



Safety Data Sheet

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| Document Group: | 30-3781-9 | Version Number: | 2.00 |
| Issue Date: | 03/03/15 | Supersedes Date: | 01/31/12 |

SECTION 1: Identification

1.1. Product identifier

3M™ Aerospace Sealant RTV-11 PMF

Product Identification Numbers

70-0052-0474-1

1.2. Recommended use and restrictions on use

Recommended use

Sealant, For industrial or professional use only.

1.3. Supplier's details

| | |
|----------------------|--|
| MANUFACTURER: | 3M |
| DIVISION: | Aerospace and Commercial Transportation Division |
| ADDRESS: | 3M Center, St. Paul, MN 55144-1000, USA |
| Telephone: | 1-888-3M HELPS (1-888-364-3577) |

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms

**Hazard Statements**

May cause an allergic skin reaction.
May damage fertility or the unborn child.

Precautionary Statements**Prevention:**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

None.

5% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|------------|-----------------------|
| SILOXANES AND SILICONES, DI-ME, HYDROXY-TERMINATED | 70131-67-8 | 55 - 100 |
| CALCIUM CARBONATE | 471-34-1 | 5 - 30 |
| ETHYL SILICATE | 11099-06-2 | .5 - 5 |
| DIBUTYL TIN DILAURATE | 77-58-7 | < 1 Trade Secret * |
| ETHYL ALCOHOL | 64-17-5 | <= 0.1 Trade Secret * |

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

| <u>Substance</u> | <u>Condition</u> |
|------------------|-------------------|
| Formaldehyde | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on

the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|------------------------|------------|--------|---|---|
| CALCIUM CARBONATE | 471-34-1 | CMRG | TWA:10 mg/m ³ ;STEL:20 mg/m ³ | |
| Limestone | 471-34-1 | OSHA | TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³ | |
| ETHYL ALCOHOL | 64-17-5 | ACGIH | STEL:1000 ppm | A3: Confirmed animal carcin. |
| ETHYL ALCOHOL | 64-17-5 | OSHA | TWA:1900 mg/m ³ (1000 ppm) | |
| TIN, ORGANIC COMPOUNDS | 77-58-7 | ACGIH | TWA(as Sn):0.1 mg/m ³ ;STEL(as Sn):0.2 mg/m ³ | A4: Not class. as human carcin, Skin Notation |
| TIN, ORGANIC COMPOUNDS | 77-58-7 | OSHA | TWA(as Sn):0.1 mg/m ³ | |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

None required.

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions.

Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| General Physical Form: | Liquid |
| Odor, Color, Grade: | Faint odor; white liquid |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | <i>No Data Available</i> |
| Flash Point | >=200 °F [<i>Test Method:</i> Closed Cup] |
| Evaporation rate | >=1 [<i>Ref Std:</i> BUOAC=1] |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Vapor Density | <i>No Data Available</i> |
| Specific Gravity | 1.2 [<i>Ref Std:</i> WATER=1] |
| Solubility in Water | Nil |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | <i>No Data Available</i> |
| Volatile Organic Compounds | 12.9 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] |
| VOC Less H2O & Exempt Solvents | 13 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] |

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products**Substance**

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

This product may have a characteristic odor; however, no adverse health effects are anticipated.

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Additional Information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|--|-----------|---------|---|
| Overall product | Ingestion | | No data available; calculated ATE > 5,000 mg/kg |
| SILOXANES AND SILICONES, DI-ME, HYDROXY-TERMINATED | Dermal | Rabbit | LD50 > 16,000 mg/kg |
| SILOXANES AND SILICONES, DI-ME, HYDROXY-TERMINATED | Ingestion | Rat | LD50 > 64,000 mg/kg |

