# Safety Data Sheet

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| **Issue Date:** | 09/02/2025 | **Supercedes Date:** | 28/01/2022 |

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

## IDENTIFICATION

**1.1. Product identifier**
3M™Scotch-Weld™ Epoxy Adhesive DP100FR Cream

**Product Identification Numbers**
62-3531-1430-9 62-3531-1431-7 62-3531-1435-8 62-3531-1436-6 62-3531-3530-4
62-3531-3830-8

**1.2. Recommended use and restrictions on use**

**Recommended use**
Structural adhesive

**1.3. Supplier's details**

| | |
|---|---|
| **ADDRESS:** | 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor |
| **Telephone:** | 03-7884 2888 |
| **E Mail:** | 3mmyehsr@mmm.com |
| **Website:** | www.3M.com.my |

**1.4. Emergency telephone number**
+60 03-7884 2888

**This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:**

19-8211-5, 19-8269-3

## TRANSPORT INFORMATION

This product is a kit that consists of two or more different regulated materials packed in the same outer packaging (ship unit). The transportation classifications of the individual components appear in Section 14 of the attached SDSs.
Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation

classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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**3M Malaysia SDSs are available at www.3M.com.my**

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|---|---|---|---|
| **Document Group:** | 19-8211-5 | **Version Number:** | 7.00 |
| **Issue Date:** | 09/02/2025 | **Supercedes Date:** | 18/05/2021 |

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

## SECTION 1: Identification

### 1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Adhesive DP100FR Cream, Part A

### 1.2. Recommended use and restrictions on use

**Recommended use**
Structural adhesive, Structural adhesive

### 1.3. Supplier's details
**ADDRESS:** 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
**Telephone:** 03-7884 2888
**E Mail:** 3mmyehsr@mmm.com
**Website:** www.3M.com.my

### 1.4. Emergency telephone number
+60 03-7884 2888

## SECTION 2: Hazard identification

### 2.1. Classification of the substance or mixture
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Skin Sensitizer: Category 1.
Chronic Aquatic Toxicity: Category 3.

### 2.2. Label elements
**Signal word**
Warning

**Symbols**
Exclamation mark |

**Pictograms**

**Hazard Statements:**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Precautionary statements**

**Prevention:**

| | |
|---|---|
| P280E | Wear protective gloves. |

**Response:**

| | |
|---|---|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313 | If skin irritation or rash occurs: Get medical attention. |

**Disposal:**

| | |
|---|---|
| P501 | Dispose of contents and container in accordance with applicable local, regional, national, and international regulations. |

**2.3. Other hazards**

A similar mixture has been tested for eye damage/irritation and the test results are reflected in the assigned classification., A similar mixture has been tested for skin corrosion/irritation and the test results are reflected in the assigned classification.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| Mercaptan Polymer | 72244-98-5 | 65 - 75 |
| Ammonium Polyphosphate | 68333-79-9 | 10 - 30 |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | 5 - 10 |
| Amorphous Silica | 67762-90-7 | 1 - 5 |
| bis((Dimethylamino)Methyl)Phenol | 71074-89-0 | 0.1 - 5 |
| Melamine | 108-78-1 | < 0.5 |

Any remaining components do not contribute to the hazards of this material.

## 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**

Allergic skin reaction (redness, swelling, blistering, and itching).

**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**

| Substance | Condition |
|---|---|
| Aldehydes | During Combustion |
| Hydrocarbons | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Ketones | During Combustion |
| Ammonia | During Combustion |
| Oxides of Nitrogen | During Combustion |
| Oxides of Sulfur | During Combustion |
| Toxic Vapor, Gas, Particulate | 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**
Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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.

