



Safety Data Sheet

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| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 28-2520-6 | Version Number: | 2.01 |
| Issue Date: | 05/09/16 | Supersedes Date: | 04/16/15 |

Product identifier

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8005 Off-White

ID Number(s):

62-2786-0436-8, 62-2786-0437-6, 62-2786-1445-8, 62-2786-1450-8, 62-2786-3630-3, 62-2786-3936-4

Recommended use

Adhesive

Supplier's details

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

Emergency telephone number

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

28-2521-4, 08-8284-5

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| | | | |
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| Document Group: | 08-8284-5 | Version Number: | 10.00 |
| Issue Date: | 04/16/15 | Supersedes Date: | 01/04/12 |

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Plastic Adhesive DP8005 Off-White and Structural Plastic Adhesive 8005 Translucent, Part A

Product Identification Numbers

62-2886-7530-9

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive

1.3. Supplier's details

| | |
|----------------------|---|
| MANUFACTURER: | 3M |
| DIVISION: | Industrial Adhesives and Tapes 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

Flammable Liquid: Category 4.
Serious Eye Damage/Irritation: Category 1.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Germ Cell Mutagenicity: Category 2.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Health Hazard |

Pictograms



Hazard Statements

Combustible liquid.

Causes serious eye damage.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause an allergic skin reaction.
 Suspected of causing genetic defects.

Precautionary Statements

Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 In case of inadequate ventilation wear respiratory protection.
 Wear protective gloves and eye/face protection.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF ON SKIN: Wash with plenty of soap and water.
 Immediately call a POISON CENTER or doctor/physician.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.
 In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

Keep cool.
 Store locked up in a well-ventilated place.

Disposal:

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

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---------------|--------------------------|
| Polyester Adipate (NJTS Reg No 04499600-7142) | Trade Secret* | 40 - 70 Trade Secret * |
| Polyfunctional Aziridine | 64265-57-2 | 20 - 40 Trade Secret * |
| Amine Borane Complex | 223674-50-8 | 5 - 20 Trade Secret * |
| Amorphous Silica | 67762-90-7 | 0.5 - 1.5 Trade Secret * |

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*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:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

| <u>Substance</u> | <u>Condition</u> |
|--------------------------|-------------------|
| Aldehydes | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Irritant Vapors or Gases | During Combustion |
| Oxides of Nitrogen | During Combustion |

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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 using non-sparking tools. 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

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing 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. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Store away from heat. Store away from acids. Store away from oxidizing agents.

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 |
|-------------------|-------------------|---------------|--|----------------------------|
| Amorphous Silica | 67762-90-7 | CMRG | CEIL:5 mg/m3 | |
| SILICA, AMORPHOUS | 67762-90-7 | OSHA | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft. | |

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

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full Face Shield

Indirect Vented Goggles

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| General Physical Form: | Liquid |
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | mild odor, white |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | >=180 °F |
| Flash Point | 180 °F [<i>Test Method:</i> Closed Cup] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | <=0.1 mmHg |
| Vapor Density | <i>No Data Available</i> |
| Density | 1.063 g/ml |
| Specific Gravity | 1.063 [<i>Ref Std:</i> WATER=1] |
| Solubility in Water | Slight (less than 10%) |
| 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 | 49,000 centipoise [<i>@ 73.4 °F</i>] |
| Hazardous Air Pollutants | 0 % weight [<i>Test Method:</i> Calculated] |
| VOC Less H2O & Exempt Solvents | 7.8 g/l [<i>Details:</i> when used as intended with Part B] |

VOC Less H2O & Exempt Solvents
VOC Less H2O & Exempt Solvents

0.8 % [Details: when used as intended with Part B]
65 g/l [Test Method: calculated SCAQMD rule 443.1] [Details:
as supplied]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat
Sparks and/or flames

10.5. Incompatible materials

Strong acids
Strong oxidizing agents

10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known. | |

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:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

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

Additional Health Effects:

Genotoxicity:

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

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 2,000 - 5,000 mg/kg |
| Polyfunctional Aziridine | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Polyfunctional Aziridine | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.252 mg/l |
| Polyfunctional Aziridine | Ingestion | Rat | LD50 3,038 mg/kg |
| Amorphous Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Amorphous Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Amorphous Silica | Ingestion | Rat | LD50 > 5,110 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--------------------------|---------|---------------------------|
| Polyfunctional Aziridine | Rabbit | Mild irritant |
| Amorphous Silica | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--------------------------|---------|---------------------------|
| Polyfunctional Aziridine | Rabbit | Corrosive |
| Amorphous Silica | Rabbit | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|--------------------------|------------------|-----------------|
| Polyfunctional Aziridine | Human and animal | Sensitizing |
| Amorphous Silica | Human and animal | Not sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|--------------------------|---------|-------------|
| Polyfunctional Aziridine | Human | Sensitizing |

