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Safety Data Sheet

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Purchase Order #: 6313968
Customer Number: 0026320740

MSDS COORDINATOR
ELLSWORTH ADHESIVE SYSTEMS
W129N10825 WASHINGTON DR
GERMANTOWN, WI 53022-4446
USA

Dear MSDS COORDINATOR

Enclosed is the Safety Data Sheet (SDS)* for the product that your company recently purchased from 3M.

Please forward the attached document(s) to the individual in your organization responsible for hazard communication.

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*An Article Information Sheet (AIS) or Article Information Letter (AIL) may be enclosed in place of an SDS if the product is an article which does not require an SDS under the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.



Safety Data Sheet

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| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 28-2535-4 | Version Number: | 4.03 |
| Issue Date: | 11/15/22 | Supersedes Date: | 04/09/21 |

Product identifier

3M™ Scotch-Weld™ Structural Plastic Adhesive DP8005, Black

ID Number(s):

62-2779-0436-3, 62-2779-0437-1, 62-2779-0438-9, 62-2779-0445-4, 62-2779-1445-3, 62-2779-1450-3, 62-2779-3630-8, 62-2779-3936-9

7100076679, 7000121231, 7100082558, 7100089476, 7100089475, 7010301035, 7010365931

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:

18-8243-0, 28-2531-3

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 28-2531-3 | Version Number: | 9.04 |
| Issue Date: | 11/15/22 | Supersedes Date: | 08/26/21 |

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Plastic Adhesive DP8005 Black, Part B

1.2. Recommended use and restrictions on use

Recommended use

Adhesive, part B of two part 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 1.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1A.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 2.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Health Hazard |

Pictograms



Hazard Statements

Causes serious eye damage.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause an allergic skin reaction.
 May damage fertility or the unborn child.
 Suspected of causing cancer.

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.
 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.

Storage:

Store locked up.

Disposal:

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

2% of the mixture consists of ingredients of unknown acute oral toxicity.

2% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|---------------|------------------------|
| Tetrahydrofurfuryl Methacrylate | 2455-24-5 | 30 - 70 Trade Secret * |
| Acrylate Polymer (NJTS Reg. No. 04499600-6806) | Trade Secret* | 10 - 30 Trade Secret * |
| 2-Ethylhexyl Methacrylate | 688-84-6 | 10 - 24 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 (NJTS Reg. No. 04499600-7431) | Trade Secret* | 1 - 10 Trade Secret * |
| Impact Modifier | 20882-04-6 | 1 - 9 Trade Secret * |
| Succinic Anhydride | 108-30-5 | < 0.7 Trade Secret * |

| | | |
|-----------------------------|-----------|------------------------|
| 2-Hydroxyethyl Methacrylate | 868-77-9 | < 0.3 Trade Secret * |
| Carbon Black | 1333-86-4 | <= 0.3 Trade Secret * |
| Methyl Methacrylate | 80-62-6 | < 0.3 Trade Secret * |
| Tetrahydrofurfuryl Alcohol | 97-99-4 | < 0.3 Trade Secret * |
| Styrene Monomer | 100-42-5 | < 0.2 Trade Secret * |
| Maleic Anhydride | 108-31-6 | < 0.002 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

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

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 carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

- Aldehydes
- Carbon monoxide
- Carbon dioxide
- Hydrogen Cyanide
- Irritant Vapors or Gases
- Oxides of Nitrogen

Condition

- During Combustion
- During Combustion
- During Combustion
- During Combustion
- During Combustion
- During Combustion

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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

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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. 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

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 |
|------------------|------------|--------|--|---|
| Styrene Monomer | 100-42-5 | ACGIH | TWA:10 ppm;STEL:20 ppm | A3: Confirmed animal carcin., Ototoxicant |
| Styrene Monomer | 100-42-5 | OSHA | TWA:100 ppm;CEIL:200 ppm | |
| Maleic Anhydride | 108-31-6 | ACGIH | TWA(inhalable fraction and vapor):0.01 mg/m3 | A4: Not class. as human carcin, Dermal/Respiratory Sensitizer |
| Maleic Anhydride | 108-31-6 | OSHA | TWA:1 mg/m3(0.25 ppm) | |
| Carbon Black | 1333-86-4 | ACGIH | TWA(inhalable fraction):3 mg/m3 | A3: Confirmed animal carcin. |
| Carbon Black | 1333-86-4 | OSHA | TWA:3.5 mg/m3 | |