**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 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. 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 away from heat. Store away from heat. Store away from oxidizing agents. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Occupational exposure limits**
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

**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:
Safety Glasses with side shields
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**

| | |
|---|---|
| **Physical state** | Liquid |
| **Specific Physical Form:** | Viscous Liquid |
| **Color** | White |
| **Odor** | Strong Mercaptan |
| **Odor threshold** | *No Data Available* |
| **pH** | *Not Applicable* |
| **Melting point/Freezing point** | *Not Applicable* |
| **Boiling point/Initial boiling point/Boiling range** | *No Data Available* |
| **Flash Point** | > 93.9 ºC [*Test Method:*Closed Cup] |
| **Evaporation rate** | Negligible |
| **Flammability** | Not Applicable |
| **Flammable Limits(LEL)** | *No Data Available* |
| **Flammable Limits(UEL)** | *No Data Available* |
| **Vapor Pressure** | <=186,158.4 Pa [@ 55 ºC ] |
| **Relative Vapor Density** | *Not Applicable* |
| **Density** | 1.3 g/ml [*Ref Std:*WATER=1] |
| **Relative Density** | 1.3 [*Ref Std:*WATER=1] |
| **Water solubility** | Nil |
| **Solubility- non-water** | *No Data Available* |
| **Partition coefficient: n-octanol/ water** | *No Data Available* |
| **Autoignition temperature** | *No Data Available* |
| **Decomposition temperature** | *No Data Available* |
| **Kinematic Viscosity** | 50,000 mm2/sec |
| **Volatile Organic Compounds** | *No Data Available* |
| **Percent volatile** | *No Data Available* |
| **VOC Less H2O & Exempt Solvents** | 0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B] |
| **VOC Less H2O & Exempt Solvents** | 0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied] |
| **VOC Less H2O & Exempt Solvents** | 0 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B] |
| **Molecular weight** | *No Data Available* |

| | |
|---|---|
| **Particle Characteristics** | *Not Applicable* |

## 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
Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

**10.5. Incompatible materials**
Strong oxidizing agents

**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.

**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:**
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:**

**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.

**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 >300 - =2,000 mg/kg |
| Mercaptan Polymer | Dermal | Rabbit | LD50 > 10,200 mg/kg |
| Mercaptan Polymer | Ingestion | Rat | LD50 2,600 mg/kg |
| Ammonium Polyphosphate | Dermal | Rat | LD50 > 5,000 mg/kg |
| Ammonium Polyphosphate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 4.85 mg/l |
| Ammonium Polyphosphate | Ingestion | Rat | LD50 > 300, < 2,000 mg/kg |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Dermal | Rat | LD50 1,280 mg/kg |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Ingestion | Rat | LD50 1,000 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 |
| bis((Dimethylamino)Methyl)Phenol | Ingestion | | LD50 estimated to be 300 - 2,000 mg/kg |
| Melamine | Dermal | Rabbit | LD50 > 1,000 mg/kg |
| Melamine | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.19 mg/l |
| Melamine | Ingestion | Rat | LD50 3,161 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| Overall product | In vitro data | Irritant |
| Mercaptan Polymer | Rabbit | No significant irritation |
| Ammonium Polyphosphate | In vitro data | No significant irritation |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Rabbit | Corrosive |
| Amorphous Silica | Rabbit | No significant irritation |
| bis((Dimethylamino)Methyl)Phenol | similar compounds | Corrosive |
| Melamine | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| Overall product | In vitro data | Severe irritant |
| Mercaptan Polymer | Rabbit | Mild irritant |
| Ammonium Polyphosphate | Rabbit | Moderate irritant |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Rabbit | Corrosive |
| Amorphous Silica | Rabbit | No significant irritation |
| bis((Dimethylamino)Methyl)Phenol | similar | Corrosive |

| | | |
|---|---|---|
| | compoun ds | |
| Melamine | Rabbit | No significant irritation |

