG, IATA</b>	UN1992
· <b>UN proper shipping name</b>	
· <b>ADR</b>	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine)
· <b>IMDG, IATA</b>	FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )
· <b>Transport hazard class(es)</b>	
· <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3+6.1
· <b>Packing group</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Flammable liquids.
· <b>Danger code (Kemler):</b>	336
· <b>EMS Number:</b>	F-E,S-D
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Transport category</b>	2

(Contd. on page 8)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 26.12.2013

Revision: 26.12.2013

Trade name: **TECHNOVIT 3040 LIQUID**

(Contd. of page 7)

· <b>Tunnel restriction code</b>	D/E
· <b>UN "Model Regulation":</b>	UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine), 3 (6.1), II

### 15 Regulatory information

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Relevant phrases**

- H225 Highly flammable liquid and vapour.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H331 Toxic if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.
- R11 Highly flammable.  
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
R33 Danger of cumulative effects.  
R37/38 Irritating to respiratory system and skin.  
R43 May cause sensitisation by skin contact.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

## 1 Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **Productidentificatie**
- **Handelsnaam:** TECHNOVIT 3040 LIQUID
- **Artikelnummer:** 14652(L)
- **Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Aurion**  
Binnenhaven 5  
6709 PD Wageningen  
The Netherlands  
Tel: 31 317 415094  
Fax: 31 317 415955  
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **Telefoonnummer voor noodgevallen:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Identificatie van de gevaren

- **Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**

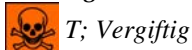


Flam. Liq. 2 H225 Licht ontvlambare vloeistof en damp.

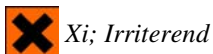


Acute Tox. 4 H302 Schadelijk bij inslikken.  
Skin Irrit. 2 H315 Veroorzaakt huidirritatie.  
Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.  
STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

- **Indeling overeenkomstig Richtlijn 67/548/EEG of Richtlijn 1999/45/EG**



R23/24/25: Vergiftig bij inademing, opname door de mond en aanraking met de huid.



R37/38: Irriterend voor de ademhalingswegen en de huid.

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

Handelsnaam: **TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 1)

*Xi; Sensibiliserend*R43: *Kan overgevoeligheid veroorzaken bij contact met de huid.**F; Licht ontvlambaar*R11: *Licht ontvlambaar.*R33: *Gevaar voor cumulatieve effecten.***• Speciale gevaaromschrijving voor mens en milieu:***Het product moet een markering krijgen op basis van het berekeningsproces van de "Algemene classificatierichtlijn voor bereidingen in de EG", laatste editie.***• Classificatiesysteem:***De Classificatie komt overeen met de actuele EG-lijsten, maar is aangevuld met gegevens uit de vakliteratuur en van de onderneming.***• Etiketteringselementen****• Kentekening volgens EEG-richtlijnen:***Het produkt is volgens de EG-richtlijnen/GefStoffV (de verordening inzake gevaarlijke stoffen) geclassificeerd en gekenmerkt.***• Kenletter en gevaaromschrijving van het produkt:***T Vergiftig**F Licht ontvlambaar***• Gevaaraanduidende componenten voor de etikettering:***methylmethacrylaat**N,N-dimethyl-p-toluidine***• R-zinnen:**11 *Licht ontvlambaar.*23/24/25 *Vergiftig bij inademing, opname door de mond en aanraking met de huid.*33 *Gevaar voor cumulatieve effecten.*37/38 *Irriterend voor de ademhalingswegen en de huid.*43 *Kan overgevoeligheid veroorzaken bij contact met de huid.***• S-zinnen:**4 *Verwijderd van woonruimten opbergen.*36/37/39 *Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht.*45 *Bij een ongeval of indien men zich onwel voelt, onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen).*60 *Deze stof en de verpakking als gevaarlijk afval afvoeren.***• Andere gevaren****• Resultaten van PBT- en zPzB-beoordeling****• PBT:** Niet bruikbaar.**• zPzB:** Niet bruikbaar.

### 3 Samenstelling en informatie over de bestanddelen

**• Chemische karakterisering: Mengsels****• Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

(Vervolg op blz. 3)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

**Handelsnaam: TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 2)

· <b>Gevaarlijke inhoudstoffen:</b>		
CAS: 80-62-6 EINECS: 201-297-1	methylmethacrylaat 	50-100%
CAS: 99-97-8 EINECS: 202-805-4	N,N-dimethyl-p-toluidine 	2,5-10%

· **Aanvullende gegevens:**

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

### 4 Eerstehulpmaatregelen

· **Beschrijving van de eerstehulpmaatregelen**· **Algemene informatie:**

Verontreinigde kleding onmiddellijk uittrekken.

Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.

Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.

· **Na het inademen:**

Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.· **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.· **Na inslikken:** Geen braken teweegbrengen en onmiddellijk medische hulp raadplegen.· **Informatie voor de arts:**· **Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.· **Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

### 5 Brandbestrijdingsmaatregelen

· **Blusmiddelen**· **Geschikte blusmiddelen:** CO<sub>2</sub>, zand, bluspoeder. Geen water gebruiken.· **Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn:** Krachtige waterstraal· **Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

· **Advies voor brandweerlieden**· **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

### 6 Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

· **Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

· **Milieuvoorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.· **Insluitings- en reinigingsmethoden en -materiaal:**

Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

(Vervolg op blz. 4)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

**Handelsnaam: TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 3)

Niet met water of waterachtige reinigingsmiddelen wegspoelen.

· **Verwijzing naar andere rubrieken**

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

Informatie inzake berging - zie hoofdstuk 13.

### 7 Hantering en opslag

· **Handling:**

· **Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**

Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.

Tanks voorzichtig openen en behandelen.

Aërosolvorming vermijden.

· **Informatie m.b.t. brand- en ontploffingsgevaar:**

Onststekingsbronnen op afstand houden - niet roken.

Maatregelen treffen tegen ontlading van statische elektriciteit.

Ademhalingstoestellen gereedhouden.

· **Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**

· **Opslag:**

· **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.

· **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.

· **Verdere inlichtingen over eisen m.b.t. de opslag:**

Tanks ondoordringbaar gesloten houden.

Koel en droog bewaren in goed gesloten vaten.

· **Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

### 8 Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

· **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

· **Controleparameters**

· **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

**80-62-6 methylmethacrylaat**

MAK Korte termijn waarde: 410 mg/m<sup>3</sup>

Lange termijn waarde: 205 mg/m<sup>3</sup>

· **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

· **Maatregelen ter beheersing van blootstelling**

· **Persoonlijke beschermingsvoorzieningen:**

· **Algemene beschermings- en gezondheidsmaatregelen:**

Verwijderd houden van eet- en drinkwaren.

Verontreinigde kleding onmiddellijk uittrekken.

Vóór de pauze en aan het einde van werktijd handen wassen.

Beschermende kleding afzonderlijk bewaren.

Aanraking met de huid vermijden.

Aanraking met de ogen en de huid vermijden.

· **Ademhalingsbescherming:**

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

(Vervolg op blz. 5)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

**Handelsnaam: TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 4)

### · Handbescherming:



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.  
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

### · Handschoenmateriaal

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

### · Doordringingstijd van het handschoenmateriaal

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

### · Oogbescherming:



Nauw aansluitende veiligheidsbril

## 9 Fysische en chemische eigenschappen

### · Informatie over fysische en chemische basiseigenschappen

#### · Algemene gegevens

#### · Voorkomen:

Vorm:	Vloeistof
Kleur:	Lichtgeel
Reuk:	Esterachtig
Geurdrempelwaarde:	Niet bepaald.

· pH-waarde: Niet bepaald.

#### · Toestandsverandering

Smeltpunt/smeltbereik:	-48 °C
Kookpunt/kookpuntbereik:	101 °C

· Vlampunt: 10 °C

· Ontvlambaarheid (vast, gasvormig): Niet bruikbaar.

· Ontstekings temperatuur: 430 °C

· Ontbindingstemperatuur: Niet bepaald.

· Zelfonsteking: Het produkt ontbrandt niet uit zichzelf.

· Ontploffingsgevaar: Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.

#### · Ontploffingsgrenzen:

Onderste:	2,1 Vol %
Bovenste:	12,5 Vol %

· Dampspanning bij 20 °C: 47 hPa

(Vervolg op blz. 6)



# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

**Handelsnaam: TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 5)

· <b>Dichtheid bij 20 °C:</b>	0,94 g/cm <sup>3</sup>
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bepaald.
· <b>Verdampingsnelheid</b>	Niet bepaald.
· <b>Oplosbaarheid in/mengbaarheid met Water bij 20 °C:</b>	1,6 g/l
· <b>Verdelingscoëfficiënt (n-octanol/water):</b>	Niet bepaald.
· <b>Viscositeit</b>	
<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
<b>Organisch oplosmiddel:</b>	0,0 %
<b>VOC (EG)</b>	0,00 %
· <b>Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### 10 Stabiliteit en reactiviteit

- **Reactiviteit**
- **Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

### 11 Toxicologische informatie

- **Informatie over toxicologische effecten**
- **Acute toxiciteit:**

· <b>Indelingsrelevantie LD/LC50-waarden:</b>
---

<b>80-62-6 methylmethacrylaat</b>
-----------------------------------

Oraal	LD50	7872 mg/kg (rat)
-------	------	------------------

- **Primaire aandoening:**
- **op de huid:** Prikkelend effect.
- **aan het oog:** Geen prikkelend effect.
- **Overgevoeligheid:** Kan overgevoeligheid veroorzaken bij contact met de huid.
- **Aanvullende toxicologische informatie:**

Het produkt vertoont op grond van het berekeningsprocédé van de algemene classificatie-richtlijnen van de EG voor toebereidingen in de laatste geldige redactie de volgende gevaren:

Vergiftig  
Irriterend

### 12 Ecologische informatie

- **Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 7)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

**Handelsnaam: TECHNOVIT 3040 LIQUID**



(Vervolg van blz. 6)

- **Gedrag in milieu-compartimenten:**
- **Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL) 10: Kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.  
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein  
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
- **Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### 13 Instructies voor verwijdering

- **Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

### 14 Informatie met betrekking tot het vervoer

- |   |   |
|---|---|
| · <b>VN-nummer</b>  | UN1992  |
| · <b>ADR, IMDG, IATA</b>  |   |
| · <b>Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b>             | 1992 BRANDBARE VLOEISTOF, GIFTIG, N.E.G. (METHYLMETHACRYLAAT, MONOMEER, GESTABILISEERD, N,N-dimethyl-p-toluidine) |
| · <b>ADR</b>  |   |
| · <b>IMDG, IATA</b>   | FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )              |
| · <b>Transportgevarenklasse(n)</b>  |   |
| · <b>ADR</b>  |   |
|  |   |
| · <b>klasse</b>   | 3 Brandbare vloeistoffen  |
| · <b>Etiket</b>   | 3+6.1   |
| · <b>IMDG, IATA</b>   |   |
|  |   |
| · <b>Class</b>  | 3 Flammable liquids.  |
| · <b>Label</b>  | 3+6.1   |

(Vervolg op blz. 8)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.12.2013

Herziening van: 26.12.2013

**Handelsnaam: TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 7)

· <b>Verpakkingsgroep:</b> · <b>ADR, IMDG, IATA</b>	II
· <b>Milieugevaren:</b> · <b>Marine pollutant:</b>	Neen
· <b>Bijzondere voorzorgen voor de gebruiker</b> · <b>Kemler-getal:</b> · <b>EMS-nummer:</b>	Waarschuwing: Brandbare vloeistoffen 336 F-E,S-D
· <b>Vervoer in bulk overeenkomstig bijlage II bij MARPOL 73/78 en de IBC-code</b>	Niet bruikbaar.
· <b>Transport/verdere gegevens:</b>	
· <b>ADR</b> · <b>Beperkte hoeveelheden (LQ)</b> · <b>Vervoerscategorie</b> · <b>Tunnelbeperkingscode</b>	1L 2 D/E
· <b>VN "Model Regulation":</b>	UN1992, BRANDBARE VLOEISTOF, GIFTIG, N.E.G. (METHYLMETHACRYLAAT, MONOMEER, GESTABILISEERD, N,N-dimethyl-p-toluidine), 3 (6.1), II

### 15 Regelgeving

· **Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**

· **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding**

geen der bestanddelen staat op de lijst.

· **Nationale voorschriften:**

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 10: Saneringsinspanning A

· **Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

### 16 Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van producteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Relevante zinnen**

H225 Licht ontvlambare vloeistof en damp.

H301 Giftig bij inslikken.

H311 Giftig bij contact met de huid.

H315 Veroorzaakt huidirritatie.

(Vervolg op blz. 9)

**Veiligheidsinformatieblad**  
**volgens 1907/2006/EG, Artikel 31**

datum van de druk: 26.12.2013

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**Handelsnaam: TECHNOVIT 3040 LIQUID**

(Vervolg van blz. 8)

- H317 Kan een allergische huidreactie veroorzaken.*
- H331 Giftig bij inademing.*
- H335 Kan irritatie van de luchtwegen veroorzaken.*
- H373 Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.*
- H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.*
- R11 Licht ontvlambaar.*
- R23/24/25 Vergiftig bij inademing, opname door de mond en aanraking met de huid.*
- R33 Gevaar voor cumulatieve effecten.*
- R37/38 Irriterend voor de ademhalingswegen en de huid.*
- R43 Kan overgevoeligheid veroorzaken bij contact met de huid.*
- R52/53 Schadelijk voor in het water levende organismen; kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.*

**Afkortingen en acroniemen:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

### 1 Identification de la substance/du mélange et de la société/l'entreprise

- **Identificateur de produit**
- **Nom du produit:** TECHNOVIT 3040 LIQUID
- **Code du produit:** 14652(L)
- **Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Identification des dangers

- **Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS02 flamme

Flam. Liq. 2 H225 Liquide et vapeurs très inflammables.



GHS07

Acute Tox. 4 H302 Nocif en cas d'ingestion.

Skin Irrit. 2 H315 Provoque une irritation cutanée.

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

STOT SE 3 H335 Peut irriter les voies respiratoires.

- **Classification selon la directive 67/548/CEE ou directive 1999/45/CE**



T; Toxique

R23/24/25: Toxique par inhalation, par contact avec la peau et par ingestion.



Xi; Irritant

R37/38: Irritant pour les voies respiratoires et la peau.



Xi; Sensibilisant

R43: Peut entraîner une sensibilisation par contact avec la peau.



F; Facilement inflammable

R11: Facilement inflammable.

(suite page 2)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

(suite de la page 1)

R33: Danger d'effets cumulatifs.

· **Indications particulières concernant les dangers pour l'homme et l'environnement:**

Le produit est à étiqueter, conformément au procédé de calcul de la "Directive générale de classification pour les préparations de la CE", dans la dernière version valable.

· **Système de classification:**

La classification correspond aux listes CEE actuelles et est complétée par des indications tirées de publications spécialisées et des indications fournies par l'entreprise.

· **Éléments d'étiquetage**

· **Marquage selon les directives CEE:**

Le produit est classé et identifié suivant les directives de la Communauté Européenne/la "GefStoffV"= la Réglementation sur les Produits dangereux.

· **Lettre d'identification et caractérisation de danger du produit:**



T Toxique

F Facilement inflammable

· **Composants dangereux déterminants pour l'étiquetage:**

méthacrylate de méthyle  
N,N-diméthyl-p-toluidine

· **Phrases R:**

- 11 Facilement inflammable.
- 23/24/25 Toxique par inhalation, par contact avec la peau et par ingestion.
- 33 Danger d'effets cumulatifs.
- 37/38 Irritant pour les voies respiratoires et la peau.
- 43 Peut entraîner une sensibilisation par contact avec la peau.

· **Phrases S:**

- 4 Conserver à l'écart de tout local d'habitation.
- 36/37/39 Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage.
- 45 En cas d'accident ou de malaise, consulter immédiatement un médecin (si possible, lui montrer l'étiquette).
- 60 Éliminer le produit et son récipient comme un déchet dangereux.

· **Autres dangers**

· **Résultats des évaluations PBT et vPvB**

- **PBT:** Non applicable.
- **vPvB:** Non applicable.

### 3 Composition/informations sur les composants

· **Caractérisation chimique: Mélanges**

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

(suite page 3)









# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

		(suite de la page 2)
CAS: 80-62-6 EINECS: 201-297-1	méthacrylate de méthyle  Xi R37/38;  Xi R43;  F R11  Flam. Liq. 2, H225;  Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 99-97-8 EINECS: 202-805-4	N,N-diméthyl-p-toluidine  T R23/24/25 R33-52/53  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT RE 2, H373; Aquatic Chronic 3, H412	2,5-10%

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

### 4 Premiers secours

- **Description des premiers secours**
- **Remarques générales:**  
Enlever immédiatement les vêtements contaminés par le produit.  
Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.  
Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.
- **Après inhalation:**  
Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.  
En cas d'inconscience, coucher et transporter la personne en position latérale stable.
- **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.
- **Après contact avec les yeux:**  
Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.
- **Après ingestion:** Ne pas faire vomir, demander d'urgence une assistance médicale.
- **Indications destinées au médecin:**
- **Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**  
Pas d'autres informations importantes disponibles.

### 5 Mesures de lutte contre l'incendie

- **Moyens d'extinction**
- **Moyens d'extinction:** CO<sub>2</sub>, sable, poudre d'extinction. Ne pas utiliser d'eau.
- **Produits extincteurs déconseillés pour des raisons de sécurité:** Jet d'eau à grand débit
- **Dangers particuliers résultant de la substance ou du mélange** Pas d'autres informations importantes disponibles.
- **Conseils aux pompiers**
- **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

### 6 Mesures à prendre en cas de dispersion accidentelle

- **Précautions individuelles, équipement de protection et procédures d'urgence**  
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **Précautions pour la protection de l'environnement:**  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **Méthodes et matériel de confinement et de nettoyage:**  
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).  
Évacuer les matériaux contaminés en tant que déchets conformément au point 13.  
Assurer une aération suffisante.

(suite page 4)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

(suite de la page 3)

Ne pas rincer à l'eau ou aux produits nettoyants aqueux.

· **Référence à d'autres sections**

Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.

Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### 7 Manipulation et stockage

· **Manipulation:**

· **Précautions à prendre pour une manipulation sans danger**

Veiller à une bonne ventilation/aspiration du poste de travail.

Ouvrir et manipuler les récipients avec précaution.

Eviter la formation d'aérosols.

· **Préventions des incendies et des explosions:**

Tenir à l'abri des sources d'inflammation - ne pas fumer.

Prendre des mesures contre les charges électrostatiques.

Tenir des appareils de protection respiratoire prêts.

· **Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**

· **Stockage:**

· **Exigences concernant les lieux et conteneurs de stockage:** Stocker dans un endroit frais.

· **Indications concernant le stockage commun:** Pas nécessaire.

· **Autres indications sur les conditions de stockage:**

Tenir les emballages hermétiquement fermés.

Stocker au frais et au sec dans des fûts bien fermés.

· **Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

### 8 Contrôles de l'exposition/protection individuelle

· **Indications complémentaires pour l'agencement des installations techniques:**

Sans autre indication, voir point 7.