| | | | | |
|----------------------------|---------|-------|-------------------------|---|
| Methyl Methacrylate | 80-62-6 | ACGIH | TWA:50 ppm;STEL:100 ppm | A4: Not class. as human carcin, Dermal Sensitizer |
| Methyl Methacrylate | 80-62-6 | OSHA | TWA:410 mg/m3(100 ppm) | |
| Tetrahydrofurfuryl Alcohol | 97-99-4 | AIHA | TWA:2 mg/m3(0.5 ppm) | SKIN |

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

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 - 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

Appearance

Physical state

Liquid

Color

Black

| | |
|--|---|
| Specific Physical Form: | Paste |
| Odor | Mild Acrylic |
| 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</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 [<i>@</i> 20 °C] |
| Vapor Density | <i>No Data Available</i> |
| Density | 0.984 g/ml |
| Specific Gravity | 0.984 [<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 | 25,000 centipoise |
| Hazardous Air Pollutants | <= 0.2 % weight [<i>Test Method</i> :Calculated] |
| Molecular weight | <i>No Data Available</i> |
| VOC Less H2O & Exempt Solvents | 7.3 g/l [<i>Details</i> :when used as intended with Part A] |
| VOC Less H2O & Exempt Solvents | 0.8 % [<i>Details</i> :when used as intended with Part A] |
| VOC Less H2O & Exempt Solvents | 392 g/l [<i>Test Method</i> :calculated SCAQMD rule 443.1] [<i>Details</i> :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

10.5. Incompatible materials

Strong acids

10.6. Hazardous decomposition products

Substance

Condition

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.

May cause additional health effects (see below).

Skin Contact:

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

May cause additional health effects (see below).

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:

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

May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

| Ingredient | CAS No. | Class Description | Regulation |
|--------------|-----------|-------------------------------|---|
| Carbon black | 1333-86-4 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| Styrene | 100-42-5 | Grp. 2A: Probable human carc. | International Agency for Research on Cancer |
| Styrene | 100-42-5 | Anticipated human carcinogen | National Toxicology Program Carcinogens |

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 | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Tetrahydrofurfuryl Methacrylate | Ingestion | Rat | LD50 4,000 mg/kg |
| Tetrahydrofurfuryl Methacrylate | Dermal | similar health hazards | 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 | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| Impact Modifier | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Dermal | Rat | LD50 > 2,000 mg/kg |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Succinic Anhydride | Dermal | Rat | LD50 > 2,000 mg/kg |
| Succinic Anhydride | Ingestion | Rat | LD50 1,510 mg/kg |
| Tetrahydrofurfuryl Alcohol | Dermal | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Tetrahydrofurfuryl Alcohol | Inhalation-Vapor (4 hours) | Rat | LC50 > 3.1 mg/l |
| Tetrahydrofurfuryl Alcohol | Ingestion | Rat | LD50 > 2,000 mg/kg |
| 2-Hydroxyethyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 2-Hydroxyethyl Methacrylate | Ingestion | Rat | LD50 5,564 mg/kg |
| Carbon Black | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Carbon Black | Ingestion | Rat | LD50 > 8,000 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 |
| Styrene Monomer | Dermal | Rat | LD50 > 2,000 mg/kg |
| Styrene Monomer | Inhalation-Vapor (4 hours) | Rat | LC50 11.8 mg/l |
| Styrene Monomer | Ingestion | Rat | LD50 5,000 mg/kg |
| Maleic Anhydride | Dermal | Rabbit | LD50 2,620 mg/kg |
| Maleic Anhydride | Ingestion | Rat | LD50 1,030 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| Tetrahydrofurfuryl Methacrylate | Rabbit | No significant irritation |
| 2-Ethylhexyl Methacrylate | Rabbit | Minimal irritation |
| Impact Modifier | Professional judgement | Mild irritant |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Rabbit | No significant irritation |
| Succinic Anhydride | In vitro data | Corrosive |
| Tetrahydrofurfuryl Alcohol | Rabbit | No significant irritation |
| 2-Hydroxyethyl Methacrylate | Rabbit | Minimal irritation |
| Carbon Black | Rabbit | No significant irritation |
| Methyl Methacrylate | Human and animal | Mild irritant |
| Styrene Monomer | Professional judgement | Mild irritant |
| Maleic Anhydride | Human and animal | Corrosive |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| Tetrahydrofurfuryl Methacrylate | Rabbit | No significant irritation |
| 2-Ethylhexyl Methacrylate | Rabbit | No significant irritation |
| Impact Modifier | In vitro data | Corrosive |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Rabbit | No significant irritation |
| Succinic Anhydride | similar health hazards | Corrosive |
| Tetrahydrofurfuryl Alcohol | Rabbit | Severe irritant |
| 2-Hydroxyethyl Methacrylate | Rabbit | Moderate irritant |
| Carbon Black | Rabbit | No significant irritation |
| Methyl Methacrylate | Rabbit | Moderate irritant |
| Styrene Monomer | Professional judgement | Moderate irritant |
| Maleic Anhydride | Rabbit | Corrosive |