**Sensitization:**

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| Mercaptan Polymer | Mouse | Sensitizing |
| Ammonium Polyphosphate | similar compoun ds | Not classified |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Guinea pig | Not classified |
| Amorphous Silica | Human and animal | Not classified |
| Melamine | Guinea pig | Not classified |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name | Route | Value |
|---|---|---|
| Mercaptan Polymer | In Vitro | Not mutagenic |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | In Vitro | Not mutagenic |
| Amorphous Silica | In Vitro | Not mutagenic |
| Melamine | In Vitro | Not mutagenic |
| Melamine | 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 |
| Melamine | Ingestion | Multiple animal species | Carcinogenic |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Ingestion | Not classified for male reproduction | Rat | NOAEL 150 mg/kg/day | 2 generation |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Ingestion | Not classified for female reproduction | Rat | NOAEL 50 mg/kg/day | 2 generation |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Ingestion | Not classified for development | Rabbit | NOAEL 15 mg/kg/day | during gestation |
| 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 |
| Melamine | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,227 mg/kg/day | 2 generation |
| Melamine | Ingestion | Not classified for development | Rat | NOAEL | during |

| | | | | | |
|---|---|---|---|---|---|
| | | | | 1,060 mg/kg/day | organogenesis |
| Melamine | Ingestion | Toxic to male reproduction | Rat | NOAEL 89 mg/kg/day | 2 generation |

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| Ammonium Polyphosphate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| Mercaptan Polymer | Ingestion | hematopoietic system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 75 mg/kg/day | 90 days |
| Mercaptan Polymer | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 250 mg/kg/day | 90 days |
| Mercaptan Polymer | Ingestion | endocrine system \| heart \| skin \| immune system \| nervous system \| eyes \| kidney and/or bladder \| respiratory system \| vascular system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 90 days |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Dermal | skin | Not classified | Rat | NOAEL 25 mg/kg/day | 4 weeks |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Dermal | liver \| nervous system \| auditory system \| hematopoietic system \| eyes | Not classified | Rat | NOAEL 125 mg/kg/day | 4 weeks |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | Ingestion | heart \| endocrine system \| hematopoietic system \| liver \| muscles \| nervous system \| kidney and/or bladder \| respiratory system \| vascular system \| auditory system \| skin \| gastrointestinal tract \| bone, teeth, nails, and/or hair \| immune system \| eyes | Not classified | Rat | NOAEL 150 mg/kg/day | 90 days |
| Amorphous Silica | Inhalation | respiratory system \| silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Melamine | Ingestion | kidney and/or bladder | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 44.6 mg/kg/day | 90 days |
| Melamine | Ingestion | heart \| skin \| endocrine system \| gastrointestinal tract \| bone, teeth, nails, and/or hair \| | Not classified | Rat | NOAEL 1,400 mg/kg/day | 90 days |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | hematopoietic system \| liver \| immune system \| muscles \| nervous system \| respiratory system | | | | |

**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

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labeling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.**