· **Paramètres de contrôle**

· **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

**80-62-6 méthacrylate de méthyle**

VME Valeur momentanée: 410 mg/m<sup>3</sup>, 100 ppm

Valeur à long terme: 205 mg/m<sup>3</sup>, 50 ppm

· **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

· **Contrôles de l'exposition**

· **Équipement de protection individuel:**

· **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Conserver à part les vêtements de protection.

Eviter tout contact avec la peau.

Eviter tout contact avec les yeux et avec la peau.

· **Protection respiratoire:**

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

(suite page 5)



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

(suite de la page 4)

· **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.  
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· **Protection des yeux:**



Lunettes de protection hermétiques

### 9 Propriétés physiques et chimiques

· **Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

<b>Forme:</b>	Liquide
<b>Couleur:</b>	Jaune clair
<b>Odeur:</b>	Genre ester
<b>Seuil olfactif:</b>	Non déterminé.

· **valeur du pH:** Non déterminé.

· **Changement d'état**

<b>Point de fusion:</b>	-48 °C
<b>Point d'ébullition:</b>	101 °C

· **Point d'éclair** 10 °C

· **Inflammabilité (solide, gazeux):** Non applicable.

· **Température d'inflammation:** 430 °C

· **Température de décomposition:** Non déterminé.

· **Auto-inflammation:** Le produit ne s'enflamme pas spontanément.

· **Danger d'explosion:** Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.

· **Limites d'explosion:**

<b>Inférieure:</b>	2,1 Vol %
<b>Supérieure:</b>	12,5 Vol %

· **Pression de vapeur à 20 °C:** 47 hPa

(suite page 6)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

(suite de la page 5)

· <b>Densité à 20 °C:</b>	0,94 g/cm <sup>3</sup>
· <b>Densité relative</b>	Non déterminé.
· <b>Densité de vapeur.</b>	Non déterminé.
· <b>Vitesse d'évaporation</b>	Non déterminé.
· <b>Solubilité dans/miscibilité avec l'eau à 20 °C:</b>	1,6 g/l
· <b>Coefficient de partage (n-octanol/eau):</b>	Non déterminé.
· <b>Viscosité:</b>	
<b>Dynamique:</b>	Non déterminé.
<b>Cinématique:</b>	Non déterminé.
· <b>Teneur en solvants:</b>	
<b>Solvants organiques:</b>	0,0 %
<b>VOC (CE)</b>	0,00 %
· <b>Autres informations</b>	Pas d'autres informations importantes disponibles.

### 10 Stabilité et réactivité

- **Réactivité**
- **Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **Conditions à éviter** Pas d'autres informations importantes disponibles.
- **Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

### 11 Informations toxicologiques

- **Informations sur les effets toxicologiques**
- **Toxicité aiguë:**

· **Valeurs LD/LC50 déterminantes pour la classification:**

**80-62-6 méthacrylate de méthyle**

Oral	LD50	7872 mg/kg (rat)
------	------	------------------

- **Effet primaire d'irritation:**
- **de la peau:** Irrite la peau et les muqueuses.
- **des yeux:** Pas d'effet d'irritation.
- **Sensibilisation:** Sensibilisation possible par contact avec la peau.
- **Indications toxicologiques complémentaires:**  
Selon le procédé de calcul de la dernière version en vigueur de la directive générale CEE sur la classification des préparations, le produit présente les dangers suivants:  
Toxique  
Irritant

### 12 Informations écologiques

- **Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **Persistance et dégradabilité** Pas d'autres informations importantes disponibles.

(suite page 7)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

(suite de la page 6)

- **Comportement dans les compartiments de l'environnement:**
- **Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:**  
*Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant*  
*Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.*
- **Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **Autres effets néfastes** Pas d'autres informations importantes disponibles.

### 13 Considérations relatives à l'élimination

- **Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

### 14 Informations relatives au transport

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>No ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <p style="text-align: center;">UN1992</p>   |
| <ul style="list-style-type: none"> <li>· <b>Nom d'expédition des Nations unies</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p>1992 LIQUIDE INFLAMMABLE, TOXIQUE, N.S.A.<br/>(MÉTHACRYLATE DE MÉTHYLE MONOMÈRE STABILISÉ, N,N-diméthyl-p-toluidine)</p> <p>FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )</p> |
| <ul style="list-style-type: none"> <li>· <b>Classe(s) de danger pour le transport</b></li> <li>· <b>ADR</b></li> </ul>                           | <p style="text-align: center;">3</p>  |
| <ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Étiquette</b></li> </ul>  | <p style="text-align: center;">3 Liquides inflammables.<br/>3+6.1</p>   |
| <ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>  | <p style="text-align: center;">3</p>  |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="text-align: center;">3 Flammable liquids.<br/>3+6.1</p>   |

(suite page 8)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

(suite de la page 7)

· <b>Groupe d'emballage</b> · <b>ADR, IMDG, IATA</b>	II
· <b>Dangers pour l'environnement:</b> · <b>Marine Pollutant:</b>	Non
· <b>Précautions particulières à prendre par l'utilisateur</b> · <b>Indice Kemler:</b> · <b>No EMS:</b>	Attention: Liquides inflammables. 336 F-E,S-D
· <b>Transport en vrac conformément à l'annexe II de la convention Marpol 73/78 et au recueil IBC</b>	Non applicable.
· <b>Indications complémentaires de transport:</b>	
· <b>ADR</b> · <b>Quantités limitées (LQ)</b> · <b>Catégorie de transport</b> · <b>Code de restriction en tunnels</b>	1L 2 D/E
· <b>"Règlement type" de l'ONU:</b>	UN1992, LIQUIDE INFLAMMABLE, TOXIQUE, N.S.A. (MÉTHACRYLATE DE MÉTHYLE MONOMÈRE STABILISÉ, N,N-diméthyl-p-toluidine), 3 (6.1), II

### 15 Informations réglementaires

- **Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

### 16 Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

#### · Phrases importantes

- H225 Liquide et vapeurs très inflammables.  
 H301 Toxique en cas d'ingestion.  
 H311 Toxique par contact cutané.  
 H315 Provoque une irritation cutanée.  
 H317 Peut provoquer une allergie cutanée.  
 H331 Toxique par inhalation.  
 H335 Peut irriter les voies respiratoires.  
 H373 Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.  
 H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- R11 Facilement inflammable.  
 R23/24/25 Toxique par inhalation, par contact avec la peau et par ingestion.  
 R33 Danger d'effets cumulatifs.  
 R37/38 Irritant pour les voies respiratoires et la peau.  
 R43 Peut entraîner une sensibilisation par contact avec la peau.  
 R52/53 Nocif pour les organismes aquatiques, peut entraîner des effets néfastes à long terme pour l'environnement aquatique.

#### · Acronymes et abréviations:

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association

(suite page 9)

**Fiche de données de sécurité**  
**selon 1907/2006/CE, Article 31**

Date d'impression : 26.12.2013

Révision: 26.12.2013

**Nom du produit: TECHNOVIT 3040 LIQUID**

*GHS: Globally Harmonized System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*

(suite de la page 8)

FR

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

### 1 Bezeichnung des Stoffs bzw. des Gemischs und des Unternehmens

- **Produktidentifikator**
- **Handelsname:** TECHNOVIT 3040 LIQUID
- **Artikelnummer:** 14652(L)
- **Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [sgkcck@aol.com](mailto:sgkcck@aol.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)  
  
Science Services  
Goerzer Strasse 70  
81549 München Germany  
Tel: +49(0)89 159802 80  
[safety@scienceservices.de](mailto:safety@scienceservices.de)  
  
24h Giftnotruf Munchen: +49 (0)89 19240  
Toxikologische Abteilung der II. Medizinischen Klinik  
rechts der Isar, Munchen. - [www.toxinfo.org](http://www.toxinfo.org)
- **Auskunftgebender Bereich:** Product safety department
- **Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Mögliche Gefahren

- **Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS02 Flamme

Flam. Liq. 2 H225 Flüssigkeit und Dampf leicht entzündbar.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

- **Einstufung gemäß Richtlinie 67/548/EWG oder Richtlinie 1999/45/EG**



T; Giftig

R23/24/25: Giftig beim Einatmen, Verschlucken und Berührung mit der Haut.

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 1)

**Xi; Reizend**

R37/38: Reizt die Atmungsorgane und die Haut.

**Xi; Sensibilisierend**

R43: Sensibilisierung durch Hautkontakt möglich.

**F; Leichtentzündlich**

R11: Leichtentzündlich.

R33: Gefahr kumulativer Wirkungen.

**· Besondere Gefahrenhinweise für Mensch und Umwelt:**

Das Produkt ist kennzeichnungspflichtig auf Grund des Berechnungsverfahrens der "Allgemeinen Einstufungsrichtlinie für Zubereitungen der EG" in der letztgültigen Fassung.

**· Klassifizierungssystem:**

Die Klassifizierung entspricht den aktuellen EG-Listen, ist jedoch ergänzt durch Angaben aus der Fachliteratur und durch Firmenangaben.

**· Kennzeichnungselemente**
**· Kennzeichnung nach EWG-Richtlinien:**

Das Produkt ist nach EG-Richtlinien/GefStoffV eingestuft und gekennzeichnet.

**· Kennbuchstabe und Gefahrenbezeichnung des Produktes:**
**T Giftig****F Leichtentzündlich**
**· Gefahrbestimmende Komponenten zur Etikettierung:**

Methyl-methacrylat  
N,N-dimethyl-p-toluidin

**· R-Sätze:**

11 Leichtentzündlich.  
23/24/25 Giftig beim Einatmen, Verschlucken und Berührung mit der Haut.  
33 Gefahr kumulativer Wirkungen.  
37/38 Reizt die Atmungsorgane und die Haut.  
43 Sensibilisierung durch Hautkontakt möglich.

**· S-Sätze:**

4 Von Wohnplätzen fernhalten.  
36/37/39 Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen.  
45 Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen).  
60 Dieses Produkt und sein Behälter sind als gefährlicher Abfall zu entsorgen.