| | | | |
|----------------------|--------------------------------|--------|---------------------|
| CALCIUM CARBONATE | Dermal | Rat | LD50 > 2,000 mg/kg |
| CALCIUM CARBONATE | Inhalation-Dust/Mist (4 hours) | Rat | LC50 3.0 mg/l |
| CALCIUM CARBONATE | Ingestion | Rat | LD50 6,450 mg/kg |
| DIBUTYLTIN DILAURATE | Dermal | Rat | LD50 > 2,000 mg/kg |
| DIBUTYLTIN DILAURATE | Ingestion | Rat | LD50 1,290 mg/kg |
| ETHYL ALCOHOL | Dermal | Rabbit | LD50 > 15,800 mg/kg |
| ETHYL ALCOHOL | Inhalation-Vapor (4 hours) | Rat | LC50 124.7 mg/l |
| ETHYL ALCOHOL | Ingestion | Rat | LD50 17,800 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|----------------------|---------|---------------------------|
| CALCIUM CARBONATE | Rabbit | No significant irritation |
| DIBUTYLTIN DILAURATE | Rabbit | Corrosive |
| ETHYL ALCOHOL | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|----------------------|---------|---------------------------|
| CALCIUM CARBONATE | Rabbit | No significant irritation |
| DIBUTYLTIN DILAURATE | Rabbit | Corrosive |
| ETHYL ALCOHOL | Rabbit | Moderate irritant |

Skin Sensitization

| Name | Species | Value |
|----------------------|------------|--|
| DIBUTYLTIN DILAURATE | Guinea pig | Sensitizing |
| ETHYL ALCOHOL | Human | Some positive data exist, but the data are not sufficient for classification |

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| SILOXANES AND SILICONES, DI-ME, HYDROXY-TERMINATED | In Vitro | Not mutagenic |
| DIBUTYLTIN DILAURATE | In vivo | Some positive data exist, but the data are not sufficient for classification |
| ETHYL ALCOHOL | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| ETHYL ALCOHOL | In vivo | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|---------------|-----------|-------------------------|--|
| ETHYL ALCOHOL | Ingestion | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|-------------------|-----------|--------------------------|---------|---------------------|--------------------------------|
| CALCIUM CARBONATE | Ingestion | Not toxic to development | Rat | NOAEL 625 mg/kg/day | prematuring & during gestation |

| | | | | | |
|-----------------------|------------|--|-----|-----------------------|--------------------------------|
| DIBUTYL TIN DILAURATE | Ingestion | Toxic to female reproduction | Rat | NOAEL 2 mg/kg/day | prematuring into lactation |
| DIBUTYL TIN DILAURATE | Ingestion | Toxic to development | Rat | NOAEL 2.5 mg/kg/day | during gestation |
| ETHYL ALCOHOL | Inhalation | Not toxic to development | Rat | NOAEL 38 mg/l | during gestation |
| ETHYL ALCOHOL | Ingestion | Some positive developmental data exist, but the data are not sufficient for classification | Rat | NOAEL 5,200 mg/kg/day | prematuring & during gestation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------------|------------|-----------------------------------|--|-------------------------|---------------------|-------------------|
| CALCIUM CARBONATE | Inhalation | respiratory system | All data are negative | Rat | NOAEL 0.812 mg/l | 90 minutes |
| ETHYL ALCOHOL | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | LOAEL 2.6 mg/l | 30 minutes |
| ETHYL ALCOHOL | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | LOAEL 9.4 mg/l | not available |
| ETHYL ALCOHOL | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL not available | |
| ETHYL ALCOHOL | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Dog | NOAEL 3,000 mg/kg | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-----------------------|------------|--------------------------------------|--|---------|-----------------------|-----------------------|
| CALCIUM CARBONATE | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| DIBUTYL TIN DILAURATE | Ingestion | liver | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 2 mg/kg/day | 2 weeks |
| DIBUTYL TIN DILAURATE | Ingestion | immune system | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 0.3 mg/kg/day | 28 days |
| ETHYL ALCOHOL | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | Rabbit | LOAEL 124 mg/l | 365 days |
| ETHYL ALCOHOL | Inhalation | hematopoietic system immune system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 25 mg/l | 14 days |
| ETHYL ALCOHOL | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 8,000 mg/kg/day | 4 months |
| ETHYL ALCOHOL | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Dog | NOAEL 3,000 mg/kg/day | 7 days |

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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