**12.1. Toxicity**

**Acute aquatic hazard:**
GHS Acute 3: Harmful to aquatic life.

**Chronic aquatic hazard:**
GHS Chronic 3: Harmful to aquatic life with long lasting effects

No product test data available

| Material | Cas # | Organism | Type | Exposure | Test Endpoint | Test Result |
|---|---|---|---|---|---|---|
| Mercaptan Polymer | 72244-98-5 | Activated sludge | Experimental | 3 hours | EC50 | >1,000 mg/l |
| Mercaptan Polymer | 72244-98-5 | Green algae | Experimental | 72 hours | EC50 | >733 mg/l |
| Mercaptan Polymer | 72244-98-5 | Water flea | Experimental | 48 hours | EC50 | 12 mg/l |
| Mercaptan Polymer | 72244-98-5 | Zebra Fish | Experimental | 96 hours | LC50 | 87 mg/l |
| Mercaptan Polymer | 72244-98-5 | Green algae | Experimental | 72 hours | NOEC | 338 mg/l |
| Mercaptan Polymer | 72244-98-5 | Water flea | Experimental | 21 days | NOEC | 3.5 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Activated sludge | Estimated | 3 hours | EC50 | >100 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Green algae | Estimated | 72 hours | EC50 | >97.1 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Rainbow Trout | Estimated | 96 hours | LC50 | >100 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Water flea | Estimated | 48 hours | EC50 | >100 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Green algae | Estimated | 72 hours | NOEC | 97.1 mg/l |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | N/A | Experimental | 96 hours | LC50 | 718 mg/l |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | Common Carp | Experimental | 96 hours | LC50 | >100 mg/l |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | Green algae | Experimental | 72 hours | EC50 | 46.7 mg/l |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| 2,4,6- | 90-72-2 | Green algae | Experimental | 72 hours | NOEC | 6.44 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| tris((Dimethylamino)Methyl)Phenol | | | | | | |
| Amorphous Silica | 67762-90-7 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| bis((Dimethylamino)Methyl)Phenol | 71074-89-0 | N/A | Data not available or insufficient for classification | N/A | N/A | NA |
| Melamine | 108-78-1 | Green algae | Experimental | 96 hours | EC50 | 325 mg/l |
| Melamine | 108-78-1 | Guppy | Experimental | 96 hours | LC50 | >3,000 mg/l |
| Melamine | 108-78-1 | Water flea | Experimental | 48 hours | EC50 | 48 mg/l |
| Melamine | 108-78-1 | Fathead Minnow | Experimental | 36 days | NOEC | 5.1 mg/l |
| Melamine | 108-78-1 | Green algae | Experimental | 96 hours | NOEC | 98 mg/l |
| Melamine | 108-78-1 | Water flea | Experimental | 21 days | NOEC | 11 mg/l |
| Melamine | 108-78-1 | Activated sludge | Experimental | 30 minutes | EC20 | >1,992 mg/l |
| Melamine | 108-78-1 | Bacteria | Experimental | 30 minutes | EC50 | >10,000 mg/l |
| Melamine | 108-78-1 | Barley | Experimental | 4 days | EC50 | 530 mg/l |

### 12.2. Persistence and degradability

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|---|---|---|---|---|---|
| Mercaptan Polymer | 72244-98-5 | Experimental Biodegradation | 28 days | Carbon dioxide evolution | 5 %CO2 evolution/THCO2 evolution | OECD 301B - Mod. Sturm or CO2 |
| Ammonium Polyphosphate | 68333-79-9 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 4 %BOD/ThOD | OECD 301D - Closed Bottle Test |
| Amorphous Silica | 67762-90-7 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| bis((Dimethylamino)Methyl)Phenol | 71074-89-0 | Modeled Biodegradation | 28 days | Biological Oxygen Demand | 41 %CO2 evolution/THCO2 evolution | Catalogic™ |
| Melamine | 108-78-1 | Experimental Biodegradation | 14 days | Biological Oxygen Demand | 0 %BOD/ThOD | OECD 301C - MITI (I) |
| Melamine | 108-78-1 | Experimental Aquatic Inherent Biodegrad. | 28 days | Dissolv. Organic Carbon Deplet | 0 %removal of DOC | OECD 302B Zahn-Wellens/EVPA |
| Melamine | 108-78-1 | Experimental Soil Metabolism Aerobic | | Half-life (t 1/2) | 2-3 years (t 1/2) | |

### 12.3. Bioaccumulative potential

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|---|---|---|---|---|---|
| Mercaptan Polymer | 72244-98-5 | Estimated Bioconcentration | | Log of Octanol/H2O part. coeff | >1.2 | |
| Ammonium Polyphosphate | 68333-79-9 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 2,4,6-tris((Dimethylamino)Methyl)Phenol | 90-72-2 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | -0.66 | 830.7550 Part.Coef Shake Flask |
| Amorphous Silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| bis((Dimethylamino)Methyl)Phenol | 71074-89-0 | Modeled Bioconcentration | | Log of Octanol/H2O part. coeff | -2.34 | ACD/Labs ChemSketch™ |
| Melamine | 108-78-1 | Experimental BCF | 42 days | Bioaccumulation | <3.8 | OECD305-Bioconcentration |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | - Fish | | Factor | | |
| Melamine | 108-78-1 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | -1.14 | EC A.8 Partition Coefficient |

**12.4. Mobility in soil**
Please contact manufacturer for more details

**12.5 Other adverse effects**
No information available

## SECTION 13: Disposal considerations

**13.1. Disposal methods**

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

## SECTION 14: Transport Information

Not hazardous for transportation.