**· Sonstige Gefahren**
**· Ergebnisse der PBT- und vPvB-Beurteilung**

· **PBT:** Nicht anwendbar.  
· **vPvB:** Nicht anwendbar.

### 3 Zusammensetzung/Angaben zu Bestandteilen

· **Chemische Charakterisierung: Gemische**

· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

(Fortsetzung auf Seite 3)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 2)

· <b>Gefährliche Inhaltsstoffe:</b>		
CAS: 80-62-6 EINECS: 201-297-1	Methyl-methacrylat ☒ Xi R37/38; ☒ Xi R43; ☒ F R11 ☒ Flam. Liq. 2, H225; ☒ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 99-97-8 EINECS: 202-805-4	N,N-dimethyl-p-toluidin ☒ T R23/24/25 R33-52/53 ☒ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☒ STOT RE 2, H373; Aquatic Chronic 3, H412	2,5-10%

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

### 4 Erste-Hilfe-Maßnahmen

- **Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**
  - Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
  - Atemschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.
  - Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.
- **Nach Einatmen:**
  - Frischluft- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.
  - Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.
- **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.
- **Nach Augenkontakt:**
  - Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.
- **Nach Verschlucken:** Kein Erbrechen herbeiführen, sofort ärztliche Hilfe zuziehen.
- **Hinweise für den Arzt:**
- **Wichtigste akute und verzögert auftretende Symptome und Wirkungen**
  - Keine weiteren relevanten Informationen verfügbar.
- **Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung** Keine weiteren relevanten Informationen verfügbar.

### 5 Maßnahmen zur Brandbekämpfung

- **Löschmittel**
- **Geeignete Löschmittel:** CO<sub>2</sub>, Sand, Löschpulver. Kein Wasser verwenden.
- **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser im Vollstrahl
- **Besondere vom Stoff oder Gemisch ausgehende Gefahren** Keine weiteren relevanten Informationen verfügbar.
- **Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

### 6 Maßnahmen bei unbeabsichtigter Freisetzung

- **Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
  - Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **Umweltschutzmaßnahmen:** Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **Methoden und Material für Rückhaltung und Reinigung:**
  - Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
  - Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
  - Für ausreichende Lüftung sorgen.
  - Nicht mit Wasser oder wäßrigen Reinigungsmitteln wegspülen.

(Fortsetzung auf Seite 4)



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 3)

- **Verweis auf andere Abschnitte**  
Informationen zur sicheren Handhabung siehe Abschnitt 7.  
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.  
Informationen zur Entsorgung siehe Abschnitt 13.

### 7 Handhabung und Lagerung

- **Handhabung:**
- **Schutzmaßnahmen zur sicheren Handhabung**  
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.  
Behälter mit Vorsicht öffnen und handhaben.  
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:**  
Zündquellen fernhalten - nicht rauchen.  
Maßnahmen gegen elektrostatische Aufladung treffen.  
Atemschutzgeräte bereithalten.
- **Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**  
Behälter dicht geschlossen halten.  
In gut verschlossenen Gebinden kühl und trocken lagern.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Leichtentzündlich
- **Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### 8 Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **Zu überwachende Parameter**

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

**80-62-6 Methyl-methacrylat**

AGW	Langzeitwert: 210 mg/m <sup>3</sup> , 50 ml/m <sup>3</sup> 2(I);DFG, EU, Y
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- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**  
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.  
Beschmutzte, getränkte Kleidung sofort ausziehen.  
Vor den Pausen und bei Arbeitsende Hände waschen.  
Getrennte Aufbewahrung der Schutzkleidung.  
Berührung mit der Haut vermeiden.  
Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**  
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition umluftunabhängiges Atemschutzgerät verwenden.

(Fortsetzung auf Seite 5)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 4)

**· Handschutz:**


Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

**· Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

**· Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

**· Augenschutz:**


Dichtschließende Schutzbrille

## 9 Physikalische und chemische Eigenschaften

**· Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**
**· Allgemeine Angaben**
**· Aussehen:**

**Form:** Flüssigkeit

**Farbe:** Hellgelb

**· Geruch:** Esterartig

**· Geruchsschwelle:** Nicht bestimmt.

**· pH-Wert:** Nicht bestimmt.

**· Zustandsänderung**

**Schmelzpunkt/Schmelzbereich:** -48 °C

**Siedepunkt/Siedebereich:** 101 °C

**· Flammpunkt:** 10 °C

**· Entzündlichkeit (fest, gasförmig):** Nicht anwendbar.

**· Zündtemperatur:** 430 °C

**· Zersetzungstemperatur:** Nicht bestimmt.

**· Selbstentzündlichkeit:** Das Produkt ist nicht selbstentzündlich.

**· Explosionsgefahr:** Das Produkt ist nicht explosionsgefährlich, jedoch ist die Bildung explosionsgefährlicher Dampf-/Luftgemische möglich.

**· Explosionsgrenzen:**

**Untere:** 2,1 Vol %

**Obere:** 12,5 Vol %

(Fortsetzung auf Seite 6)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 5)

· <b>Dampfdruck bei 20 °C:</b>	47 hPa
· <b>Dichte bei 20 °C:</b>	0,94 g/cm <sup>3</sup>
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
· <b>Löslichkeit in / Mischbarkeit mit Wasser bei 20 °C:</b>	1,6 g/l
· <b>Verteilungskoeffizient (n-Octanol/Wasser):</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht bestimmt.
<b>Kinematisch:</b>	Nicht bestimmt.
· <b>Lösemittelgehalt:</b>	
<b>Organische Lösemittel:</b>	0,0 %
<b>VOC (EU)</b>	0,00 %
· <b>Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### 10 Stabilität und Reaktivität

- **Reaktivität**
- **Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**  
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

### 11 Toxikologische Angaben

- **Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität:**

· <b>Einstufungsrelevante LD/LC50-Werte:</b>	
<b>80-62-6 Methyl-methacrylat</b>	
Oral	LD50 7872 mg/kg (rat)

- **Primäre Reizwirkung:**
- **an der Haut:** Reizt die Haut und die Schleimhäute.
- **am Auge:** Keine Reizwirkung.
- **Sensibilisierung:** Durch Hautkontakt Sensibilisierung möglich.
- **Zusätzliche toxikologische Hinweise:**  
Das Produkt weist aufgrund des Berechnungsverfahrens der Allgemeinen Einstufungsrichtlinie der EG für Zubereitungen in der letztgültigen Fassung folgende Gefahren auf:  
Giftig  
Reizend

DE

(Fortsetzung auf Seite 7)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 6)



### 12 Umweltbezogene Angaben

- **Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **Verhalten in Umweltkompartimenten:**
- **Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend  
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### 13 Hinweise zur Entsorgung

- **Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

### 14 Angaben zum Transport

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Nummer</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <p style="text-align: center;">UN1992</p>   |
| <ul style="list-style-type: none"> <li>· <b>Ordnungsgemäße UN-Versandbezeichnung</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p>1992 ENTZÜNDBARER FLÜSSIGER STOFF, GIFTIG, N.A.G. (METHYLMETHACRYLAT, MONOMER, STABILISIERT, N,N-dimethyl-p-toluidin)</p> <p>FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )</p>                  |
| <ul style="list-style-type: none"> <li>· <b>Transportgefahrenklassen</b></li> <li>· <b>ADR</b></li> </ul>  | <div style="display: flex; align-items: center; justify-content: center;">   </div> |
| <ul style="list-style-type: none"> <li>· <b>Klasse</b></li> </ul>  | <p style="text-align: center;">3 Entzündbare flüssige Stoffe</p>  |

(Fortsetzung auf Seite 8)

# Sicherheitsdatenblatt


## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

überarbeitet am: 26.12.2013

Handelsname: **TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 7)

· <b>Gefahrzettel</b>	3+6.1
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3+6.1
· <b>Verpackungsgruppe</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>Umweltgefahren:</b>	
· <b>Marine pollutant:</b>	Nein
· <b>Besondere Vorsichtsmaßnahmen für den Verwender</b>	Achtung: Entzündbare flüssige Stoffe
· <b>Kemler-Zahl:</b>	336
· <b>EMS-Nummer:</b>	F-E,S-D
· <b>Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code</b>	Nicht anwendbar.
· <b>Transport/weitere Angaben:</b>	
· <b>ADR</b>	
· <b>Begrenzte Menge (LQ)</b>	1L
· <b>Beförderungskategorie</b>	2
· <b>Tunnelbeschränkungscode</b>	D/E
· <b>UN "Model Regulation":</b>	UN1992, ENTZÜNDBARER FLÜSSIGER STOFF, GIFTIG, N.A.G. (METHYLMETHACRYLAT, MONOMER, STABILISIERT, N,N-dimethyl-p-toluidin), 3 (6.1), II

### 15 Rechtsvorschriften

- **Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Nationale Vorschriften:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Leichtentzündlich
- **Technische Anleitung Luft:**

Klasse	Anteil in %
I	5,0
NK	95,0
- **Wassergefährdungsklasse: WGK I (Selbsteinstufung):** schwach wassergefährdend.
- **Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### 16 Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

(Fortsetzung auf Seite 9)

**Sicherheitsdatenblatt**  
gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.12.2013

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**Handelsname: TECHNOVIT 3040 LIQUID**

(Fortsetzung von Seite 8)

· **Relevante Sätze**

- H225 Flüssigkeit und Dampf leicht entzündbar.  
 H301 Giftig bei Verschlucken.  
 H311 Giftig bei Hautkontakt.  
 H315 Verursacht Hautreizungen.  
 H317 Kann allergische Hautreaktionen verursachen.  
 H331 Giftig bei Einatmen.  
 H335 Kann die Atemwege reizen.  
 H373 Kann die Organe schädigen bei längerer oder wiederholter Exposition.  
 H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.
- R11 Leichtentzündlich.  
 R23/24/25 Giftig beim Einatmen, Verschlucken und Berührung mit der Haut.  
 R33 Gefahr kumulativer Wirkungen.  
 R37/38 Reizt die Atmungsorgane und die Haut.  
 R43 Sensibilisierung durch Hautkontakt möglich.  
 R52/53 Schädlich für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben.

