



02/02/2015

### Kit Components

Product code	Description
<b>1610172</b> <b>1610173</b> <b>1610174</b> <b>1610175</b> <b>1610170</b> <b>1610171</b> <b>10033888</b> <b>10033887</b> <b>10033890</b> <b>10033889</b> <b>10033891</b> <b>10033886</b>	<b>TGX™ FastCast™ Acrylamide Kit</b>

#### Components:

10033837	FastCast™ Stacker A
10033833	TGX FastCast™ Stacker/Resolver B
10033830	FastCast™ Resolver A, 7.5%, 10%, 12%

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 12/24/2014

## 1 Identification

- **Product identifier**
- **Trade name:** FastCast™ Stacker A
- **Catalog or product number:** 10033837, 10033829, 10040501
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:**  
Technical services, customer support  
lsg\_techserv\_us@bio-rad.com
- **Emergency telephone number:**  
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.  
510-741-1000

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Muta. 1B H340 May cause genetic defects.  
Carc. 1B H350 May cause cancer.  
Repr. 2 H361 Suspected of damaging fertility or the unborn child.  
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Sens. 1 H317 May cause an allergic skin reaction.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Contains a suspect carcinogen.  
Irritant to skin.  
Sensitizer by dermal contact.  
Contains a suspected reproductive toxin.  
Irritant to respiratory system and skin.  
T; Toxic  
R45-46: May cause cancer. May cause heritable genetic damage.  
Xn; Harmful  
R22-48/20/21/22-62: Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Possible risk of impaired fertility.  
Xi; Irritant  
R43: May cause sensitization by skin contact.
- **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.

(Contd. on page 2)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 12/24/2014

Trade name: **FastCast™ Stacker A**

(Contd. of page 1)

- **Classification system:**

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

The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

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

acrylamide

N,N'-methylenediacrylamide

- **Hazard statements**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves.

P321 Specific treatment (see on this label).

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:** Contact with acids may cause release of toxic gases

- **Emergency overview:**

- **Routes of exposure:**

Ingestion

Skin

- **Classification system**

- **Special Hazards**

Reproductive toxin.

Carcinogen.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

USA

(Contd. on page 3)

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

Printing date 02/02/2015

Reviewed on 12/24/2014

Trade name: **FastCast™ Stacker A**

(Contd. of page 2)

**3 Composition/information on ingredients**

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

· **Listing of dangerous and non-hazardous components:**

79-06-1	acrylamide	T Carc. Cat. 2, Muta. Cat. 2 R45-46-25-48/23/24/25 Xn R20/21-62 Xi R36/38-43 Repr. Cat. 3	5-10%
7732-18-5	water		50-100%

· **SVHC**

79-06-1 acrylamide

- **Additional information** For the wording of the listed risk phrases refer to section 15.

**4 First-aid measures**

- **Description of first aid measures**
- **General information**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation**  
Supply fresh air and to be sure call for a 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.
- **After swallowing** Immediately call a 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**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.  
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).

(Contd. on page 4)

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

Printing date 02/02/2015

Reviewed on 12/24/2014

**Trade name: FastCast™ Stacker A**

(Contd. of page 3)

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **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**

· **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 respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**

· **Storage**

· **Requirements to be met by storerooms and receptacles:** According to product specification

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** None.

· **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:**

**79-06-1 acrylamide**

PEL Long-term value: 0.3 mg/m<sup>3</sup>  
Skin

REL Long-term value: 0.03 mg/m<sup>3</sup>  
Skin; See Pocket Guide App. A

TLV Long-term value: 0.03\* mg/m<sup>3</sup>  
Skin;\*inhalable fraction and vapor

· **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.

· **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.

(Contd. on page 5)

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

Printing date 02/02/2015

Reviewed on 12/24/2014

**Trade name: FastCast™ Stacker A**

(Contd. of page 4)

- **Material of gloves** Synthetic gloves
- **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:**  
Safety glasses  
Tightly sealed goggles.

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

**Form:** Liquid  
**Color:** Colorless

· **Odor:** Odorless

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** undetermined  
**Boiling point/Boiling range:** 100 °C

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.  
**Upper:** Not determined.