**Marine Transport (IMDG)**

**UN Number:**None assigned.
**Proper Shipping Name:**None assigned.
**Technical Name:**None assigned.
**Hazard Class/Division:**None assigned.
**Subsidiary Risk:**None assigned.
**Packing Group:**None assigned.
**Limited Quantity:**None assigned.
**Marine Pollutant:** None assigned.
**Marine Pollutant Technical Name:** None assigned.
**Other Dangerous Goods Descriptions:**
None assigned.

**Air Transport (IATA)**

**UN Number:**None assigned.
**Proper Shipping Name:**None assigned.
**Technical Name:**None assigned.
**Hazard Class/Division:**None assigned.
**Subsidiary Risk:**None assigned.
**Packing Group:**None assigned.
**Limited Quantity:**None assigned.
**Marine Pollutant:** None assigned.
**Marine Pollutant Technical Name:** None assigned.
**Other Dangerous Goods Descriptions:**
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for

reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

## SECTION 15: Regulatory information

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

**Global inventory status**
Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

## SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

**3M Malaysia SDSs are available at www.3M.com.my**

# Safety Data Sheet

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| | | | |
|---|---|---|---|
| **Document Group:** | 19-8269-3 | **Version Number:** | 8.00 |
| **Issue Date:** | 23/02/2025 | **Supercedes Date:** | 15/05/2021 |

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

## SECTION 1: Identification

### 1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Adhesive DP100FR Cream, Part B

### 1.2. Recommended use and restrictions on use

**Recommended use**
Adhesive, Structural adhesive

### 1.3. Supplier's details
**ADDRESS:** 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
**Telephone:** 03-7884 2888
**E Mail:** 3mmyehsr@mmm.com
**Website:** www.3M.com.my

### 1.4. Emergency telephone number
+60 03-7884 2888

## SECTION 2: Hazard identification

### 2.1. Classification of the substance or mixture
Serious Eye Damage/Irritation: Category 2.
Skin Sensitizer: Category 1.
Chronic Aquatic Toxicity: Category 2.

### 2.2. Label elements
**Signal word**
Warning

**Symbols**
Exclamation mark |Environment |

**Pictograms**

**Hazard Statements:**

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H411 | Toxic to aquatic life with long lasting effects. |

**Precautionary statements**

**Prevention:**

| | |
|---|---|
| P273 | Avoid release to the environment. |
| P280E | Wear protective gloves. |

**Response:**

| | |
|---|---|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313 | If skin irritation or rash occurs: Get medical attention. |

**Disposal:**

| | |
|---|---|
| P501 | Dispose of contents and container in accordance with applicable local, regional, national, and international regulations. |

**2.3. Other hazards**

Although titanium dioxide is classified as a carcinogen, exposures associated with this health effect are not expected during normal, intended use of this product.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| Epoxy resin | 25068-38-6 | 68 - 80 |
| Ammonium Polyphosphate | 68333-79-9 | 10 - 30 |
| Titanium Dioxide | 13463-67-7 | 1 - 5 |
| Melamine | 108-78-1 | <= 0.5 |

Any remaining components do not contribute to the hazards of this material.

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

attention.

**If Swallowed:**
Rinse mouth. If you feel unwell, get medical attention.

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

Allergic skin reaction (redness, swelling, blistering, and itching).

**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**

| Substance | Condition |
|---|---|
| Aldehydes | During Combustion |
| Hydrocarbons | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Hydrogen Chloride | During Combustion |
| Ketones | During Combustion |
| Ammonia | During Combustion |
| Oxides of Nitrogen | During Combustion |
| Toxic Vapor, Gas, Particulate | 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**
Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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.