· **Abkürzungen und Akronyme:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
 VOC: Volatile Organic Compounds (USA, EU)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

### 1 Identificazione della sostanza o della miscela e della società/impresa

- **Identificatore del prodotto**
- **Denominazione commerciale:** TECHNOVIT 3040 LIQUID
- **Articolo numero:** 14652(L)
- **Usi pertinenti identificati della sostanza o miscela e usi sconsigliati** Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Società Italiana Chimici**  
Via Rio Nell Ellba 140  
00138 Rome, Italy  
Tel: 39 06 8800211  
Fax: 39 30 06 8815313  
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **Numero telefonico di emergenza:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Identificazione dei pericoli

- **Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS02 fiamma

Flam. Liq. 2 H225 Liquido e vapori facilmente infiammabili.



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

Skin Irrit. 2 H315 Provoca irritazione cutanea.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

STOT SE 3 H335 Può irritare le vie respiratorie.

- **Classificazione secondo la direttiva 67/548/CEE o direttiva 1999/45/CE**



T; Tossico

R23/24/25: Tossico per inalazione, contatto con la pelle e per ingestione.



Xi; Irritante

R37/38: Irritante per le vie respiratorie e la pelle.



Xi; Sensibilizzante

R43: Può provocare sensibilizzazione per contatto con la pelle.

(continua a pagina 2)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**

(Segue da pagina 1)



**F**; Facilmente infiammabile

**R11:** Facilmente infiammabile.

**R33:** Pericolo di effetti cumulativi.

**Indicazioni di pericolosità specifiche per l'uomo e l'ambiente:**

Il prodotto ha l'obbligo di classificazione in base al metodo di calcolo della "direttiva generale della Comunità sulla classificazione dei preparati" nella sua ultima versione valida.

**Sistema di classificazione:**

La classificazione corrisponde alle attuali liste della CEE, è tuttavia integrata da dati raccolti da bibliografia specifica e da dati forniti dall'impresa.

**Elementi dell'etichetta**

**Classificazione secondo le direttive CEE:**

Il prodotto è classificato e codificato conformemente alle direttive CEE/norme sulle sostanze pericolose

**Sigla ed etichettatura di pericolosità del prodotto:**



**T** Tossico

**F** Facilmente infiammabile

**Componenti pericolosi che ne determinano l'etichettatura:**

metacrilato di metile  
N,N-dimetil-p-toluidina

**Natura dei rischi specifici (frasi R):**

11 Facilmente infiammabile.

23/24/25 Tossico per inalazione, contatto con la pelle e per ingestione.

33 Pericolo di effetti cumulativi.

37/38 Irritante per le vie respiratorie e la pelle.

43 Può provocare sensibilizzazione per contatto con la pelle.

**Consigli di prudenza (frasi S):**

4 Conservare lontano da locali di abitazione.

36/37/39 Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia.

45 In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta).

60 Questo materiale e il suo contenitore devono essere smaltiti come rifiuti pericolosi.

**Altri pericoli**

**Risultati della valutazione PBT e vPvB**

**PBT:** Non applicabile.

**vPvB:** Non applicabile.

### 3 Composizione/informazioni sugli ingredienti

**Caratteristiche chimiche: Miscela**

**Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

**Sostanze pericolose:**

(continua a pagina 3)











## Scheda di dati di sicurezza ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**

(Segue da pagina 2)

CAS: 80-62-6 EINECS: 201-297-1	metacrilato di metile  Xi R37/38;  Xi R43;  F R11  Flam. Liq. 2, H225;  Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 99-97-8 EINECS: 202-805-4	N,N-dimetil-p-toluidina  T R23/24/25 R33-52/53  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT RE 2, H373; Aquatic Chronic 3, H412	2,5-10%

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

### 4 Misure di primo soccorso

- **Descrizione delle misure di primo soccorso**
- **Indicazioni generali:**  
Allontanare immediatamente gli abiti contaminati dal prodotto.  
Levare la maschera protettiva solamente dopo aver tolto gli abiti contaminati.  
In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.
- **Inalazione:**  
Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di un medico.  
Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.
- **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.
- **Contatto con gli occhi:**  
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.
- **Ingestione:** Non provocare il vomito, chiamare subito il medico.
- **Indicazioni per il medico:**
- **Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **Indicazione della eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**  
Non sono disponibili altre informazioni.

### 5 Misure antincendio

- **Mezzi di estinzione**
- **Mezzi di estinzione idonei:** CO<sub>2</sub>, sabbia, polvere. Non usare acqua.
- **Mezzi di estinzione inadatti per motivi di sicurezza:** Getti d'acqua
- **Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Indossare il respiratore.

### 6 Misure in caso di rilascio accidentale

- **Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**  
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **Precauzioni ambientali:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **Metodi e materiali per il contenimento e per la bonifica:**  
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).  
Smaltimento del materiale contaminato conformemente al punto 13.  
Provvedere ad una sufficiente areazione.  
Non dilavare con acqua o detergenti liquidi.
- **Riferimento ad altre sezioni**  
Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.

(continua a pagina 4)

**Scheda di dati di sicurezza**  
**ai sensi del regolamento 1907/2006/CE, Articolo 31**

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**

(Segue da pagina 3)

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.  
 Per informazioni relative allo smaltimento vedere Capitolo 13.

## 7 Manipolazione e immagazzinamento

- **Manipolazione:**
- **Precauzioni per la manipolazione sicura**  
 Accurata ventilazione/aspirazione nei luoghi di lavoro.  
 Aprire e manipolare i recipienti con cautela.  
 Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:**  
 Tenere lontano da fonti di calore, non fumare.  
 Adottare provvedimenti contro cariche elettrostatiche.  
 Tener pronto il respiratore.
- **Condizioni per l'immagazzinamento sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**  
 Mantenere i recipienti ermeticamente chiusi.  
 Conservare in luogo fresco e asciutto in fusti ben chiusi.
- **Usi finali specifici** Non sono disponibili altre informazioni.

## 8 Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

### 80-62-6 metacrilato di metile

TWA	Valore a breve termine: 410 mg/m <sup>3</sup> , 100 ppm Valore a lungo termine: 205 mg/m <sup>3</sup> , 50 ppm sen, A4
VL	Valore a breve termine: 100 ppm Valore a lungo termine: 50 ppm

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.
- **Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**  
 Tenere lontano da cibo, bevande e foraggi.  
 Togliere immediatamente gli abiti contaminati.  
 Lavarsi le mani prima dell'intervallo o a lavoro terminato.  
 Custodire separatamente l'equipaggiamento protettivo.  
 Evitare il contatto con la pelle.  
 Evitare il contatto con gli occhi e la pelle.
- **Maschera protettiva:**  
 Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

(continua a pagina 5)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**

(Segue da pagina 4)

**· Guanti protettivi:**

Guanti protettivi

*Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.*

*A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.*

*Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.*

**· Materiale dei guanti**

*La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego*

**· Tempo di permeazione del materiale dei guanti**

*Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.*

**· Occhiali protettivi:**

Occhiali protettivi a tenuta

## 9 Proprietà fisiche e chimiche

**· Informazioni sulle proprietà fisiche e chimiche fondamentali****· Indicazioni generali****· Aspetto:**

<b>Forma:</b>	Liquido
<b>Colore:</b>	Giallo chiaro
<b>Odore:</b>	Simile all'estere
<b>Soglia olfattiva:</b>	Non definito.

**· valori di pH:** Non definito.

**· Cambiamento di stato**

<b>Temperatura di fusione/ambito di fusione:</b>	-48 °C
<b>Temperatura di ebollizione/ambito di ebollizione:</b>	101 °C

**· Punto di infiammabilità:** 10 °C

**· Infiammabilità (solido, gassoso):** Non applicabile.

**· Temperatura di accensione:** 430 °C

**· Temperatura di decomposizione:** Non definito.

**· Autoaccensione:** Prodotto non autoinfiammabile.

**· Pericolo di esplosione:** Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.

**· Limiti di infiammabilità:**

<b>Inferiore:</b>	2,1 Vol %
<b>Superiore:</b>	12,5 Vol %

**· Tensione di vapore a 20 °C:** 47 hPa

(continua a pagina 6)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**

(Segue da pagina 5)

· <b>Densità a 20 °C:</b>	0,94 g/cm <sup>3</sup>
· <b>Densità relativa</b>	Non definito.
· <b>Densità del vapore</b>	Non definito.
· <b>Velocità di evaporazione</b>	Non definito.
· <b>Solubilità in/Miscibilità con acqua a 20 °C:</b>	1,6 g/l
· <b>Coefficiente di distribuzione (n-Octanol/acqua):</b>	Non definito.
· <b>Viscosità:</b>	
<b>Dinamica:</b>	Non definito.
<b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
<b>Solventi organici:</b>	0,0 %
<b>VOC (CE)</b>	0,00 %
· <b>Altre informazioni</b>	Non sono disponibili altre informazioni.