Skin Sensitization

| Name | Species | Value |
|--|-------------------------|----------------|
| Tetrahydrofurfuryl Methacrylate | In vitro data | Sensitizing |
| 2-Ethylhexyl Methacrylate | Guinea pig | Sensitizing |
| Impact Modifier | Professional judgement | Sensitizing |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Mouse | Not classified |
| Succinic Anhydride | Mouse | Sensitizing |
| Tetrahydrofurfuryl Alcohol | Mouse | Not classified |
| 2-Hydroxyethyl Methacrylate | Human and animal | Sensitizing |
| Methyl Methacrylate | Human and animal | Sensitizing |
| Styrene Monomer | Guinea pig | Not classified |
| Maleic Anhydride | Multiple animal species | Sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|---------------------|-------------------|----------------|
| Succinic Anhydride | similar compounds | Sensitizing |
| Methyl Methacrylate | Human | Not classified |
| Maleic Anhydride | Human | Sensitizing |

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| Tetrahydrofurfuryl Methacrylate | In Vitro | Not mutagenic |
| Impact Modifier | In Vitro | Not mutagenic |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | In vivo | Not mutagenic |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Succinic Anhydride | In Vitro | Not mutagenic |

| | | |
|-----------------------------|----------|--|
| Tetrahydrofurfuryl Alcohol | In Vitro | Not mutagenic |
| 2-Hydroxyethyl Methacrylate | In vivo | Not mutagenic |
| 2-Hydroxyethyl Methacrylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Carbon Black | In Vitro | Not mutagenic |
| Carbon Black | In vivo | 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 |
| Styrene Monomer | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Styrene Monomer | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Maleic Anhydride | In vivo | Not mutagenic |
| Maleic Anhydride | 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 |
| Carbon Black | Dermal | Mouse | Not carcinogenic |
| Carbon Black | Ingestion | Mouse | Not carcinogenic |
| Carbon Black | Inhalation | Rat | Carcinogenic |
| Methyl Methacrylate | Ingestion | Rat | Not carcinogenic |
| Methyl Methacrylate | Inhalation | Human and animal | Not carcinogenic |
| Styrene Monomer | Ingestion | Mouse | Carcinogenic |
| Styrene Monomer | Inhalation | Human and animal | Carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|--|------------|--|---------|-----------------------|------------------------------|
| Tetrahydrofurfuryl Methacrylate | Ingestion | Not classified for male reproduction | Rat | NOAEL 300 mg/kg/day | 29 days |
| Tetrahydrofurfuryl Methacrylate | Ingestion | Toxic to female reproduction | Rat | NOAEL 120 mg/kg/day | premating into lactation |
| Tetrahydrofurfuryl Methacrylate | Ingestion | Toxic to development | Rat | NOAEL 120 mg/kg/day | premating into lactation |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Ingestion | Not classified for female reproduction | Rat | NOAEL 500 mg/kg/day | premating into lactation |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Ingestion | Not classified for male reproduction | Rat | NOAEL 500 mg/kg/day | 56 days |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| Tetrahydrofurfuryl Alcohol | Ingestion | Toxic to female reproduction | Rat | NOAEL 50 mg/kg/day | premating into lactation |
| Tetrahydrofurfuryl Alcohol | Dermal | Toxic to male reproduction | Rat | NOAEL 100 mg/kg/day | 13 weeks |
| Tetrahydrofurfuryl Alcohol | Ingestion | Toxic to male reproduction | Rat | NOAEL 150 mg/kg/day | 47 days |
| Tetrahydrofurfuryl Alcohol | Inhalation | Toxic to male reproduction | Rat | NOAEL 0.6 mg/l | 90 days |
| Tetrahydrofurfuryl Alcohol | Ingestion | Toxic to development | Rat | NOAEL 50 mg/kg/day | premating into lactation |
| 2-Hydroxyethyl Methacrylate | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |

| | | | | | |
|-----------------------------|------------|--|-------------------------|-----------------------|--------------------------------|
| 2-Hydroxyethyl Methacrylate | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 49 days |
| 2-Hydroxyethyl Methacrylate | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| Methyl Methacrylate | Inhalation | Not classified for male reproduction | Mouse | NOAEL 36.9 mg/l | |
| Methyl Methacrylate | Inhalation | Not classified for development | Rat | NOAEL 8.3 mg/l | during organogenesis |
| Styrene Monomer | Ingestion | Not classified for female reproduction | Rat | NOAEL 21 mg/kg/day | 3 generation |
| Styrene Monomer | Inhalation | Not classified for female reproduction | Rat | NOAEL 2.1 mg/l | 2 generation |
| Styrene Monomer | Inhalation | Not classified for male reproduction | Rat | NOAEL 2.1 mg/l | 2 generation |
| Styrene Monomer | Ingestion | Not classified for male reproduction | Rat | NOAEL 400 mg/kg/day | 60 days |
| Styrene Monomer | Ingestion | Not classified for development | Rat | NOAEL 400 mg/kg/day | during gestation |
| Styrene Monomer | Inhalation | Not classified for development | Multiple animal species | NOAEL 2.1 mg/l | during gestation |
| Maleic Anhydride | Ingestion | Not classified for female reproduction | Rat | NOAEL 55 mg/kg/day | 2 generation |
| Maleic Anhydride | Ingestion | Not classified for male reproduction | Rat | NOAEL 55 mg/kg/day | 2 generation |
| Maleic Anhydride | Ingestion | Not classified for development | Rat | NOAEL 140 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 |
|----------------------------|------------|-----------------------------------|--|-------------------------|---------------------|-----------------------|
| Impact Modifier | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Succinic Anhydride | Inhalation | respiratory irritation | May cause respiratory irritation | similar health hazards | NOAEL Not available | |
| Tetrahydrofurfuryl Alcohol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Methyl Methacrylate | Inhalation | respiratory irritation | May cause respiratory irritation | Human | NOAEL Not available | occupational exposure |
| Styrene Monomer | Inhalation | auditory system | Causes damage to organs | Multiple animal species | LOAEL 4.3 mg/l | not available |
| Styrene Monomer | Inhalation | liver | Causes damage to organs | Mouse | LOAEL 2.1 mg/l | not available |
| Styrene Monomer | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | occupational exposure |
| Styrene Monomer | Inhalation | respiratory irritation | May cause respiratory irritation | Human and animal | NOAEL Not available | |
| Styrene Monomer | Inhalation | endocrine system | Not classified | Rat | NOAEL Not available | not available |
| Styrene Monomer | Inhalation | kidney and/or bladder | Not classified | Multiple animal species | NOAEL 2.1 mg/l | not available |
| Maleic Anhydride | Inhalation | respiratory irritation | May cause respiratory irritation | Human | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|--|------------|--|--|-------------------------|---------------------|-----------------------|
| Tetrahydrofurfuryl Methacrylate | Ingestion | hematopoietic system nervous system | Not classified | Rat | NOAEL 300 mg/kg/day | 29 days |
| Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester | Ingestion | hematopoietic system nervous system eyes | Not classified | Rat | NOAEL 500 mg/kg/day | 90 days |
| 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 | Not classified | Mouse | NOAEL 300 mg/kg/day | 13 weeks |
| Tetrahydrofurfuryl Alcohol | Inhalation | nervous system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.2 mg/l | 90 days |
| Tetrahydrofurfuryl Alcohol | Inhalation | hematopoietic system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 0.6 mg/l | 90 days |
| Tetrahydrofurfuryl Alcohol | Inhalation | eyes | Not classified | Rat | NOAEL 2.1 mg/l | 90 days |
| Tetrahydrofurfuryl Alcohol | Ingestion | hematopoietic system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 69 mg/kg/day | 91 days |
| Tetrahydrofurfuryl Alcohol | Ingestion | immune system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 150 mg/kg/day | 28 days |
| Tetrahydrofurfuryl Alcohol | Ingestion | endocrine system kidney and/or bladder | Not classified | Rat | NOAEL 600 mg/kg/day | 28 days |
| Tetrahydrofurfuryl Alcohol | Ingestion | liver eyes | Not classified | Rat | NOAEL 781 mg/kg/day | 91 days |
| Tetrahydrofurfuryl Alcohol | Ingestion | heart nervous system | Not classified | Rat | NOAEL 600 mg/kg/day | 28 days |
| Carbon Black | Inhalation | pneumoconiosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Methyl Methacrylate | Dermal | peripheral nervous system | Not classified | 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 | Not classified | Multiple animal species | NOAEL Not available | 14 weeks |
| Methyl Methacrylate | Inhalation | liver | Not classified | Mouse | NOAEL 12.3 mg/l | 14 weeks |
| Methyl Methacrylate | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Styrene Monomer | Inhalation | auditory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL not available | occupational exposure |
| Styrene Monomer | Inhalation | eyes | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |
| Styrene Monomer | Inhalation | liver | May cause damage to organs though prolonged or repeated exposure | Mouse | LOAEL 0.85 mg/l | 13 weeks |
| Styrene Monomer | Inhalation | nervous system | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | LOAEL 1.1 mg/l | not available |
| Styrene Monomer | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 0.85 mg/l | 7 days |
| Styrene Monomer | Inhalation | endocrine system | Not classified | Rat | NOAEL 0.6 mg/l | 10 days |
| Styrene Monomer | Inhalation | respiratory system | Not classified | Multiple | LOAEL 0.09 | not available |