Germ Cell Mutagenicity

| Name | Route | Value |
|--------------------------|----------|---------------|
| Polyfunctional Aziridine | In vivo | Mutagenic |
| Amorphous Silica | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|------------------|---------------|---------|--|
| Amorphous Silica | Not Specified | Mouse | 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 |
|------------------|-----------|----------------------------------|---------|-----------------------|----------------------|
| Amorphous Silica | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Amorphous Silica | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Amorphous Silica | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|--------------------------|------------|------------------------|--|---------|---------------------|-------------------|
| Polyfunctional Aziridine | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL Not available | 4 hours |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|------------------|------------|--------------------------------|-----------------------|---------|---------------------|-----------------------|
| Amorphous Silica | Inhalation | respiratory system silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |

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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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 - Yes 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. One or more of the components in this material is not listed on the TSCA inventory, but is approved for specific commercial use(s) under a US EPA low volume exemption.

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: 3 **Flammability:** 2 **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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|------------------------|-----------|-------------------------|----------|
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| Issue Date: | 04/16/15 | Supersedes Date: | 01/04/12 |

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| Document Group: | 28-2521-4 | Version Number: | 4.00 |
| Issue Date: | 08/25/16 | Supersedes Date: | 04/16/15 |

SECTION 1: Identification

1.1. Product identifier

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8005 Off-White, Part B

1.2. Recommended use and restrictions on use

Recommended use

Adhesive

1.3. Supplier's details

| | |
|----------------------|---|
| MANUFACTURER: | 3M |
| DIVISION: | Industrial Adhesives and Tapes 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

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Health Hazard |

Pictograms



Hazard Statements

Causes serious eye irritation.
 Causes skin irritation.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause an allergic skin reaction.

Precautionary Statements

Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray.
 In case of inadequate ventilation wear respiratory protection.
 Wear protective gloves and eye/face protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.

Disposal:

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

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|---------------|------------------------|
| Tetrahydrofurfuryl Methacrylate | 2455-24-5 | 30 - 70 Trade Secret * |
| 2-Ethylhexyl Methacrylate | 688-84-6 | 10 - 30 Trade Secret * |
| Acrylate Polymer (NJTS Reg No 04499600-6800) | Trade Secret* | 10 - 30 Trade Secret * |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | 21282-97-3 | 1 - 15 Trade Secret * |
| Glass Spheres | 68131-74-8 | 1 - 10 Trade Secret * |
| Impact Modifier | 20882-04-6 | 1 - 10 Trade Secret * |
| Succinic Anhydride | 108-30-5 | <= 0.7 Trade Secret * |
| 2-Hydroxyethylmethacrylate | 868-77-9 | <= 0.3 Trade Secret * |
| Methyl Methacrylate | 80-62-6 | <= 0.3 Trade Secret * |

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*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:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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> |
|--------------------------|-------------------|
| Aldehydes | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Irritant Vapors or Gases | During Combustion |
| Oxides of Nitrogen | 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

Evacuate area. 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. 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

Avoid breathing 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.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids.

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 |
|---------------------|------------|--------|-------------------------|---|
| Methyl Methacrylate | 80-62-6 | ACGIH | TWA:50 ppm;STEL:100 ppm | Dermal Sensitizer, A4: Not class. as human carcin |
| Methyl Methacrylate | 80-62-6 | OSHA | TWA:410 mg/m3(100 ppm) | |

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

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

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: Fluoroelastomer
Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| General Physical Form: | Liquid |
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | Off-white pasty liquid mild acrylic odor. |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | >=180 °F |
| Flash Point | 218 °F [<i>Test Method: Closed Cup</i>] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | <=0.1 mmHg [@ 20 °C] |
| Vapor Density | <i>No Data Available</i> |
| Density | 0.98 g/ml |
| Specific Gravity | 0.98 [<i>Ref Std: WATER=1</i>] |
| Solubility in Water | Slight (less than 10%) |
| 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> |
| Hazardous Air Pollutants | 0 % weight [<i>Test Method: Calculated</i>] |
| Molecular weight | <i>No Data Available</i> |
| VOC Less H2O & Exempt Solvents | 7.3 g/l [<i>Details: when used as intended with Part A</i>] |
| VOC Less H2O & Exempt Solvents | 0.8 % [<i>Details: when used as intended with Part A</i>] |
| VOC Less H2O & Exempt Solvents | 392 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>] [<i>Details: as supplied</i>] |

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Strong acids

10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known. | |

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:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

May be harmful if swallowed.