· **Vapor pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 1.00157 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix

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

· **Viscosity:**

**dynamic:** Not determined.  
**kinematic:** Not determined.

· **Solvent content:**

**Organic solvents:** 0.0 %

(Contd. on page 6)

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

Printing date 02/02/2015

Reviewed on 12/24/2014

Trade name: **FastCast™ Stacker A**

(Contd. of page 5)

<b>Water:</b>	92.1 %
<b>Solids content:</b>	7.6 %
<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:** Carbon monoxide

**11 Toxicological information**

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

· **LD/LC50 values for hazardous components per OSHA criteria:**

**79-06-1 acrylamide**

Oral	LD50	124 mg/kg (rat)
Dermal	LD50	400 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant 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:

Harmful

Irritant

Carcinogenic

The product can cause inheritable damage.

· **Carcinogenic categories**

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

79-06-1	acrylamide	2A
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· **NTP (National Toxicology Program)**

79-06-1	acrylamide	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Target organs:** Skin.

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

Printing date 02/02/2015

Reviewed on 12/24/2014

Trade name: **FastCast™ Stacker A**

(Contd. of page 6)

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water danger class 3 (Internal calculation) (Self-assessment): extremely hazardous for water.  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void            |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void            |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |                 |
| · <b>Class</b>   | Void            |
| · <b>Packing group</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Void            |
| · <b>Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>   | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |

(Contd. on page 8)



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

Printing date 02/02/2015

Reviewed on 12/24/2014

Trade name: **FastCast™ Stacker A**

(Contd. of page 7)

· UN "Model Regulation": -

**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

79-06-1 | acrylamide

· **Section 313 (40CFR372.65):**

79-06-1 | acrylamide

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

All ingredients are listed.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

79-06-1 | acrylamide

· **Developmental Toxicity**

79-06-1 | acrylamide

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

79-06-1 | acrylamide

B2

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

79-06-1 | acrylamide

A3

· **MAK (German Maximum Workplace Concentration)**

79-06-1 | acrylamide

2

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

79-06-1 | acrylamide

· **National regulations**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Technical instructions (air):**

Class	Share in %
II	5-10

· **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.

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

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 12/24/2014

Trade name: **FastCast™ Stacker A**

(Contd. of page 8)

### 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.*

· **Department issuing SDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· **Date of preparation / last revision** 02/02/2015 / -

· **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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 1B: Germ cell mutagenicity, Hazard Category 1B

Carc. 1B: Carcinogenicity, Hazard Category 1B

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

· **\* Data compared to the previous version altered.**

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

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## 1 Identification

- **Product identifier**
- **Trade name:** TGX FastCast™ Stacker/Resolver B
- **Catalog or product number:**  
10033833, 10033834, 10033835, 10033836, 10033909, 10033911, 10033910, 10033912, 10033913, 10033851
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:**  
Technical services, customer support  
lsg\_techserv\_us@bio-rad.com
- **Emergency telephone number:**  
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.  
510-741-1000

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
- **Information concerning particular hazards for human and environment:**  
The product does not have 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 was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:** Contact with acids may cause release of toxic gases
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: TGX FastCast™ Stacker/Resolver B**

(Contd. of page 1)

**3 Composition/information on ingredients**

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

· **Listing of dangerous and non-hazardous components:**

	Proprietary Reagent CP 11	2.5-5%
56-40-6	glycine	1.0-2.5%
	??	1.0-2.5%
7732-18-5	water	50-100%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

**4 First-aid measures**

- **Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.
- **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**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.  
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.
- **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.