| | | | | animal species | mg/l | |
|------------------|------------|---|--|-------------------------|---------------------|---------------|
| Styrene Monomer | Inhalation | heart gastrointestinal tract bone, teeth, nails, and/or hair muscles kidney and/or bladder | Not classified | Multiple animal species | NOAEL 4.3 mg/l | 2 years |
| Styrene Monomer | Ingestion | nervous system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 500 mg/kg/day | 8 weeks |
| Styrene Monomer | Ingestion | immune system | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL Not available | not available |
| Styrene Monomer | Ingestion | liver kidney and/or bladder | Not classified | Rat | NOAEL 677 mg/kg/day | 6 months |
| Styrene Monomer | Ingestion | hematopoietic system | Not classified | Dog | NOAEL 600 mg/kg/day | 470 days |
| Styrene Monomer | Ingestion | heart respiratory system | Not classified | Rat | NOAEL 35 mg/kg/day | 105 weeks |
| Maleic Anhydride | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.0011 mg/l | 6 months |
| Maleic Anhydride | Inhalation | endocrine system hematopoietic system nervous system kidney and/or bladder heart liver eyes | Not classified | Rat | NOAEL 0.0098 mg/l | 6 months |
| Maleic Anhydride | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 55 mg/kg/day | 80 days |
| Maleic Anhydride | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 250 mg/kg/day | 183 days |
| Maleic Anhydride | Ingestion | heart nervous system | Not classified | Rat | NOAEL 600 mg/kg/day | 183 days |
| Maleic Anhydride | Ingestion | gastrointestinal tract | Not classified | Rat | NOAEL 150 mg/kg/day | 80 days |
| Maleic Anhydride | Ingestion | hematopoietic system | Not classified | Dog | NOAEL 60 mg/kg/day | 90 days |
| Maleic Anhydride | Ingestion | skin endocrine system immune system eyes respiratory system | Not classified | Rat | NOAEL 150 mg/kg/day | 80 days |

Aspiration Hazard

| Name | Value |
|-----------------|-------------------|
| Styrene Monomer | Aspiration hazard |

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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Not applicable

Health Hazards

Carcinogenicity

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

| <u>Ingredient</u> | <u>C.A.S. No</u> | <u>% by Wt</u> |
|-------------------|------------------|--------------------|
| Styrene Monomer | 100-42-5 | Trade Secret < 0.2 |

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. All required components of this product are listed on the active portion of the TSCA Inventory.