**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 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. 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 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 |
|---|---|---|---|---|
| DUST, INERT OR NUISANCE | 13463-67-7 | Malaysia OELs | TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3 | |
| Titanium Dioxide | 13463-67-7 | ACGIH | TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3 | A3: Confirmed animal carcin. |
| Titanium Dioxide | 13463-67-7 | Malaysia OELs | TWA(8 hours):10 mg/m3 | |

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
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:

Safety Glasses with side shields
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
Half facepiece or full facepiece supplied-air respirator

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**

| | |
|---|---|
| **Physical state** | Liquid |
| **Specific Physical Form:** | Viscous Liquid |
| **Color** | White |
| **Odor** | Mild Epoxy |
| **Odor threshold** | *No Data Available* |
| **pH** | *No Data Available* |
| **Melting point/Freezing point** | *Not Applicable* |
| **Boiling point/Initial boiling point/Boiling range** | *No Data Available* |
| **Flash Point** | > 93.9 ºC [@ 101,325 Pa ] [*Test Method:*Closed Cup] |
| **Evaporation rate** | Negligible |
| **Flammability** | Not Applicable |
| **Flammable Limits(LEL)** | *No Data Available* |
| **Flammable Limits(UEL)** | *No Data Available* |
| **Vapor Pressure** | *No Data Available* |
| **Relative Vapor Density** | *No Data Available* |
| **Density** | 1.2 g/ml [*Ref Std:*WATER=1] |
| **Relative Density** | 1.2 [*Ref Std:*WATER=1] |
| **Water solubility** | Negligible |
| **Solubility- non-water** | *No Data Available* |
| **Partition coefficient: n-octanol/ water** | *No Data Available* |
| **Autoignition temperature** | *No Data Available* |
| **Decomposition temperature** | *No Data Available* |
| **Kinematic Viscosity** | 58,333 mm2/sec |
| **Volatile Organic Compounds** | *No Data Available* |

| | |
|---|---|
| **Percent volatile** | *No Data Available* |
| **VOC Less H2O & Exempt Solvents** | 0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A] |
| **VOC Less H2O & Exempt Solvents** | 0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied] |
| **VOC Less H2O & Exempt Solvents** | 0 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A] |
| **Molecular weight** | *No Data Available* |

| | |
|---|---|
| **Particle Characteristics** | *Not Applicable* |

## 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
Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

**10.5. Incompatible materials**
Strong acids
Strong oxidizing agents

**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.

**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:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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:**

**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.

**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 |
| Epoxy resin | Dermal | Rat | LD50 > 1,600 mg/kg |
| Epoxy resin | Ingestion | Rat | LD50 > 1,000 mg/kg |
| Ammonium Polyphosphate | Dermal | Rat | LD50 > 5,000 mg/kg |
| Ammonium Polyphosphate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 4.85 mg/l |
| Ammonium Polyphosphate | Ingestion | Rat | LD50 > 300, < 2,000 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 |
| Melamine | Dermal | Rabbit | LD50 > 1,000 mg/kg |
| Melamine | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.19 mg/l |
| Melamine | Ingestion | Rat | LD50 3,161 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| Epoxy resin | Rabbit | Mild irritant |
| Ammonium Polyphosphate | In vitro data | No significant irritation |
| Titanium Dioxide | Rabbit | No significant irritation |
| Melamine | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|

| | | |
|---|---|---|
| Epoxy resin | Rabbit | Moderate irritant |
| Ammonium Polyphosphate | Rabbit | Moderate irritant |
| Titanium Dioxide | Rabbit | No significant irritation |
| Melamine | Rabbit | No significant irritation |

**Sensitization:**

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| Epoxy resin | Human and animal | Sensitizing |
| Ammonium Polyphosphate | similar compounds | Not classified |
| Titanium Dioxide | Human and animal | Not classified |
| Melamine | Guinea pig | Not classified |