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

Printing date 02/02/2015

Reviewed on 10/30/2014

Trade name: **TGX FastCast™ Stacker/Resolver B**

(Contd. of page 2)

**7 Handling and storage**

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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:**

**56-40-6 glycine**

REL Long-term value: 1 mg/m<sup>3</sup>  
as Fe

TLV Long-term value: 1 mg/m<sup>3</sup>  
as Fe

**26628-22-8 sodium azide**

REL Short-term value: C 0.3\*\* mg/m<sup>3</sup>, C 0.1\* ppm  
\*as HN<sub>3</sub>; \*\*as NaN<sub>3</sub>; Skin

TLV Short-term value: C 0.29\*\* mg/m<sup>3</sup>, C 0.11\* ppm  
\*as HN<sub>3</sub> vapor \*\*as NaN<sub>3</sub>

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **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:** Safety glasses

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

**Form:** Liquid  
**Color:** Colorless

(Contd. on page 4)

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

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: TGX FastCast™ Stacker/Resolver B**

(Contd. of page 3)

· <b>Odor:</b>	Odorless
· <b>Odour threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	undetermined
<b>Boiling point/Boiling range:</b>	100 °C
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gaseous)</b>	Not applicable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.00829 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</b>	
<b>Water:</b>	Not miscible or difficult to mix
· <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>	1.4 %
<b>Water:</b>	92.9 %
<b>Solids content:</b>	5.6 %
· <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**  
This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Conditions to avoid** No further relevant information available.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: TGX FastCast™ Stacker/Resolver B**

(Contd. of page 4)

- **Incompatible materials:**  
*This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.*
- **Hazardous decomposition products:** No dangerous decomposition products known

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
*The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.*

### · Carcinogenic categories

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

??

3

#### · NTP (National Toxicology Program)

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Target organs:** Not applicable.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **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.

**Safety Data Sheet**

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 10/30/2014

Trade name: **TGX FastCast™ Stacker/Resolver B**

(Contd. of page 5)

**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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void            |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void            |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |                 |
| · <b>Class</b>   | Void            |
| · <b>Packing group</b>   |                 |
| · <b>DOT, ADR, IMDG, IATA</b>  | Void            |
| · <b>Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>   | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | -               |

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendants and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

26628-22-8 sodium azide

· **Section 313 (40CFR372.65):**

26628-22-8 sodium azide

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

All ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

(Contd. on page 7)



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

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: TGX FastCast™ Stacker/Resolver B**

(Contd. of page 6)

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

26628-22-8 sodium azide

A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
NK	1.0-2.5

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **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.*

· **Department issuing SDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· **Date of preparation / last revision** 02/02/2015 / -

· **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

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)

· **\* Data compared to the previous version altered.**

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 10/30/2014

### 1 Identification

- **Product identifier**
- **Trade name:** FastCast™ Resolver A, 7.5%, 10%, 12%
- **Catalog or product number:**  
10033830, 10033831, 10033832, 10033838, 10033839, 100338340, 10033903, 10033907, 10033840, 10033908
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:**  
Technical services, customer support  
lsg\_techserv\_us@bio-rad.com
- **Emergency telephone number:**  
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.  
510-741-1000

### 2 Hazard(s) identification

- **Classification of the substance or mixture**

Muta. 1B H340 May cause genetic defects.  
Carc. 1B H350 May cause cancer.  
Repr. 2 H361 Suspected of damaging fertility or the unborn child.  
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Contains a suspect carcinogen.  
Irritant to skin.  
Sensitizer by dermal contact.  
Contains a suspected reproductive toxin.  
Irritant to respiratory system and skin.  
T; Toxic  
R45-46-48/23/24/25: May cause cancer. May cause heritable genetic damage. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.  
.....  
Xn; Harmful  
R22-62: Harmful if swallowed. Possible risk of impaired fertility.  
.....  
Xi; Irritant  
R43: May cause sensitization by skin contact.

(Contd. on page 2)

USA

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 1)

· **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 was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Danger

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

acrylamide

N,N'-methylenediacrylamide

· **Hazard statements**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:** Contact with acids may cause release of toxic gases

· **Emergency overview:**

· **Routes of exposure:**

Ingestion

Skin

· **Classification system**

· **Special Hazards**

Reproductive toxin.

Carcinogen.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

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

Printing date 02/02/2015

Reviewed on 10/30/2014

Trade name: **FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 2)

· **vPvB:** Not applicable.

**3 Composition/information on ingredients**

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

· **Listing of dangerous and non-hazardous components:**

79-06-1	acrylamide	T Carc. Cat. 2, Muta. Cat. 2 R45-46-25-48/23/24/25 Xn R20/21-62 Xi R36/38-43 Repr. Cat. 3	10-20%
	Proprietary Reagent J11		2.5-5%
7732-18-5	water		50-100%

· **SVHC**

79-06-1 acrylamide

· **Additional information** For the wording of the listed risk phrases refer to section 15.

**4 First-aid measures**

- **Description of first aid measures**
- **General information**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation**  
Supply fresh air and to be sure call for a 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.
- **After swallowing** Immediately call a 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** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.

(Contd. on page 4)

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

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 3)

- **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.
- **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**

- **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 respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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:**

**79-06-1 acrylamide**

PEL	Long-term value: 0.3 mg/m <sup>3</sup> Skin
REL	Long-term value: 0.03 mg/m <sup>3</sup> Skin; See Pocket Guide App. A
TLV	Long-term value: 0.03* mg/m <sup>3</sup> Skin;*inhalable fraction and vapor

- **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.

(Contd. on page 5)

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

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 4)

- **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.
- **Material of gloves** Synthetic gloves
- **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:**  
Safety glasses  
Tightly sealed goggles.

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

Form: Liquid  
Color: Colorless

· **Odor:** Odorless

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: undetermined  
Boiling point/Boiling range: 100 °C

· **Flash point:** > 100 °C

· **Flammability (solid, gaseous)** Not applicable.

· **Ignition temperature:** 400 °C

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: 0.9 Vol %  
Upper: Not determined.

· **Vapor pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 1.0258 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix

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

(Contd. on page 6)

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

Printing date 02/02/2015

Reviewed on 10/30/2014

Trade name: **FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 5)

- **Viscosity:**
  - dynamic:** Not determined.
  - kinematic:** Not determined.
- **Solvent content:**
  - Organic solvents:** 4.8 %
  - Water:** 81.6 %
- **Solids content:** 4.3 %
- **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:** Carbon monoxide

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

**79-06-1 acrylamide**

Oral	LD50	124 mg/kg (rat)
Dermal	LD50	400 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant 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:  
Harmful  
Irritant  
Carcinogenic  
The product can cause inheritable damage.
- **Carcinogenic categories**

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

79-06-1	acrylamide	2A
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· **NTP (National Toxicology Program)**

79-06-1	acrylamide	R
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(Contd. on page 7)



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

Printing date 02/02/2015

Reviewed on 10/30/2014

Trade name: **FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 6)

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

None of the ingredients is listed.

· **Target organs:** Skin.

**12 Ecological information**

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water danger class 3 (Internal calculation) (Self-assessment): extremely hazardous for water.

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

· **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.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

· **UN-Number**

· **DOT, ADR, ADN, IMDG, IATA**

Void

· **UN proper shipping name**

· **DOT, ADR, ADN, IMDG, IATA**

Void

· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class**

Void

· **Packing group**

· **DOT, ADR, IMDG, IATA**

Void

· **Environmental hazards:**

· **Marine pollutant:**

No

(Contd. on page 8)



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

Printing date 02/02/2015

Reviewed on 10/30/2014

Trade name: **FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 7)

- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

79-06-1 acrylamide

- **Section 313 (40CFR372.65):**

79-06-1 acrylamide

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

All ingredients are listed.

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

79-06-1 acrylamide

- **Developmental Toxicity**

79-06-1 acrylamide

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

79-06-1 acrylamide

B2

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

79-06-1 acrylamide

A3

- **MAK (German Maximum Workplace Concentration)**

79-06-1 acrylamide

2

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

79-06-1 acrylamide

- **National regulations**

- **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- **Technical instructions (air):**

Class	Share in %
II	10-20
NK	2.5-5

- **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.

(Contd. on page 9)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/02/2015

Reviewed on 10/30/2014

**Trade name: FastCast™ Resolver A, 7.5%, 10%, 12%**

(Contd. of page 8)

· **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.*

· **Department issuing SDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· **Date of preparation / last revision** 02/02/2015 / -

· **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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 1B: Germ cell mutagenicity, Hazard Category 1B

Carc. 1B: Carcinogenicity, Hazard Category 1B

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

· \* **Data compared to the previous version altered.**