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:** 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.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 28-2531-3 | Version Number: | 9.04 |
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Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 18-8243-0 | Version Number: | 5.02 |
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SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Plastic Adhesive DP8005 Black and Structural Plastic Adhesive 8005 Black, Part A

Product Identification Numbers

62-2879-7530-4, 62-2879-8530-3
7000121243

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.

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 * |
| Titanium Dioxide | 13463-67-7 | <= 0.5 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

No critical symptoms or effects. 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. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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.

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 metal 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or 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. 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. 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 |
|-------------------|------------|--------|--|--------------------------------|
| Titanium Dioxide | 13463-67-7 | ACGIH | TWA:10 mg/m3 | A4: Not class. as human carcin |
| Titanium Dioxide | 13463-67-7 | OSHA | TWA(as total dust):15 mg/m3 | |
| SILICA, AMORPHOUS | 67762-90-7 | OSHA | TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3 | |

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

Appearance

Physical state
Color

Liquid
White

Specific Physical Form:

Paste

Odor

Mild Odor

Odor threshold

No Data Available

pH

Not Applicable

Melting point

Not Applicable

Boiling Point

≥ 180 °F

Flash Point

180 °F [*Test Method: Closed Cup*]

Evaporation rate

No Data Available

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

No Data Available

Flammable Limits(UEL)

No Data Available

Vapor Pressure

≤ 0.1 mmHg

Vapor Density

No Data Available

Density

1.063 g/ml

Specific Gravity

1.063 [*Ref Std: WATER=1*]

Solubility in Water

Slight (less than 10%)

Solubility- non-water

No Data Available

Partition coefficient: n-octanol/ water

No Data Available

Autoignition temperature

No Data Available

Decomposition temperature

No Data Available

| | |
|--------------------------------|---|
| Viscosity | 49,000 centipoise [<i>@ 73.4 °F</i>] |
| Hazardous Air Pollutants | 0 % weight [<i>Test Method: Calculated</i>] |
| Molecular weight | <i>No Data Available</i> |
| VOC Less H2O & Exempt Solvents | 7.8 g/l [<i>Details: when used as intended with Part B</i>] |
| VOC Less H2O & Exempt Solvents | 0.8 % [<i>Details: when used as intended with Part B</i>] |
| VOC Less H2O & Exempt Solvents | 65 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
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.

May cause additional health effects (see below).

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.

May cause additional health effects (see below).

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.

May cause additional health effects (see below).

Additional Health Effects:

Genotoxicity:

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

Carcinogenicity:

| Ingredient | CAS No. | Class Description | Regulation |
|------------------|------------|-------------------------------|---|
| Titanium Dioxide | 13463-67-7 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

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 ATE2,000 - 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 |
| Titanium Dioxide | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Titanium Dioxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.82 mg/l |
| Titanium Dioxide | Ingestion | Rat | LD50 > 10,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

Serious Eye Damage/Irritation

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

Skin Sensitization

| Name | Species | Value |
|--------------------------|------------------|----------------|
| Polyfunctional Aziridine | Human and animal | Sensitizing |
| Amorphous Silica | Human and animal | Not classified |
| Titanium Dioxide | Human and animal | Not classified |

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 |
| Titanium Dioxide | In Vitro | Not mutagenic |
| Titanium Dioxide | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|------------------|---------------|-------------------------|--|
| Amorphous Silica | Not Specified | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Titanium Dioxide | Ingestion | Multiple animal species | Not carcinogenic |
| Titanium Dioxide | Inhalation | Rat | Carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|------------------|-----------|--|---------|-----------------------|----------------------|
| Amorphous Silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Amorphous Silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Amorphous Silica | Ingestion | Not classified for 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 | Not classified | Human | NOAEL Not available | occupational exposure |
| Titanium Dioxide | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 0.01 mg/l | 2 years |
| Titanium Dioxide | Inhalation | pulmonary fibrosis | Not classified | 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.

Incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

| |
|--------------------------------------|
| Health Hazards |
| Germ cell mutagenicity |
| Respiratory or Skin Sensitization |
| Serious eye damage or eye irritation |

Additional TSCA Information

| <u>Components</u> | <u>CAS No</u> | <u>Additional Information</u> |
|----------------------|---------------|-------------------------------|
| Amine Borane Complex | 223674-50-8 | Allowed use(s): Catalyst. |

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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