**Respiratory Sensitization**

| Name | Species | Value |
|---|---|---|
| Epoxy resin | Human | Not classified |

**Germ Cell Mutagenicity**

| Name | Route | Value |
|---|---|---|
| Epoxy resin | In vivo | Not mutagenic |
| Epoxy resin | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Titanium Dioxide | In Vitro | Not mutagenic |
| Titanium Dioxide | In vivo | Not mutagenic |
| Melamine | In Vitro | Not mutagenic |
| Melamine | In vivo | Not mutagenic |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Epoxy resin | Dermal | 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 |
| Melamine | Ingestion | Multiple animal species | Carcinogenic |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|
| Epoxy resin | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Epoxy resin | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Epoxy resin | Dermal | Not classified for development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |

| | | | | | |
|---|---|---|---|---|---|
| Epoxy resin | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Melamine | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,227 mg/kg/day | 2 generation |
| Melamine | Ingestion | Not classified for development | Rat | NOAEL 1,060 mg/kg/day | during organogenesis |
| Melamine | Ingestion | Toxic to male reproduction | Rat | NOAEL 89 mg/kg/day | 2 generation |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| Epoxy resin | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| Epoxy resin | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| Epoxy resin | Ingestion | auditory system \| heart \| endocrine system \| hematopoietic system \| liver \| eyes \| kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| 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 |
| Melamine | Ingestion | kidney and/or bladder | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 44.6 mg/kg/day | 90 days |
| Melamine | Ingestion | heart \| skin \| endocrine system \| gastrointestinal tract \| bone, teeth, nails, and/or hair \| hematopoietic system \| liver \| immune system \| muscles \| nervous system \| respiratory system | Not classified | Rat | NOAEL 1,400 mg/kg/day | 90 days |

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

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

## SECTION 12: Ecological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient**

**classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labeling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.**

**12.1. Toxicity**

**Acute aquatic hazard:**
GHS Acute 2: Toxic to aquatic life.

**Chronic aquatic hazard:**
GHS Chronic 2: Toxic to aquatic life with long lasting effects

No product test data available

| Material | Cas # | Organism | Type | Exposure | Test Endpoint | Test Result |
|---|---|---|---|---|---|---|
| Epoxy resin | 25068-38-6 | Activated sludge | Estimated | 3 hours | IC50 | >100 mg/l |
| Epoxy resin | 25068-38-6 | Green algae | Estimated | 72 hours | EC50 | >11 mg/l |
| Epoxy resin | 25068-38-6 | Rainbow Trout | Estimated | 96 hours | LC50 | 2 mg/l |
| Epoxy resin | 25068-38-6 | Water flea | Estimated | 48 hours | EC50 | 1.8 mg/l |
| Epoxy resin | 25068-38-6 | Green algae | Estimated | 72 hours | NOEC | 4.2 mg/l |
| Epoxy resin | 25068-38-6 | Water flea | Estimated | 21 days | NOEC | 0.3 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Activated sludge | Estimated | 3 hours | EC50 | >100 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Green algae | Estimated | 72 hours | EC50 | >97.1 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Rainbow Trout | Estimated | 96 hours | LC50 | >100 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Water flea | Estimated | 48 hours | EC50 | >100 mg/l |
| Ammonium Polyphosphate | 68333-79-9 | Green algae | Estimated | 72 hours | NOEC | 97.1 mg/l |
| Titanium Dioxide | 13463-67-7 | Activated sludge | Experimental | 3 hours | NOEC | >=1,000 mg/l |
| Titanium Dioxide | 13463-67-7 | Diatom | Experimental | 72 hours | EC50 | >10,000 mg/l |
| Titanium Dioxide | 13463-67-7 | Fathead Minnow | Experimental | 96 hours | LC50 | >100 mg/l |
| Titanium Dioxide | 13463-67-7 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Titanium Dioxide | 13463-67-7 | Diatom | Experimental | 72 hours | NOEC | 5,600 mg/l |
| Melamine | 108-78-1 | Green algae | Experimental | 96 hours | EC50 | 325 mg/l |
| Melamine | 108-78-1 | Guppy | Experimental | 96 hours | LC50 | >3,000 mg/l |
| Melamine | 108-78-1 | Water flea | Experimental | 48 hours | EC50 | 48 mg/l |
| Melamine | 108-78-1 | Fathead Minnow | Experimental | 36 days | NOEC | 5.1 mg/l |
| Melamine | 108-78-1 | Green algae | Experimental | 96 hours | NOEC | 98 mg/l |
| Melamine | 108-78-1 | Water flea | Experimental | 21 days | NOEC | 11 mg/l |
| Melamine | 108-78-1 | Activated sludge | Experimental | 30 minutes | EC20 | >1,992 mg/l |
| Melamine | 108-78-1 | Bacteria | Experimental | 30 minutes | EC50 | >10,000 mg/l |
| Melamine | 108-78-1 | Barley | Experimental | 4 days | EC50 | 530 mg/l |

**12.2. Persistence and degradability**

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|---|---|---|---|---|---|
| Epoxy resin | 25068-38-6 | Estimated Biodegradation | 28 days | Biological Oxygen Demand | 5 %BOD/COD | OECD 301F - Manometric Respiro |
| Epoxy resin | 25068-38-6 | Estimated Hydrolysis | | Hydrolytic half-life | 117 hours (t 1/2) | |
| Ammonium Polyphosphate | 68333-79-9 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Titanium Dioxide | 13463-67-7 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| Melamine | 108-78-1 | Experimental Biodegradation | 14 days | Biological Oxygen Demand | 0 %BOD/ThOD | OECD 301C - MITI (I) |
| Melamine | 108-78-1 | Experimental Aquatic Inherent Biodegrad. | 28 days | Dissolv. Organic Carbon Deplet | 0 %removal of DOC | OECD 302B Zahn-Wellens/EVPA |
| Melamine | 108-78-1 | Experimental Soil Metabolism Aerobic | | Half-life (t 1/2) | 2-3 years (t 1/2) | |

**12.3. Bioaccumulative potential**

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|---|---|---|---|---|---|
| Epoxy resin | 25068-38-6 | Estimated Bioconcentration | | Log of Octanol/H2O part. coeff | 3.242 | |
| Ammonium Polyphosphate | 68333-79-9 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Titanium Dioxide | 13463-67-7 | Experimental BCF - Fish | 42 days | Bioaccumulation Factor | 9.6 | |
| Melamine | 108-78-1 | Experimental BCF - Fish | 42 days | Bioaccumulation Factor | <3.8 | OECD305-Bioconcentration |
| Melamine | 108-78-1 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | -1.14 | EC A.8 Partition Coefficient |

**12.4. Mobility in soil**
Please contact manufacturer for more details

**12.5 Other adverse effects**
No information available

## SECTION 13: Disposal considerations

**13.1. Disposal methods**

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

## SECTION 14: Transport Information

**Marine Transport (IMDG)**

**UN Number:**UN3082
**Proper Shipping Name:**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
**Technical Name:**None assigned.
**Hazard Class/Division:**9
**Subsidiary Risk:**None assigned.
**Packing Group:**III
**Limited Quantity:**None assigned.
**Marine Pollutant:** Yes
**Marine Pollutant Technical Name:** None assigned.
**Other Dangerous Goods Descriptions:**
None assigned.

**Air Transport (IATA)**

**UN Number:**UN3082
**Proper Shipping Name:**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
**Technical Name:**None assigned.
**Hazard Class/Division:**9
**Subsidiary Risk:**None assigned.
**Packing Group:**III
**Limited Quantity:**None assigned.
**Marine Pollutant:** Yes
**Marine Pollutant Technical Name:** None assigned.
**Other Dangerous Goods Descriptions:**
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

## SECTION 15: Regulatory information

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

**Global inventory status**
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

## SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

**3M Malaysia SDSs are available at www.3M.com.my**