### 10 Stabilità e reattività

- **Reattività**
- **Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **Condizioni da evitare** Non sono disponibili altre informazioni.
- **Materiali incompatibili:** Non sono disponibili altre informazioni.
- **Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

### 11 Informazioni tossicologiche

- **Informazioni sugli effetti tossicologici**
- **Tossicità acuta:**

· **Valori LD/LC50 rilevanti per la classificazione:**

**80-62-6 metacrilato di metile**

Orale	LD50	7872 mg/kg (rat)
-------	------	------------------

- **Irritabilità primaria:**
- **sulla pelle:** Irrita la pelle e le mucose.
- **sugli occhi:** Non irritante.
- **Sensibilizzazione:** Può provocare sensibilizzazione a contatto con la pelle.
- **Ulteriori dati tossicologici:**

Il prodotto, in base al metodo di calcolo della direttiva generale della Comunità sulla classificazione dei preparati nella sua ultima versione valida, presenta i seguenti rischi:

Tossico  
Irritante

### 12 Informazioni ecologiche

- **Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **Persistenza e degradabilità** Non sono disponibili altre informazioni.

(continua a pagina 7)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**



(Segue da pagina 6)

- **Comportamento in compartimenti ecologici:**
- **Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **Altri effetti avversi** Non sono disponibili altre informazioni.

### 13 Considerazioni sullo smaltimento

- **Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

### 14 Informazioni sul trasporto

· <b>Numero ONU</b> · <b>ADR, IMDG, IATA</b>	UN1992
· <b>Nome di spedizione dell'ONU</b> · <b>ADR</b>  · <b>IMDG, IATA</b>	1992 LIQUIDO INFIAMMABILE, TOSSICO, N.A.S. (METACRILATO DI METILE MONOMERO STABILIZZATO, N,N-dimetil-p-toluidina) FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine )
· <b>Classi di pericolo connesso al trasporto</b> · <b>ADR</b>	
	
· <b>Classe</b> · <b>Etichetta</b>	3 Liquidi infiammabili 3+6.1
· <b>IMDG, IATA</b>	
	
· <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3+6.1
· <b>Gruppo di imballaggio</b> · <b>ADR, IMDG, IATA</b>	II

(continua a pagina 8)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID**

(Segue da pagina 7)

· <b>Pericoli per l'ambiente:</b>	
· <b>Marine pollutant:</b>	No
· <b>Precauzioni speciali per gli utilizzatori</b>	Attenzione: Liquidi infiammabili
· <b>Numero Kemler:</b>	336
· <b>Numero EMS:</b>	F-E,S-D
· <b>Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC</b>	Non applicabile.
· <b>Trasporto/ulteriori indicazioni:</b>	
· <b>ADR</b>	
· <b>Quantità limitate (LQ)</b>	1L
· <b>Categoria di trasporto</b>	2
· <b>Codice di restrizione in galleria</b>	D/E
· <b>UN "Model Regulation":</b>	UN1992, LIQUIDO INFIAMMABILE, TOSSICO, N.A.S. (METACRILATO DI METILE MONOMERO STABILIZZATO, N,N-dimetil-p-toluidina), 3 (6.1), II

### 15 Informazioni sulla regolamentazione

- **Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

### 16 Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Frasei rilevanti**

- H225 Liquido e vapori facilmente infiammabili.
  - H301 Tossico se ingerito.
  - H311 Tossico per contatto con la pelle.
  - H315 Provoca irritazione cutanea.
  - H317 Può provocare una reazione allergica cutanea.
  - H331 Tossico se inalato.
  - H335 Può irritare le vie respiratorie.
  - H373 Può provocare danni agli organi in caso di esposizione prolungata o ripetuta.
  - H412 Nocivo per gli organismi acquatici con effetti di lunga durata.
- 
- R11 Facilmente infiammabile.
  - R23/24/25 Tossico per inalazione, contatto con la pelle e per ingestione.
  - R33 Pericolo di effetti cumulativi.
  - R37/38 Irritante per le vie respiratorie e la pelle.
  - R43 Può provocare sensibilizzazione per contatto con la pelle.
  - R52/53 Nocivo per gli organismi acquatici, può provocare a lungo termine effetti negativi per l'ambiente acquatico.

- **Abbreviazioni e acronimi:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)

(continua a pagina 9)

**Scheda di dati di sicurezza**  
**ai sensi del regolamento 1907/2006/CE, Articolo 31**

Stampato il: 26.12.2013

Revisione: 26.12.2013

**Denominazione commerciale: TECHNOVIT 3040 LIQUID***VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent*

(Segue da pagina 8)

IT

# 안 전 지 침 서

## 제31조의 1907/2006/EC에 따라

기 압 점: 2013.12.26

개정: 2013.12.26

### 1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: **TECHNOVIT 3040 LIQUID**
- 상 품 번 호: 14652(L)
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.
- 제품의 권고 용도와 사용상의 제한: 실험실화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkcck@aol.com  
 www.emsdiasum.com
- Samchang Commercial Co., Ltd.  
 Yeo Eui Do  
 PO Box 1110  
 Seoul, Korea  
 Tel: 82 2 703 3040  
 Fax: 82 2 717 3298
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

### 2 유해성.위험성

- 순물질 또는 혼합물의 분류



GHS02 화염

H225 고인화성 액체 및 증기



GHS07

- H302 삼키면 유해함
- H315 피부에 자극을 일으킴
- H317 알레르기성 피부 반응을 일으킬 수 있음
- H335 호흡기계 자극을 일으킬 수 있음

- 라벨표기 요소
- GHS 라벨 요소  
 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- 그림문자



GHS02



GHS07

(2 쪽 에 계 속)



# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

(1 쪽부터 계속)

- **신호어 위험**
- **상 표 상 에 명 확 히 위 험 성 이 표 시 된 성 분:**  
methyl methacrylate  
N,N-dimethyl-p-toluidine
- **유 해.위 험 문 구**  
고인화성 액체 및 증기  
삼키면 유해함  
피부에 자극을 일으킴  
알레르기성 피부 반응을 일으킬 수 있음  
호흡기계 자극을 일으킬 수 있음
- **예 방 조 치 문 구**  
열·스파크·화염·고열로부터 멀리하십시오 - 금연  
폭발 방지용 전기·환기·조명·장비를 사용하십시오.  
피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으십시오/샤워하십시오.  
(라벨 참조) 처치를 하십시오.  
잠금장치가 있는 저장장소에 저장하십시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **기 타 유 해 성**
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.

### 3 구성성분의 명칭 및 함유량

- **화 학 적 특 성:** 혼합물
- **설 명:** 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· **위 험 요 소:**

80-62-6	methyl methacrylate	☠ H225; ⚠ H315; H317; H335	50-100%
99-97-8	N,N-dimethyl-p-toluidine	☠ H301; H311; H331; ☠ H373	2.5-10%

### 4 응급조치 요령

- **응 급 조 치 요 령 내 용**
- **일 반 적 정 보:**  
이 제품에 의해 오염된 의상은 즉시 제거한다.  
반드시 오염된 의상을 완전히 제거한 후에 호흡보호기를 떼어낸다.  
불규칙적인 호흡이나 호흡정지상태에서는 인공호흡을 실시한다.
- **흡 입 했 을 때:**  
신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.  
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피 부 에 접 촉 했 을 때:** 즉시 물과 비누로 씻고 잘 행군다.
- **눈 에 들 어 갔 을 때:** 흐르는 물에 눈을 몇분동안 씻어내고나서, 의사와 상담한다
- **먹 었 을 때:** 구토를 유발시키지 않는다. 즉시 의료진의 도움을 구한다.
- **기 타 의 사 의 주 의 사 항:**
- **가 장 중 요 한 급·만 성 증 상 및 영 향** 추가적인 정보가 존재하지 않습니다.
- **즉 각 적 인 의 료 처 치 및 특 별 처 리 가 필 요 함 을 시사 하는 징 후** 추가적인 정보가 존재하지 않습니다.

- KR

(3 쪽에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

제품명: TECHNIVIT 3040 LIQUID

(2 쪽 부터 계속)

### 5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제: 이산화탄소, 모래, 석회가루를 사용하고, 물을 사용하지 않는다.
- 부적절한 소화제: 플레트용 물
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

### 6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 안전장비 착용하고, 무방비의 사람은 격리시킨다.
- 환경 관련 예방조치: 하수도망/해수면위의물/지하수로도달하지않게한다.
- 밀폐 및 정화 방법과 소재: 액체가 혼합된 물질(모래, 규조토, 산성결합물, 일반결합물, 톱밥)에 흡입되도록 한다. 항목 13에 따라 오염된 물질을 쓰레기로 처분한다. 충분한 환기가 되도록 한다. 물이나 묽은 세척제로 씻어 내지 마십시오
- 타 섹션 참조
- 안전관리에 대한 정보는 제7장을 참고하십시오.
- 개인보호장비에 대한 정보는 제8장을 참고하십시오.
- 쓰레기처리에 대한 정보는 제13장을 참고하십시오.

### 7 취급 및 저장방법

- 취급:
- 안전 취급을 위한 예방조치
- 작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
- 조심스럽게 용기를 개봉하거나 취급한다.
- 연무질이 형성되는 것을 피한다.
- 화재 및 폭발 사고 예방대책에 관한 정보:
- 발화요소는 멀리둔다.금연.
- 정전기의 충전으로부터 보호한다.
- 호흡보호장비를 항상 비치한다.
- 혼합위험성 등 안전 저장 조건
- 보관:
- 안전한 저장 방법: 차가운 장소에 보관한다.
- 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음
- 보관 조건에 관한 추가적인 정보:
- 용기를 새지않게 밀폐한 채 보관한다.
- 밀폐된 용기속에서 늘 하고 건조하게 보관한다.
- 구체적인 최종 사용자 추가적인 정보가 존재하지 않습니다.

### 8 누출방지 및 개인보호구

- 첨단시설 디자인에 대한 추가정보: 더 이상 의 자료는 없음. 항목 7을 참고하십시오.