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

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 2,000 - 5,000 mg/kg |
| Tetrahydrofurfuryl Methacrylate | Dermal | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Tetrahydrofurfuryl Methacrylate | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 2-Ethylhexyl Methacrylate | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| 2-Ethylhexyl Methacrylate | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Impact Modifier | Dermal | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Impact Modifier | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Succinic Anhydride | Dermal | Rat | LD50 > 2,000 mg/kg |
| Succinic Anhydride | Ingestion | Rat | LD50 1,510 mg/kg |
| 2-Hydroxyethylmethacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 2-Hydroxyethylmethacrylate | Ingestion | Rat | LD50 5,564 mg/kg |
| Methyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Methyl Methacrylate | Inhalation-Vapor (4 hours) | Rat | LC50 29 mg/l |
| Methyl Methacrylate | Ingestion | Rat | LD50 7,900 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---------------------------------|-------------------|--------------------|
| Tetrahydrofurfuryl Methacrylate | similar compounds | Irritant |
| 2-Ethylhexyl Methacrylate | Rabbit | Minimal irritation |
| Impact Modifier | Not applicable | Irritant |
| Succinic Anhydride | In vitro data | Corrosive |
| 2-Hydroxyethylmethacrylate | Rabbit | Minimal irritation |
| Methyl Methacrylate | Human and animal | Mild irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---------------------------------|------------------------|---------------------------|
| Tetrahydrofurfuryl Methacrylate | similar compounds | Severe irritant |
| 2-Ethylhexyl Methacrylate | Rabbit | No significant irritation |
| Impact Modifier | Not available | Severe irritant |
| Succinic Anhydride | similar health hazards | Corrosive |
| 2-Hydroxyethylmethacrylate | Rabbit | Moderate irritant |
| Methyl Methacrylate | Rabbit | Moderate irritant |

Skin Sensitization

| Name | Species | Value |
|---------------------------------|-------------------|--|
| Tetrahydrofurfuryl Methacrylate | Human | Some positive data exist, but the data are not sufficient for classification |
| 2-Ethylhexyl Methacrylate | Guinea pig | Sensitizing |
| Impact Modifier | similar compounds | Sensitizing |
| Succinic Anhydride | Mouse | Sensitizing |
| 2-Hydroxyethylmethacrylate | Human and | Sensitizing |

| | | |
|---------------------|----------------------------------|-------------|
| Methyl Methacrylate | animal Human and animal | Sensitizing |
|---------------------|----------------------------------|-------------|

Respiratory Sensitization

| Name | Species | Value |
|---------------------|-------------------|--|
| Succinic Anhydride | similar compounds | Sensitizing |
| Methyl Methacrylate | Human | Some positive data exist, but the data are not sufficient for classification |

Germ Cell Mutagenicity

| Name | Route | Value |
|----------------------------|----------|--|
| Impact Modifier | In Vitro | Not mutagenic |
| Succinic Anhydride | In Vitro | Not mutagenic |
| 2-Hydroxyethylmethacrylate | In vivo | Not mutagenic |
| 2-Hydroxyethylmethacrylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Methyl Methacrylate | In vivo | Not mutagenic |
| Methyl Methacrylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|---------------------|------------|-------------------------|------------------|
| Succinic Anhydride | Ingestion | Multiple animal species | Not carcinogenic |
| Methyl Methacrylate | Ingestion | Rat | Not carcinogenic |
| Methyl Methacrylate | Inhalation | Human and animal | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|----------------------------|------------|----------------------------------|---------|-----------------------|--------------------------------|
| 2-Hydroxyethylmethacrylate | Ingestion | Not toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| 2-Hydroxyethylmethacrylate | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 mg/kg/day | 49 days |
| 2-Hydroxyethylmethacrylate | Ingestion | Not toxic to development | Rat | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| Methyl Methacrylate | Inhalation | Not toxic to male reproduction | Mouse | NOAEL 36.9 mg/l | |
| Methyl Methacrylate | Inhalation | Not toxic to development | Rat | NOAEL 8.3 mg/l | during organogenesis |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------------------------|------------|------------------------|--|---------|---------------------|-------------------|
| Tetrahydrofurfuryl Methacrylate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |

| | | | | | | |
|---------------------|------------|------------------------|--|------------------------|---------------------|-----------------------|
| Impact Modifier | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| Succinic Anhydride | Inhalation | respiratory irritation | May cause respiratory irritation | similar health hazards | NOAEL Not available | |
| Methyl Methacrylate | Inhalation | respiratory irritation | May cause respiratory irritation | Human | NOAEL Not available | occupational exposure |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------------|------------|--|--|-------------------------|---------------------|-----------------------|
| Succinic Anhydride | Ingestion | heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system | All data are negative | Mouse | NOAEL 300 mg/kg/day | 13 weeks |
| Methyl Methacrylate | Dermal | peripheral nervous system | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Methyl Methacrylate | Inhalation | olfactory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |
| Methyl Methacrylate | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL Not available | 14 weeks |
| Methyl Methacrylate | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 12.3 mg/l | 14 weeks |
| Methyl Methacrylate | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |

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 - No

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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