(4 쪽 에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

(3 쪽부터 계속)

**통제 변수**

**· 화학물질의 노출기준, 생물학적 노출기준 등:**

**80-62-6 methyl methacrylate**

TLV (ROK)	단 기간 의 값: 410 mg/m <sup>3</sup> , 100 ppm 장 기간 의 값: 205 mg/m <sup>3</sup> , 50 ppm
IOELV (EU)	단 기간 의 값: 100 ppm 장 기간 의 값: 50 ppm
PEL (USA)	장 기간 의 값: 410 mg/m <sup>3</sup> , 100 ppm
REL (USA)	장 기간 의 값: 410 mg/m <sup>3</sup> , 100 ppm
TLV (USA)	단 기간 의 값: 410 mg/m <sup>3</sup> , 100 ppm 장 기간 의 값: 205 mg/m <sup>3</sup> , 50 ppm (SEN) NIC-DSEN, RSEN

**99-97-8 N,N-dimethyl-p-toluidine**

WEEL (USA)	장 기간 의 값: 0.5 ppm
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**· 추가 정보:** 제조할 당시에 유효한 목록을 기초로 사용했다.

**· 노출 통제**

**· 개인 보호구**

**· 일반적 보호 조치 및 위생 조치:**

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날 때마다 손을 씻는다.
- 방호복은 따로 보관한다.
- 피부와의 접촉을 피한다.
- 눈과 피부와의 접촉을 피한다.

**· 호흡기 보호:**

단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장 기간 노출시에는 호흡보호장비를 사용한다.

**· 손 보호:**



보호용 장갑

장갑재질은 제품 / 원료 / 조제를 투과시키지 않아야 하고, 내구성이 있어야 한다.  
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.  
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

**· 장갑의 재료**

적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제로 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크되어야 한다.

**· 장갑재료의 투과 시간**

정확한 관통 시간은 보호장갑 제조자에 의하여 인지도고, 준수되어야 한다.

(5 쪽에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

· 눈 보호:

(4 쪽부터 계속)



· 팍 조 이 는 보 안 경

### 9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보	
· 일반 정보	
· 외형	
· 물리적 상태:	액체
· 색:	연한 노랑
· 냄새:	에스테르 종류의
· 후각역치	알맞지 않다.
· pH:	알맞지 않다.
· 상태 변화	
· 녹는점/어는점:	-48 °C
· 초기 끓는점과 끓는점 범위:	101 °C
· 인화점:	10 °C
· 인화성(고체, 기체):	해당사항 없음.
· 점화 온도:	430 °C
· 분해 온도:	알맞지 않다.
· 자기점화:	이제 품은 자연발화성이 없다.
· 폭발 위험:	이제 품은 폭발 위험성이 없지만, 폭발 가능성이 있는 증기 화합물/공기 화합물의 형성 가능성이 있다.
· 인화 또는 폭발 범위의 상한/하한	
· 아래로:	2.1 Vol %
· 위로:	12.5 Vol %
· 증기압 의 경우 20 °C:	47 hPa
· 밀도 의 경우 20 °C:	0.94 g/cm <sup>3</sup>
· 비중:	알맞지 않다.
· 증기밀도:	알맞지 않다.
· 증발 속도:	알맞지 않다.
· 용해도:	
· 물 의 경우 20 °C:	1.6 g/l
· n 옥탄올/물 분배계수:	알맞지 않다.
· 점도:	
· 역학성:	알맞지 않다.
· 동점성:	알맞지 않다.
· 용매 내용물	
· 유기용매:	0.0 %
· VOC (EU)	0.00 %

(6 쪽에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

(5 쪽부터 계속)

**· 기타 정보**

추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

- 반응성
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에 따라 사용할 경우 해체는 없다
- 유해반응 가능성 위험한 반응으로는 알려지지 않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는 분해물들은 알려지지 않았다.

### 11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:

80-62-6 methyl methacrylate

구강의	LD50	7872 mg/kg (rat)
-----	------	------------------

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 피부와 접막을 자극한다.
- 심한 눈 손상 또는 자극성: 무 자극.
- 감각 화: 피부접촉을 통하여 감각 화 가능성이 있다.

### 12 환경에 미치는 영향

- 독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성: 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성: 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성: 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보:
- 일반 특징:  
수질오염등급 1 (자체등급 분류): 약하게 수질오염이 된  
희석시키지 않은 채 대량으로 지하수나, 하천으로 그리고 하수도망에도 달하지 않게 한다.
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용: 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.

(7 쪽에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

(6 쪽부터 계속)

- 비위생적 포장:
- 권고: 당국의 지침에 입각한 쓰레기 처리.

### 14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1992	
· UN 적정 선적명 · ADR  · IMDG, IATA	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine)  FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N- dimethyl-p-toluidine )	
· 교통 위험 클래스 · ADR	3 발화 성용 액 3+6.1	
<div style="display: flex; align-items: center; gap: 10px;">   </div> · 등급 · 위험물 라벨	3 발화 성용 액 3+6.1	
· IMDG, IATA	<div style="display: flex; align-items: center; gap: 10px;">   </div> · Class · Label	3 Flammable liquids. 3+6.1
· 용기등급 · ADR, IMDG, IATA	II	
· 환경적 유해물질: · 해양오염물질:	아니오	
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호:	경고: 발 화 성용 액 336 F-E,S-D	
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.	
· 운 송/추가 정보:	· ADR · 한정 수량 (LQ) · 운송 구분	1L 2

(8 쪽에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

(7 쪽부터 계속)

· 터널 제한 코드	D/E
· UN "모범 규제":	UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-toluidine), 3 (6.1), II

### 15 법적 규제현황

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

· Korean Existing Chemical Inventory		
80-62-6	methyl methacrylate	KE-25050
99-97-8	N,N-dimethyl-p-toluidine	KE-34407

· GHS 라벨 요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· 위험 도표



GHS02 GHS07

· 표지어 위험

· 상 표 상 에 명 확 히 위 험 성 이 표 시 된 성 분:

methyl methacrylate  
N,N-dimethyl-p-toluidine

· 위험 문구

고인화성 액체 및 증기  
삼키면 유해함  
피부에 자극을 일으킴  
알레르기성 피부 반응을 일으킬 수 있음  
호흡기계 자극을 일으킬 수 있음

· 주의 문구

열·스파크·화염·고열로부터 멀리하십시오 - 금연  
폭발 방지용 전기·환기·조명·장비를 사용하십시오.  
피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으십시오/샤워하십시오.  
(라벨 참조) 처치를 하십시오.  
잠금장치가 있는 저장장소에 저장하십시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 화학물질 안전성 평가: 화학물질 안전성 평가가 수행되지 않음

### 16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날 의상 태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

· 최초 작성일자: 2013.12.26

· 개정 횟수 및 최종 개정일자: 1 / 2013.12.26

· 약어와 두문자어:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

(9 쪽 에 계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압 점: 2013.12.26

개정: 2013.12.26

**제품명: TECHNOVIT 3040 LIQUID**

(8 쪽부터 계속)

EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

KR



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

### 1 Identificación de la sustancia o la mezcla y de la sociedad o la empresa

- **Identificador del producto**
- **Nombre comercial:** TECHNOVIT 3040 LIQUID
- **Número del artículo:** 14652(L)
- **Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**  
No existen más datos relevantes disponibles.
- **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio
- **Datos del proveedor de la ficha de datos de seguridad**
- **Fabricante/distribuidor:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Aname**  
C/ Perez Galdos no. 2  
28693 Quijorna  
Madrid, Spain  
Tel: +34.91.816.89.50  
Fax: +34.91.816.85.94  
email: ventas@aname.es
- **Área de información:** Product safety department
- **Teléfono de emergencia:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Identificación de los peligros

- **Clasificación de la sustancia o de la mezcla**
- **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS02 llama

Flam. Liq. 2 H225 Líquido y vapores muy inflamables.



GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.

Skin Irrit. 2 H315 Provoca irritación cutánea.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

STOT SE 3 H335 Puede irritar las vías respiratorias.

- **Clasificación con arreglo a la Directiva 67/548/CEE o Directiva 1999/45/CE**



T; Tóxico

R23/24/25: Tóxico por inhalación, por ingestión y en contacto con la piel.



Xi; Irritante

R37/38: Irrita las vías respiratorias y la piel.

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

**Nombre comercial: TECHNOVIT 3040 LIQUID**

( se continua en página 1 )



Xi; Sensibilizante

R43: Posibilidad de sensibilización en contacto con la piel.



F; Fácilmente inflamable

R11: Fácilmente inflamable.

R33: Peligro de efectos acumulativos.

**Indicaciones adicionales sobre los riesgos para personas y el medio ambiente:**

Es obligatorio identificar el producto según el procedimiento de cálculo de la última versión válida de la "Directiva general de clasificación de preparaciones de la UE".

**Sistema de clasificación:**

La clasificación corresponde a las listas actuales de la CE, pero siempre completada por la literatura especializada y los informes de las empresas.

**Elementos de la etiqueta**
**Distintivo según las directrices de la CEE:**

El producto está catalogado y etiquetado según las directrices de la CEE/Reglamento sobre sustancias peligrosas.

**Letra indicadora y denominación de la peligrosidad del producto:**


T Tóxico

F Fácilmente inflamable

**Componentes peligrosos a indicar en el etiquetaje:**

metacrilato de metilo  
N,N-dimetil-p-toluidina

**Frases-R:**

11 Fácilmente inflamable.  
23/24/25 Tóxico por inhalación, por ingestión y en contacto con la piel.  
33 Peligro de efectos acumulativos.  
37/38 Irrita las vías respiratorias y la piel.  
43 Posibilidad de sensibilización en contacto con la piel.

**Frases-S:**

4 Manténgase lejos de locales habitados.  
36/37/39 Úsense indumentaria y guantes adecuados y protección para los ojos/la cara.  
45 En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstrese la etiqueta).  
60 Elimínense el producto y su recipiente como residuos peligrosos.

**Otros peligros**
**Resultados de la valoración PBT y mPmB**

· **PBT:** No aplicable.  
· **mPmB:** No aplicable.

### 3 Composición/información sobre los componentes

· **Caracterización química:** Mezclas  
· **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

( se continua en página 3 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

Nombre comercial: **TECHNOVIT 3040 LIQUID**

( se continua en página 2 )

· <b>Componentes peligrosos:</b>		
CAS: 80-62-6 EINECS: 201-297-1	metacrilato de metilo 	50-100%
CAS: 99-97-8 EINECS: 202-805-4	N,N-dimetil-p-toluidina 	2,5-10%

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

### 4 Primeros auxilios

- **Descripción de los primeros auxilios**
- **Instrucciones generales:**  
 Quitar de inmediato toda prenda contaminada con el producto.  
 Antes de quitarse la protección respiratoria, quítese la ropa contaminada.  
 En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.
- **En caso de inhalación del producto:**  
 Suministrar aire fresco u oxígeno; solicitar ayuda médica.  
 Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.
- **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.
- **En caso de con los ojos:**  
 Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.
- **En caso de ingestión:** No provocar el vómito y solicitar asistencia médica inmediata.
- **Indicaciones para el médico:**
- **Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**  
 No existen más datos relevantes disponibles.

### 5 Medidas de lucha contra incendios

- **Medios de extinción**
- **Sustancias extintoras apropiadas:** CO<sub>2</sub>, arena, polvo extintor. No utilizar agua.
- **Sustancias extintoras inapropiadas por razones de seguridad:** Agua a pleno chorro
- **Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** Colocarse la protección respiratoria.

### 6 Medidas en caso de vertido accidental

- **Precauciones personales, equipo de protección y procedimientos de emergencia**  
 Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **Precauciones relativas al medio ambiente:**  
 Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **Métodos y material de contención y de limpieza:**  
 Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).  
 Desechar el material contaminado como vertido según ítem 13.  
 Asegurar suficiente ventilación.

( se continua en página 4 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

**Nombre comercial: TECHNOVIT 3040 LIQUID**

( se continua en página 3 )

No enjuagar con agua ni productos de limpieza acuosos.

· **Referencia a otras secciones**

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### 7 Manipulación y almacenamiento

· **Manipulación:**

· **Precauciones para una manipulación segura**

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Abrir y manejar el recipiente con cuidado.

Evitar la formación de aerosoles.

· **Prevención de incendios y explosiones:**

Mantener alejadas las fuentes de encendido. No fumar.

Tomar medidas contra las cargas electrostáticas.

Tener preparados los aparatos respiratorios.

· **Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**

· **Almacenamiento:**

· **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.

· **Normas en caso de un almacenamiento conjunto:** No es necesario.

· **Indicaciones adicionales sobre las condiciones de almacenamiento:**

Mantener el recipiente cerrado herméticamente.

Almacenarlo en envases bien cerrados en un lugar fresco y seco.

· **Usos específicos finales** No existen más datos relevantes disponibles.

### 8 Controles de exposición/protección individual

· **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**

Sin datos adicionales, ver punto 7.

· **Parámetros de control**

· **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

**80-62-6 metacrilato de metilo**

LEP Valor de corta duración: 100 ppm

Valor de larga duración: 50 ppm

Sen, VLI

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· **Controles de la exposición**

· **Equipo de protección individual:**

· **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Guardar la ropa protectora por separado.

Evitar el contacto con la piel.

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

( se continua en página 5 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

Nombre comercial: **TECHNOVIT 3040 LIQUID**

( se continua en página 4 )

### · Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

### · Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

### · Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

### · Protección de ojos:



Gafas de protección herméticas

## 9 Propiedades físicas y químicas

### · Información sobre propiedades físicas y químicas básicas

#### · Datos generales

#### · Aspecto:

Forma:	Líquido
Color:	Amarillo claro
Olor:	Similar al de los ésteres
Umbral olfativo:	No determinado.

· valor pH: No determinado.

#### · Cambio de estado

Punto de fusión /campo de fusión:	-48 °C
Punto de ebullición /campo de ebullición:	101 °C

· Punto de inflamación: 10 °C

· Inflamabilidad (sólido, gaseiforme): No aplicable.

· Temperatura de ignición: 430 °C

· Temperatura de descomposición: No determinado.

· Autoinflamabilidad: El producto no es autoinflamable.

· Peligro de explosión: El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.

#### · Límites de explosión:

Inferior:	2,1 Vol %
Superior:	12,5 Vol %

( se continua en página 6 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

**Nombre comercial: TECHNOVIT 3040 LIQUID**

( se continua en página 5 )

· <b>Presión de vapor a 20 °C:</b>	47 hPa
· <b>Densidad a 20 °C:</b>	0,94 g/cm <sup>3</sup>
· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Velocidad de evaporación</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua a 20 °C:</b>	1,6 g/l
· <b>Coefficiente de reparto (n-octanol/agua):</b>	No determinado.
· <b>Viscosidad:</b>	
<b>Dinámica:</b>	No determinado.
<b>Cinemática:</b>	No determinado.
· <b>Concentración del disolvente:</b>	
<b>Disolventes orgánicos:</b>	0,0 %
<b>VOC (CE)</b>	0,00 %
· <b>Información adicional</b>	No existen más datos relevantes disponibles.

### 10 Estabilidad y reactividad

- **Reactividad**
- **Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **Possibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **Materiales incompatibles:** No existen más datos relevantes disponibles.
- **Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

### 11 Información toxicológica

- **Información sobre los efectos toxicológicos**
- **Toxicidad aguda:**

· **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

**80-62-6 metacrilato de metilo**

Oral	LD50	7872 mg/kg (rat)
------	------	------------------

- **Efecto estimulante primario:**
- **en la piel:** Irrita la piel y las mucosas.
- **en el ojo:** No produce irritaciones.
- **Sensibilización:** Posible sensibilización al entrar en contacto con la piel.
- **Indicaciones toxicológicas adicionales:**

En conformidad con el procedimiento de cálculo contenido en la última versión de la Normativa General de Clasificación de la CE para Preparados, el producto tiene los siguientes riesgos:

Tóxico  
Irritante

ES

( se continua en página 7 )

# Ficha de datos de seguridad

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Nombre comercial: **TECHNOVIT 3040 LIQUID**

( se continua en página 6 )

### 12 Información ecológica

- **Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **Comportamiento en sistemas ecológicos:**
- **Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 1 (autoclasiificación): escasamente peligroso para el agua  
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
- **Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **Otros efectos adversos** No existen más datos relevantes disponibles.

### 13 Consideraciones relativas a la eliminación

- **Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### 14 Información relativa al transporte

- |   |  |
|---|--|
| · <b>Número UN</b>  | UN1992   |
| · <b>ADR, IMDG, IATA</b>  |  |
| · <b>Designación oficial de transporte de las Naciones Unidas</b> | 1992 LÍQUIDO INFLAMABLE, TÓXICO, N.E.P.<br>(METACRILATO DE METILO MONÓMERO ESTABILIZADO,<br>N,N-dimetil-p-toluidina) |
| · <b>ADR</b>  |  |
| · <b>IMDG, IATA</b>   | FLAMMABLE LIQUID, TOXIC, N.O.S. (METHYL<br>METHACRYLATE MONOMER, STABILIZED, N,N-dimethyl-p-<br>toluidine )          |
| · <b>Clase(s) de peligro para el transporte</b>                   |  |
| · <b>ADR</b>  |  |
|   |  |
| · <b>Clase</b>  | 3 Líquidos inflamables   |

( se continua en página 8 )

# Ficha de datos de seguridad


## según 1907/2006/CE, Artículo 31

fecha de impresión 26.12.2013

Revisión: 26.12.2013

Nombre comercial: **TECHNOVIT 3040 LIQUID**

( se continua en página 7 )

· <b>Etiqueta</b>	3+6.1
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3+6.1
· <b>Grupo de embalaje</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>Peligros para el medio ambiente:</b>	
· <b>Contaminante marino:</b>	No
· <b>Precauciones particulares para los usuarios</b>	Atención: Líquidos inflamables
· <b>Número Kemler:</b>	336
· <b>Número EMS:</b>	F-E,S-D
· <b>Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC</b>	No aplicable.
· <b>Transporte/datos adicionales:</b>	
· <b>ADR</b>	
· <b>Cantidades limitadas (LQ)</b>	1L
· <b>Categoría de transporte</b>	2
· <b>Código de restricción del túnel</b>	D/E
· <b>"Reglamentación Modelo" de la UNECE:</b>	UN1992, LÍQUIDO INFLAMABLE, TÓXICO, N.E.P. (METACRILATO DE METILO MONÓMERO ESTABILIZADO, N,N-dimetil-p-toluidina), 3 (6.1), II

### 15 Información reglamentaria

· **Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### 16 Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

#### · Frases relevantes

- H225 Líquido y vapores muy inflamables.  
H301 Tóxico en caso de ingestión.  
H311 Tóxico en contacto con la piel.  
H315 Provoca irritación cutánea.  
H317 Puede provocar una reacción alérgica en la piel.  
H331 Tóxico en caso de inhalación.  
H335 Puede irritar las vías respiratorias.  
H373 Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.  
H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.
- 
- R11 Fácilmente inflamable.  
R23/24/25 Tóxico por inhalación, por ingestión y en contacto con la piel.

( se continua en página 9 )



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( se continua en página 8 )

R33 Peligro de efectos acumulativos.

R37/38 Irrita las vías respiratorias y la piel.

R43 Posibilidad de sensibilización en contacto con la piel.

R52/53 Nocivo para los organismos acuáticos, puede provocar a largo plazo efectos negativos en el medio ambiente acuático.

**· Abreviaturas y acrónimos:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent