

Safety Data Sheet

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27/12/2024 **Issue Date: Supercedes Date:** 03/12/2019

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

3MTM Scotch-WeldTM Low Odor Acrylic Adhesive DP810 Black

Product Identification Numbers

62-2788-1431-4 62-2788-1436-3 62-2788-3530-1 62-2788-1430-6 62-2788-1435-5

62-2788-3830-5

1.2. Recommended use and restrictions on use

Recommended use

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

03-7884 2888 **Telephone:**

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:

16-0853-8, 16-0854-6

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

3M™ Scotch-Weld™ Low Odor Acrylic Adhesive DP810 Black

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



Safety Data Sheet

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Document Group: 16-0853-8 **Version Number:** 4.00

Issue Date: 27/12/2024 **Supercedes Date:** 02/12/2019

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

3MTM Scotch-WeldTM Low Odor Acrylic Adhesive DP810 Black and Low Odor Acrylic Adhesive 810 Black, Part B

Product Identification Numbers

62-2788-7530-7 62-2788-8730-2

1.2. Recommended use and restrictions on use

Recommended use

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, Java, 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 1.

Skin Sensitizer: Category 1.

Chronic Aquatic Toxicity: Category 2.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Environment |

Pictograms



Hazard Statements:

H315 Causes skin irritation. H318 Causes serious eye damage.

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.

P280B Wear protective gloves and eye/face protection.

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.

P310 Immediately call a POISON CENTER or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

P501 Dispose of contents/container in accordance with applicable

local/regional/national/international regulations.

2.3. Other hazards

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt |
|---------------------------------------|------------|---------|
| Phenoxyethyl Methacrylate | 10595-06-9 | 10 - 40 |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | 10 - 30 |
| Acrylate Oligomer | 41637-38-1 | 5 - 20 |
| Acrylonitrile-Butadiene Polymer | 9010-81-5 | 5 - 20 |
| Hydroxypropyl Methacrylate | 27813-02-1 | 10 - 20 |
| 2-Hydroxyethyl Methacrylate Phosphate | 52628-03-2 | 1 - 4 |
| 4-Methoxyphenol | 150-76-5 | < 1 |
| Carbon Black | 1333-86-4 | < 1 |
| Phenothiazine | 92-84-2 | < 1 |

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.

3MTM Scotch-WeldTM Low Odor Acrylic Adhesive DP810 Black and Low Odor Acrylic Adhesive 810 Black, Part B

Skin Contact:

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

Eve 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 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 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

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

Hazardous Decomposition or By-Products

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible 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. 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.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from oxidizing agents. Store away from amines.

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 |
|-----------------|------------|---------------|-----------------------------|-------------------------|
| Carbon Black | 1333-86-4 | ACGIH | TWA(inhalable fraction):3 | A3: Confirmed animal |
| | | | mg/m3 | carcin. |
| Carbon Black | 1333-86-4 | Malaysia OELs | TWA(8 hours):3.5 mg/m3 | |
| 4-Methoxyphenol | 150-76-5 | ACGIH | TWA:5 mg/m3 | |
| 4-Methoxyphenol | 150-76-5 | Malaysia OELs | TWA(8 hours):5 mg/m3 | |
| Phenothiazine | 92-84-2 | ACGIH | TWA(inhalable fraction):0.5 | A4: Not class. as human |
| | | | mg/m3 | carcin, SKIN; Dermal |
| | | | | sensitizer |
| Phenothiazine | 92-84-2 | Malaysia OELs | TWA(8 hours):5 mg/m3 | SKIN |

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:

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

| Information on basic physical and chemical propertie | | |
|--|--|--|
| Physical state | Liquid | |
| Specific Physical Form: | Paste | |
| | | |
| Color | Black | |
| Odor | Slight Methacrylate | |
| Odor threshold | No Data Available | |
| pH | Not Applicable | |
| Melting point/Freezing point | Not Applicable | |
| Boiling point/Initial boiling point/Boiling range | >=99.4 °C | |
| Flash Point | >=98.9 °C [Test Method:Closed Cup] | |
| Evaporation rate | No Data Available | |
| 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 | 1.07 g/ml | |
| Relative Density | 1.07 [Ref Std:WATER=1] | |
| Water solubility | 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 | |
| Kinematic Viscosity | 18,692 mm2/sec | |
| Volatile Organic Compounds | No Data Available | |
| Percent volatile | No Data Available | |
| VOC Less H2O & Exempt Solvents | 3.1 g/l [Details: when used as intended with Part A] | |
| VOC Less H2O & Exempt Solvents | 0.3 % [Details: when used as intended with Part A] | |
| VOC Less H2O & Exempt Solvents | 319 g/l [Details:as supplied] | |
| Molecular weight | No Data Available | |
| | | |

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

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 may occur.

10.4. Conditions to avoid

Heat

Sparks and/or flames

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

Amines

Strong oxidizing agents

Reducing agents

Reactive metals

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.

Photosensitization: Signs/symptoms may include a sunburn-like reaction such as blistering, redness, swelling, and itching from minor exposure to sunlight.

Eve 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.

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 >2,000 - =5,000 mg/kg |
| Phenoxyethyl Methacrylate | Dermal | similar compoun ds | LD50 > 2,000 mg/kg |
| Phenoxyethyl Methacrylate | Ingestion | similar compoun ds | LD50 > 5,000 mg/kg |
| 2-Hydroxyethyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 2-Hydroxyethyl Methacrylate | Ingestion | Rat | LD50 5,564 mg/kg |
| Acrylonitrile-Butadiene Polymer | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Acrylonitrile-Butadiene Polymer | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Hydroxypropyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Hydroxypropyl Methacrylate | Ingestion | Rat | LD50 > 11,200 mg/kg |
| Acrylate Oligomer | Dermal | Rat | LD50 > 2,000 mg/kg |
| Acrylate Oligomer | Ingestion | Rat | LD50 > 2,000 mg/kg |
| 2-Hydroxyethyl Methacrylate Phosphate | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Carbon Black | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| 4-Methoxyphenol | Dermal | Rat | LD50 > 2,000 mg/kg |
| 4-Methoxyphenol | Ingestion | Rat | LD50 1,630 mg/kg |
| Carbon Black | Ingestion | Rat | LD50 > 8,000 mg/kg |
| Phenothiazine | Dermal | Rat | LD50 > 2,000 mg/kg |
| Phenothiazine | Ingestion | Rat | LD50 1,370 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---------------------------------------|-----------------------------------|---------------------------|
| Phenoxyethyl Methacrylate | similar compoun ds | No significant irritation |
| 2-Hydroxyethyl Methacrylate | Rabbit | Minimal irritation |
| Acrylonitrile-Butadiene Polymer | Professio nal judgemen t | No significant irritation |
| Hydroxypropyl Methacrylate | Rabbit | Minimal irritation |
| Acrylate Oligomer | In vitro data | No significant irritation |
| 2-Hydroxyethyl Methacrylate Phosphate | Rabbit | Corrosive |
| 4-Methoxyphenol | Rabbit | Mild irritant |
| Carbon Black | Rabbit | No significant irritation |
| Phenothiazine | Rabbit | No significant irritation |

Serious Eve Damage/Irritation

| Name | Species | Value |
|---------------------------|---------|---------------------------|
| Phenoxyethyl Methacrylate | similar | No significant irritation |
| | compoun | |
| | ds | |

3MTM Scotch-WeldTM Low Odor Acrylic Adhesive DP810 Black and Low Odor Acrylic Adhesive 810 Black, Part B

| 2-Hydroxyethyl Methacrylate | Rabbit | Moderate irritant |
|---------------------------------------|-----------|---------------------------|
| Acrylonitrile-Butadiene Polymer | Professio | No significant irritation |
| | nal | |
| | judgemen | |
| | t | |
| Hydroxypropyl Methacrylate | Rabbit | Moderate irritant |
| Acrylate Oligomer | In vitro | No significant irritation |
| | data | |
| 2-Hydroxyethyl Methacrylate Phosphate | similar | Corrosive |
| | health | |
| | hazards | |
| 4-Methoxyphenol | Rabbit | Severe irritant |
| Carbon Black | Rabbit | No significant irritation |
| Phenothiazine | Rabbit | Mild irritant |

Sensitization:

Skin Sensitization

| Name | Species | Value |
|---------------------------------------|-------------------------------|----------------|
| Phenoxyethyl Methacrylate | similar compoun ds | Sensitizing |
| 2-Hydroxyethyl Methacrylate | Human and animal | Sensitizing |
| Hydroxypropyl Methacrylate | Human and animal | Sensitizing |
| Acrylate Oligomer | Multiple animal species | Not classified |
| 2-Hydroxyethyl Methacrylate Phosphate | Mouse | Sensitizing |
| 4-Methoxyphenol | Guinea pig | Sensitizing |
| Phenothiazine | Guinea pig | Sensitizing |

Photosensitization

| Name | Species | Value |
|---------------|---------|-------------|
| Phenothiazine | Human | Sensitizing |

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 |
|---------------------------------------|----------|--|
| Phenoxyethyl Methacrylate | 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 |
| Hydroxypropyl Methacrylate | In vivo | Not mutagenic |
| Hydroxypropyl Methacrylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Acrylate Oligomer | In Vitro | Not mutagenic |
| 2-Hydroxyethyl Methacrylate Phosphate | In Vitro | Not mutagenic |
| 4-Methoxyphenol | In vivo | Not mutagenic |
| 4-Methoxyphenol | 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 |

| Phenothiazine | In Vitro | Not mutagenic |
|---------------|----------|---------------|
| Phenothiazine | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|-----------------|------------|----------|--|
| 4-Methoxyphenol | Dermal | Multiple | Not carcinogenic |
| | | animal | |
| | | species | |
| 4-Methoxyphenol | Ingestion | Multiple | Some positive data exist, but the data are not |
| | | animal | sufficient for classification |
| | | species | |
| Carbon Black | Dermal | Mouse | Not carcinogenic |
| Carbon Black | Ingestion | Mouse | Not carcinogenic |
| Carbon Black | Inhalation | Rat | Carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---------------------------------------|-----------|--|--------------------------|-----------------------------|------------------------------|
| Phenoxyethyl Methacrylate | Ingestion | Toxic to female reproduction | similar compoun ds | NOAEL 300 mg/kg/day | premating into lactation |
| Phenoxyethyl Methacrylate | Ingestion | Toxic to development | similar compoun ds | NOAEL 300 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 | premating & during gestation |
| Hydroxypropyl Methacrylate | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating into lactation |
| Hydroxypropyl Methacrylate | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 49 days |
| Hydroxypropyl Methacrylate | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| Acrylate Oligomer | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating into lactation |
| Acrylate Oligomer | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Acrylate Oligomer | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| 2-Hydroxyethyl Methacrylate Phosphate | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| 4-Methoxyphenol | Ingestion | Not classified for female reproduction | Rat | NOAEL 300 mg/kg/day | premating into lactation |
| 4-Methoxyphenol | Ingestion | Not classified for male reproduction | Rat | NOAEL 300 mg/kg/day | 28 days |
| 4-Methoxyphenol | Ingestion | Not classified for development | Rat | NOAEL 200 mg/kg/day | during gestation |
| Phenothiazine | Ingestion | Not classified for development | Rat | NOAEL 150 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 |
|--|------------|------------------------|--|------------------------------|------------------------|----------------------|
| Hydroxypropyl Methacrylate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | Duration |
| 2-Hydroxyethyl Methacrylate Phosphate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| 4-Methoxyphenol | 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 |
|--|------------|--|--|---------|-----------------------------|-----------------------|
| Hydroxypropyl Methacrylate | Inhalation | blood | Not classified | Rat | NOAEL 0.5 mg/l | 21 days |
| Hydroxypropyl Methacrylate | Ingestion | hematopoietic system heart endocrine system liver immune system nervous system kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 41 days |
| Acrylate Oligomer | Ingestion | hematopoietic system liver immune system kidney and/or bladder endocrine system eyes | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| 2-Hydroxyethyl Methacrylate Phosphate | Ingestion | hematopoietic system kidney and/or bladder heart liver immune system eyes | Not classified | Rat | NOAEL 300 mg/kg/day | 90 days |
| 4-Methoxyphenol | Ingestion | gastrointestinal tract | Not classified | Rat | LOAEL 300 mg/kg/day | 28 days |
| 4-Methoxyphenol | Ingestion | liver immune system | Not classified | Rat | NOAEL 300 mg/kg/day | 28 days |
| 4-Methoxyphenol | Ingestion | kidney and/or bladder | Not classified | Rat | LOAEL 300 mg/kg/day | 28 days |
| 4-Methoxyphenol | Ingestion | heart endocrine system hematopoietic system nervous system respiratory system | Not classified | Rat | NOAEL 300 mg/kg/day | 28 days |
| Carbon Black | Inhalation | pneumoconiosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Phenothiazine | Ingestion | hematopoietic system | May cause damage to organs though prolonged or repeated exposure | Dog | NOAEL 18 mg/kg/day | 13 weeks |
| Phenothiazine | Ingestion | heart endocrine system liver kidney and/or bladder respiratory system | Not classified | Dog | NOAEL 67 mg/kg/day | 13 weeks |

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 | Туре | Exposure | Test Endpoint | Test Result |
|-------------------|------------|------------------|---------------------|----------|-------------------|-----------------------------|
| Phenoxyethyl | 10595-06-9 | Activated sludge | Analogous | 3 hours | EC50 | 177 mg/l |
| Methacrylate | | | Compound | | | |
| Phenoxyethyl | 10595-06-9 | Golden Orfe | Analogous | 96 hours | LC50 | 10 mg/l |
| Methacrylate | | | Compound | | | |
| Phenoxyethyl | 10595-06-9 | Green algae | Analogous | 96 hours | ErC50 | 4.4 mg/l |
| Methacrylate | | | Compound | | | |
| Phenoxyethyl | 10595-06-9 | Water flea | Analogous | 48 hours | EC50 | 1.21 mg/l |
| Methacrylate | | | Compound | | | |
| Phenoxyethyl | 10595-06-9 | Green algae | Analogous | 96 hours | ErC10 | 0.74 mg/l |
| Methacrylate | | | Compound | | | |
| 2-Hydroxyethyl | 868-77-9 | Turbot | Analogous | 96 hours | LC50 | 833 mg/l |
| Methacrylate | | | Compound | | | |
| 2-Hydroxyethyl | 868-77-9 | Fathead Minnow | Experimental | 96 hours | LC50 | 227 mg/l |
| Methacrylate | | | 1 | | | |
| 2-Hydroxyethyl | 868-77-9 | Green algae | Experimental | 72 hours | EC50 | 710 mg/l |
| Methacrylate | | | 1 | | | |
| 2-Hydroxyethyl | 868-77-9 | Water flea | Experimental | 48 hours | EC50 | 380 mg/l |
| Methacrylate | | | 1 | | | |
| 2-Hydroxyethyl | 868-77-9 | Green algae | Experimental | 72 hours | NOEC | 160 mg/l |
| Methacrylate | | | 1 | | | |
| 2-Hydroxyethyl | 868-77-9 | Water flea | Experimental | 21 days | NOEC | 24.1 mg/l |
| Methacrylate | | | 1 | | | |
| 2-Hydroxyethyl | 868-77-9 | N/A | Experimental | 16 hours | EC0 | >3,000 mg/l |
| Methacrylate | | | 1 | | | |
| 2-Hydroxyethyl | 868-77-9 | N/A | Experimental | 18 hours | LD50 | <98 mg per kg of bodyweight |
| Methacrylate | | | 1 | | | |
| Acrylate Oligomer | 41637-38-1 | Green algae | Analogous | 72 hours | No tox obs at lmt | >100 mg/l |
| | | | Compound | | of water sol | |
| Acrylate Oligomer | 41637-38-1 | Rainbow Trout | Analogous | 96 hours | No tox obs at lmt | >100 mg/l |
| | | | Compound | | of water sol | |
| Acrylate Oligomer | 41637-38-1 | Water flea | Experimental | 48 hours | No tox obs at lmt | >100 mg/l |
| | | | | | of water sol | |
| Acrylate Oligomer | 41637-38-1 | Green algae | Analogous | 72 hours | No tox obs at lmt | 100 mg/l |
| | | | Compound | | of water sol | |
| Acrylate Oligomer | 41637-38-1 | Water flea | Analogous | 21 days | No tox obs at lmt | 100 mg/l |
| | | | Compound | | of water sol | |
| Acrylate Oligomer | 41637-38-1 | Zebra Fish | Analogous | 34 days | No tox obs at lmt | 100 mg/l |
| | | | Compound | | of water sol | |
| Acrylate Oligomer | 41637-38-1 | Activated sludge | Experimental | 3 hours | EC50 | >1,000 mg/l |
| Acrylonitrile- | 9010-81-5 | N/A | Data not available | N/A | N/A | N/A |
| Butadiene Polymer | | | or insufficient for | | | |

| | | | classification | | | |
|---|------------|-------------------|----------------|----------|--------------------------------|------------|
| Hydroxypropyl Methacrylate | 27813-02-1 | Bacteria | Experimental | N/A | EC10 | 1,140 mg/l |
| Hydroxypropyl Methacrylate | 27813-02-1 | Golden Orfe | Experimental | 48 hours | EC50 | 493 mg/l |
| Hydroxypropyl Methacrylate | 27813-02-1 | Green algae | Experimental | 72 hours | ErC50 | >97.2 mg/l |
| Hydroxypropyl Methacrylate | 27813-02-1 | Water flea | Experimental | 48 hours | EC50 | >143 mg/l |
| Hydroxypropyl Methacrylate | 27813-02-1 | Green algae | Experimental | 72 hours | NOEC | 97.2 mg/l |
| Hydroxypropyl Methacrylate | 27813-02-1 | Water flea | Experimental | 21 days | NOEC | 45.2 mg/l |
| 2-Hydroxyethyl Methacrylate Phosphate | 52628-03-2 | Green algae | Experimental | 72 hours | EC50 | >120 mg/l |
| 2-Hydroxyethyl Methacrylate Phosphate | 52628-03-2 | Rainbow Trout | Experimental | 96 hours | LC50 | >112 mg/l |
| 2-Hydroxyethyl Methacrylate Phosphate | 52628-03-2 | Water flea | Experimental | 48 hours | EC50 | 68 mg/l |
| 2-Hydroxyethyl Methacrylate Phosphate | 52628-03-2 | Green algae | Experimental | 72 hours | NOEC | 30 mg/l |
| 4-Methoxyphenol | 150-76-5 | Ciliated protozoa | Experimental | 40 hours | IC50 | 171.4 mg/l |
| 4-Methoxyphenol | 150-76-5 | Green algae | Experimental | 72 hours | ErC50 | 54.7 mg/l |
| 4-Methoxyphenol | 150-76-5 | Rainbow Trout | Experimental | 96 hours | LC50 | 28.5 mg/l |
| 4-Methoxyphenol | 150-76-5 | Water flea | Experimental | 48 hours | EC50 | 2.2 mg/l |
| 4-Methoxyphenol | 150-76-5 | Green algae | Experimental | 72 hours | NOEC | 2.96 mg/l |
| 4-Methoxyphenol | 150-76-5 | Water flea | Experimental | 21 days | NOEC | 0.68 mg/l |
| Carbon Black | 1333-86-4 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Carbon Black | 1333-86-4 | Zebra Fish | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Carbon Black | 1333-86-4 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | 100 mg/l |
| Carbon Black | 1333-86-4 | Activated sludge | Experimental | 3 hours | NOEC | >800 mg/l |
| Phenothiazine | 92-84-2 | Activated sludge | Experimental | 3 hours | IC50 | >100 mg/l |
| Phenothiazine | 92-84-2 | Ciliated protozoa | Experimental | 48 hours | IC50 | 8 mg/l |
| Phenothiazine | 92-84-2 | Green algae | Experimental | 72 hours | ErC50 | >100 mg/l |
| Phenothiazine | 92-84-2 | Rainbow Trout | Experimental | 96 hours | LC50 | 0.597 mg/l |
| Phenothiazine | 92-84-2 | Water flea | Experimental | 48 hours | EC50 | 0.154 mg/l |

12.2. Persistence and degradability

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|-------------------------------------|------------|---|----------|-------------------------------|-------------------|-----------------------------------|
| | | | | | | |
| Phenoxyethyl Methacrylate | 10595-06-9 | Analogous Compound Biodegradation | 28 days | Biological Oxygen Demand | 22.3 %BOD/ThOD | OECD 301D - Closed Bottle Test |
| Phenoxyethyl Methacrylate | 10595-06-9 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 1 years (t 1/2) | OECD 111 Hydrolysis func of pH |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 84 %BOD/COD | OECD 301D - Closed Bottle Test |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | Experimental Hydrolysis | | Hydrolytic half-life basic pH | 10.9 days (t 1/2) | OECD 111 Hydrolysis func of pH |
| Acrylate Oligomer | 41637-38-1 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 24 %BOD/ThOD | OECD 301D - Closed Bottle Test |
| Acrylonitrile- Butadiene Polymer | 9010-81-5 | Data not availbl- insufficient | N/A | N/A | N/A | N/A |
| Hydroxypropyl Methacrylate | 27813-02-1 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 81 %BOD/ThOD | OECD 301C - MITI (I) |

| 2-Hydroxyethyl Methacrylate | 52628-03-2 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 93.1 %BOD/ThOD | OECD 301F - Manometric Respiro |
|--------------------------------|------------|---|---------|-----------------------------|----------------|-----------------------------------|
| Phosphate | | Biodegradation | | Demand | | Respiro |
| 4-Methoxyphenol | 150-76-5 | Experimental Biodegradation - Anaerobic | 28 days | Percent degraded | >90 %degraded | |
| 4-Methoxyphenol | 150-76-5 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 86 %BOD/ThOD | OECD 301C - MITI (I) |
| Carbon Black | 1333-86-4 | Data not availbl- insufficient | N/A | N/A | N/A | N/A |
| Phenothiazine | 92-84-2 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 0 %BOD/ThOD | OECD 301D - Closed Bottle Test |

12.3. Bioaccumulative potential

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|------------|---|----------|--------------------------------------|-------------|-----------------------------------|
| Phenoxyethyl Methacrylate | 10595-06-9 | Modeled Bioconcentration | | Bioaccumulation Factor | 5.8 | Catalogic™ |
| Phenoxyethyl Methacrylate | 10595-06-9 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 3.137 | OECD 117 log Kow HPLC method |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 0.42 | OECD 107 log Kow shke flsk mtd |
| Acrylate Oligomer | 41637-38-1 | Modeled Bioconcentration | | Bioaccumulation Factor | 7 | Catalogic™ |
| Acrylate Oligomer | 41637-38-1 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | ≥4.66 | OECD 117 log Kow HPLC method |
| Acrylonitrile- Butadiene Polymer | 9010-81-5 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Hydroxypropyl Methacrylate | 27813-02-1 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 0.97 | EC A.8 Partition Coefficient |
| 2-Hydroxyethyl Methacrylate Phosphate | 52628-03-2 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 1 - 2.72 | OECD 117 log Kow HPLC method |
| 4-Methoxyphenol | 150-76-5 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 1.58 | |
| Carbon Black | 1333-86-4 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Phenothiazine | 92-84-2 | Experimental BCF - Fish | 56 days | Bioaccumulation Factor | 660 | |
| Phenothiazine | 92-84-2 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 3.78 | OECD 117 log Kow HPLC method |

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: None assigned.

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: 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 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. 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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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

3MTM Scotch-WeldTM Low Odor Acrylic Adhesive DP810 Black and Low Odor Acrylic Adhesive 810 Black, Part A

Product Identification Numbers

62-2888-7530-5 62-2888-8730-0

1.2. Recommended use and restrictions on use

Recommended use

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 Eve Damage/Irritation: Category 1.

Skin Sensitizer: Category 1. Carcinogenicity: Category 1B. Reproductive Toxicity: Category 1B.

Specific Target Organ Toxicity (repeated exposure): Category 2.

Chronic Aquatic Toxicity: Category 2.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard | Environment |

Pictograms



Hazard Statements:

H315 Causes skin irritation. H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure: nervous

system | respiratory system.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P201 Obtain special instructions before use.

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

P273 Avoid release to the environment.

P280I Wear protective gloves, eye/face protection, and respiratory protection.

P281 Use personal protective equipment as required.

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.

P310 Immediately call a POISON CENTER or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

P501 Dispose of contents/container in accordance with applicable

local/regional/national/international regulations.

2.3. Other hazards

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt |
|---------------------------------|------------|---------|
| Phenoxyethyl Methacrylate | 10595-06-9 | 10 - 40 |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | 10 - 30 |
| Acrylate Oligomer | 41637-38-1 | 1 - 20 |
| Acrylonitrile-Butadiene Polymer | 9010-81-5 | 1 - 20 |
| Hydroxypropyl Methacrylate | 27813-02-1 | 1 - 20 |
| Cumene Hydroperoxide | 80-15-9 | 1 - 5 |

| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | 119-47-1 | < 1 |
|--|----------|-----|
| Cumene | 98-82-8 | < 1 |

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 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). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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

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

Hazardous Decomposition or By-Products

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. 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 oxidizing agents. Store away from amines.

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 |
|------------|------------|---------------|---------------------------|----------------------|
| Cumene | 98-82-8 | ACGIH | TWA:5 ppm | A3: Confirmed animal |
| | | | | carcin. |
| Cumene | 98-82-8 | Malaysia OELs | TWA(8 hours):246 mg/m3(50 | SKIN |
| | | | ppm) | |

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: 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 mask or full facepiece air-purifying respirator with N100 particulate filters

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: | Paste | |
| | | |
| Color | White | |
| Odor | Mild Acrylic | |
| Odor threshold | No Data Available | |
| pH | Not Applicable | |
| Melting point/Freezing point | Not Applicable | |
| Boiling point/Initial boiling point/Boiling range | 80 °C | |
| Flash Point | 103.9 °C [Test Method:Closed Cup] | |
| Evaporation rate | No Data Available | |
| 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 | 1.07 g/ml | |
| Relative Density | 1.07 [Ref Std:WATER=1] | |
| Water solubility | 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 | |

| Kinematic Viscosity | 18,692 mm2/sec | |
|--------------------------------|--|--|
| Volatile Organic Compounds | No Data Available | |
| Percent volatile | No Data Available | |
| VOC Less H2O & Exempt Solvents | 3.1 g/l [Details: when used as intended with Part B] | |
| VOC Less H2O & Exempt Solvents | 0.3 % [Details: when used as intended with Part B] | |
| VOC Less H2O & Exempt Solvents | 349 g/l [Test Method:tested per EPA method 24] [Details:as | |
| | supplied] | |
| 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 may occur.

10.4. Conditions to avoid

Heat

Sparks and/or flames

Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke

10.5. Incompatible materials

Amines

Strong oxidizing agents

Reactive metals

Reducing agents

10.6. Hazardous decomposition products

Substance
None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

May be harmful if inhaled.

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

May cause additional health effects (see below).

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.

Eve 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:

Prolonged or repeated exposure may cause target organ effects:

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

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 | Inhalation- Vapor(4 hr) | | No data available; calculated ATE >20 - =50 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >2,000 - =5,000 mg/kg |
| Phenoxyethyl Methacrylate | Dermal | similar compoun ds | LD50 > 2,000 mg/kg |
| Phenoxyethyl Methacrylate | Ingestion | similar compoun ds | LD50 > 5,000 mg/kg |
| 2-Hydroxyethyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 2-Hydroxyethyl Methacrylate | Ingestion | Rat | LD50 5,564 mg/kg |
| Acrylonitrile-Butadiene Polymer | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Acrylonitrile-Butadiene Polymer | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Hydroxypropyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |

| Hydroxypropyl Methacrylate | Ingestion | Rat | LD50 > 11,200 mg/kg |
|--|-------------|--------|---------------------|
| Acrylate Oligomer | Dermal | Rat | LD50 > 2,000 mg/kg |
| Acrylate Oligomer | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Cumene Hydroperoxide | Dermal | Rat | LD50 500 mg/kg |
| Cumene Hydroperoxide | Inhalation- | Rat | LC50 1.4 mg/l |
| | Vapor (4 | | |
| | hours) | | |
| Cumene Hydroperoxide | Ingestion | Rat | LD50 382 mg/kg |
| Cumene | Dermal | Rabbit | LD50 > 3,160 mg/kg |
| Cumene | Inhalation- | Rat | LC50 39.4 mg/l |
| | Vapor (4 | | |
| | hours) | | |
| Cumene | Ingestion | Rat | LD50 2,260 mg/kg |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|--------------------------|---------------------------|
| Phenoxyethyl Methacrylate | similar compoun ds | No significant irritation |
| 2-Hydroxyethyl Methacrylate | Rabbit | Minimal irritation |
| Acrylonitrile-Butadiene Polymer | Professio | No significant irritation |
| | nal | |
| | judgemen | |
| | t | |
| Hydroxypropyl Methacrylate | Rabbit | Minimal irritation |
| Acrylate Oligomer | In vitro | No significant irritation |
| | data | |
| Cumene Hydroperoxide | official | Corrosive |
| | classificat | |
| | ion | |
| Cumene | Rabbit | Minimal irritation |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|--------------------------|---------------------------|
| Phenoxyethyl Methacrylate | similar compoun ds | No significant irritation |
| 2-Hydroxyethyl Methacrylate | Rabbit | Moderate irritant |
| Acrylonitrile-Butadiene Polymer | Professio | No significant irritation |
| | nal | |
| | judgemen | |
| | t | |
| Hydroxypropyl Methacrylate | Rabbit | Moderate irritant |
| Acrylate Oligomer | In vitro | No significant irritation |
| | data | |
| Cumene Hydroperoxide | official | Corrosive |
| | classificat | |
| | ion | |
| Cumene | Rabbit | Mild irritant |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Rabbit | Mild irritant |

Sensitization:

Skin Sensitization

| Skiii Schsitization | | |
|---------------------------|---------|-------------|
| Name | Species | Value |
| Phenoxyethyl Methacrylate | similar | Sensitizing |
| | compoun | |

| | ds | |
|--|----------|----------------|
| 2-Hydroxyethyl Methacrylate | Human | Sensitizing |
| | and | |
| | animal | |
| Hydroxypropyl Methacrylate | Human | Sensitizing |
| | and | |
| | animal | |
| Acrylate Oligomer | Multiple | Not classified |
| | animal | |
| | species | |
| Cumene | Guinea | Not classified |
| | pig | |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Mouse | 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 |
|--|----------|--|
| Phenoxyethyl Methacrylate | 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 |
| Hydroxypropyl Methacrylate | In vivo | Not mutagenic |
| Hydroxypropyl Methacrylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Acrylate Oligomer | In Vitro | Not mutagenic |
| Cumene Hydroperoxide | In vivo | Not mutagenic |
| Cumene Hydroperoxide | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Cumene | In Vitro | Not mutagenic |
| Cumene | In vivo | Not mutagenic |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | In Vitro | Not mutagenic |

Carcinogenicity

| eur em og em er ej | | | | | | | | |
|--------------------|------------|----------|--------------|--|--|--|--|--|
| Name | Route | Species | Value | | | | | |
| Cumene | Inhalation | Multiple | Carcinogenic | | | | | |
| | | anımal | | | | | | |
| | | species | | | | | | |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration | |
|-----------------------------|---|--|--------------------------|-----------------------------|------------------------------|--|
| Phenoxyethyl Methacrylate | Ingestion | Toxic to female reproduction | similar compoun ds | NOAEL 300 mg/kg/day | premating into lactation | |
| Phenoxyethyl Methacrylate | henoxyethyl Methacrylate Ingestion Toxic to development | | similar compoun ds | NOAEL 300 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 | premating & during gestation | |
| Hydroxypropyl Methacrylate | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating into lactation | |

| Hydroxypropyl Methacrylate | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 49 days |
|--|------------|--|--------|-----------------------------|--------------------------|
| Hydroxypropyl Methacrylate | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| Acrylate Oligomer | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating into lactation |
| Acrylate Oligomer | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Acrylate Oligomer | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| Cumene | Inhalation | Not classified for development | Rabbit | NOAEL 11.3 mg/l | during organogenesis |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Ingestion | Not classified for female reproduction | Rat | NOAEL 50 mg/kg/day | premating into lactation |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Ingestion | Not classified for development | Rat | NOAEL 50 mg/kg/day | premating into lactation |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Ingestion | Toxic to male reproduction | Rat | NOAEL 12.5 mg/kg/day | 50 days |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------------------------|------------|--------------------------------------|--|-----------------------------------|------------------------|-----------------------|
| Hydroxypropyl Methacrylate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Cumene Hydroperoxide | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | occupational exposure |
| Cumene Hydroperoxide | Inhalation | respiratory irritation | May cause respiratory irritation | Human | NOAEL Not available | occupational exposure |
| Cumene Hydroperoxide | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professio nal judgeme nt | NOAEL Not available | |
| Cumene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | not available |
| Cumene | Inhalation | respiratory irritation | May cause respiratory irritation | Human | LOAEL 0.2 mg/l | occupational exposure |
| Cumene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | not available |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------------------------|------------|--|----------------|---------|-----------------------------|----------------------|
| Hydroxypropyl Methacrylate | Inhalation | blood | Not classified | Rat | NOAEL 0.5 mg/l | 21 days |
| Hydroxypropyl Methacrylate | Ingestion | hematopoietic system heart endocrine system liver immune system nervous system kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 41 days |
| Acrylate Oligomer | Ingestion | hematopoietic system liver immune system kidney and/or bladder endocrine | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |

| | | system eyes | | | | |
|--|------------|--|--|-----|------------------------|-----------|
| Cumene Hydroperoxide | Inhalation | nervous system respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.2 mg/l | 7 days |
| Cumene Hydroperoxide | Inhalation | heart liver kidney and/or bladder | Not classified | Rat | NOAEL 0.03 mg/l | 90 days |
| Cumene | Inhalation | auditory system endocrine system hematopoietic system liver nervous system eyes | Not classified | Rat | NOAEL 59 mg/l | 13 weeks |
| Cumene | Inhalation | kidney and/or bladder | Not classified | Rat | NOAEL 4.9 mg/l | 13 weeks |
| Cumene | Inhalation | respiratory system | Not classified | Rat | NOAEL 59 mg/l | 13 weeks |
| Cumene | Ingestion | kidney and/or bladder heart endocrine system hematopoietic system liver respiratory system | Not classified | Rat | NOAEL 769 mg/kg/day | 6 months |
| 2,2'-Methylenebis(6-tert-butyl-p-cresol) | Ingestion | liver heart endocrine system gastrointestinal tract hematopoietic system immune system muscles nervous system kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 42 mg/kg/day | 18 months |

Aspiration Hazard

| Name | Value |
|--------|-------------------|
| Cumene | 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

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 | Туре | Exposure | Test Endpoint | Test Result |
|--------------|------------|------------------|-----------|----------|---------------|-------------|
| Phenoxyethyl | 10595-06-9 | Activated sludge | Analogous | 3 hours | EC50 | 177 mg/l |
| Methacrylate | | | Compound | | | |
| Phenoxyethyl | 10595-06-9 | Golden Orfe | Analogous | 96 hours | LC50 | 10 mg/l |
| Methacrylate | | | Compound | | | |

| Menhacylate Menhacylate Menhacylate Menhacylate Menhacylate Menhacylate 10595-06-9 Menhacylate 10595-06-9 Green algae Compound 10505-06-9 Green algae Compound 10505-06-9 Menhacylate 10505-06-9 Turbot Compound 10505-06-9 Menhacylate 10505-06-9 Fathead Minnow Experimental Policy 10505-06-9 Menhacylate 10505-06-9 Menhacyl | Phenoxyethyl | 10595-06-9 | Green algae | Analogous | 96 hours | ErC50 | 4.4 mg/l |
|--|--|--|---|--|---|--|--|
| Methacytolate 1659-60-9 Green algae Compound 90 hours FeC10 0.74 mg/l | Methacrylate | | | Compound | | | Č . |
| Phemosynthy | | 10595-06-9 | Water flea | | 48 hours | EC50 | 1.21 mg/l |
| Menharylate | | 10595-06-9 | Green algae | | 96 hours | ErC10 | 0.74 mg/l |
| Menhaeryslate Artyloroxycelyla Se8-77-9 Fathead Minnow Experimental 96 hours LC50 227 mg/l | Methacrylate | | | Compound | | | _ |
| Methacyslate 2-Hydroxycytols 868-77-9 Green algae Experimental 72 hours EC50 380 mg/l | | | Turbot | | 96 hours | LC50 | 833 mg/l |
| Methacrylate Section | | 868-77-9 | Fathead Minnow | Experimental | 96 hours | LC50 | 227 mg/l |
| 2-Hydroxyethy 868-77-9 Water flea Experimental 48 hours ECSO 380 mg/l | | 868-77-9 | Green algae | Experimental | 72 hours | EC50 | 710 mg/l |
| 2-11ydrocycethy 868-77-9 Green algae Experimental 72 hours NOEC 160 mg/l | 2-Hydroxyethyl | 868-77-9 | Water flea | Experimental | 48 hours | EC50 | 380 mg/l |
| 2-11ydroxycpthy 88-77-9 | 2-Hydroxyethyl | 868-77-9 | Green algae | Experimental | 72 hours | NOEC | 160 mg/l |
| 2-Hydroxychty 868-77-9 | 2-Hydroxyethyl | 868-77-9 | Water flea | Experimental | 21 days | NOEC | 24.1 mg/l |
| 2-Hydroxychty 86 87-79 N/A Experimental 18 hours L550 998 mg per kg of bodyweight | 2-Hydroxyethyl | 868-77-9 | N/A | Experimental | 16 hours | EC0 | >3,000 mg/l |
| Acrylate Oligomer 41637-38-1 Rainbow Trout Analogous Compound Com | 2-Hydroxyethyl | 868-77-9 | N/A | Experimental | 18 hours | LD50 | <98 mg per kg of bodyweight |
| Acrylate Oligomer 41637-38-1 Rainbow Trout Analogous Compound No tox obs at limt of water sol | | 41637-38-1 | Green algae | | 72 hours | | >100 mg/l |
| Acrylate Oligomer 41637-38-1 Water flea Experimental 48 hours No tox obs at lmt of water sol 100 mg/l of water s | Acrylate Oligomer | 41637-38-1 | Rainbow Trout | Analogous | 96 hours | No tox obs at lmt | >100 mg/l |
| Compound | Acrylate Oligomer | 41637-38-1 | Water flea | | 48 hours | | >100 mg/l |
| Compound | Acrylate Oligomer | 41637-38-1 | Green algae | | 72 hours | | 100 mg/l |
| Acrylate Oligomer | Acrylate Oligomer | 41637-38-1 | Water flea | | 21 days | 1 | 100 mg/l |
| Acrylate Oligomer | Acrylate Oligomer | 41637-38-1 | Zebra Fish | Analogous | 34 days | No tox obs at lmt | 100 mg/l |
| Butadiene Polymer | | 41637-38-1 | Activated sludge | - | 3 hours | | >1,000 mg/l |
| Hydroxypropy Methacrylate Mydroxypropy Methacrylate Hydroxypropy Methacrylate Mydroxypropy Methacrylate Mydroxypropy Methacrylate Mydroperoxide Mydrope | | 9010-81-5 | N/A | or insufficient for | N/A | N/A | N/A |
| Hydroxypropy Methacrylate Methacrylate Hydroxypropy Methacrylate Methacrylate Methacrylate Hydroxypropy Methacrylate Methalene Methal | Hydroxypropyl Methacrylate | 27813-02-1 | Bacteria | Experimental | N/A | EC10 | 1,140 mg/l |
| Hydroxypropy Methacrylate 27813-02-1 Water flea Experimental 72 hours ErC50 >97.2 mg/l | | 27813-02-1 | Golden Orfe | Experimental | 48 hours | EC50 | 493 mg/l |
| Hydroxypropy Methacrylate 27813-02-1 Water flea Experimental 48 hours EC50 >143 mg/l | Hydroxypropyl | 27813-02-1 | Green algae | Experimental | 72 haura | E-C50 | 07.0 |
| Hydroxypropyl Methacrylate Hydroxypropyl 27813-02-1 Water flea Experimental 72 hours NOEC 97.2 mg/l Hydroxypropyl 27813-02-1 Water flea Experimental 21 days NOEC 45.2 mg/l Methacrylate Cumene 80-15-9 Bacteria Experimental 18 hours EC10 0.103 mg/l Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours EC50 3.1 mg/l Hydroperoxide Cumene 80-15-9 Rainbow Trout Experimental 96 hours LC50 3.9 mg/l Hydroperoxide Cumene 80-15-9 Water flea Experimental 48 hours EC50 18.84 mg/l Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours EC50 1 hours I hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours EC50 1 hours I hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours EC50 1 hours I hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours NOEC I hmg/l Hydroperoxide 2,2'- I hy-47-1 Green algae Endpoint not reached reached FC50 1 hours F | | | | Z.iperimentar | /2 nours | ETCSU | >97.2 mg/l |
| Hydroxypropyl Methacrylate Cumene 80-15-9 Hydroperoxide Cumene 80-15-9 Rainbow Trout Experimental 96 hours Hydroperoxide Cumene 80-15-9 Hydroperoxide Cumene 10-15-9 Hydroperoxide Cumene 11-15-9 Hydroperoxide Cu | Hydroxypropyl | 27813-02-1 | | 1 | | | |
| Cumene Bacteria Experimental I8 hours EC10 0.103 mg/l Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours EC50 3.1 mg/l Hydroperoxide Cumene 80-15-9 Rainbow Trout Experimental 96 hours LC50 3.9 mg/l Hydroperoxide Cumene 80-15-9 Water flea Experimental 48 hours EC50 18.84 mg/l Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours NOEC I mg/l Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours NOEC I mg/l Hydroperoxide 2,2'- I19-47-1 Green algae Endpoint not reached EC50 >100 mg/l Methylenebis(6- tert-butyl-p-cresol) Hydroperoxide EC50 >100 mg/l EC50 >100 mg/l | Hydroxypropyl Methacrylate Hydroxypropyl | | Water flea | Experimental | 48 hours | EC50 | >143 mg/l |
| Cumene 80-15-9 Rainbow Trout Experimental 72 hours EC50 3.1 mg/l Hydroperoxide Cumene 80-15-9 Rainbow Trout Experimental 96 hours LC50 3.9 mg/l Hydroperoxide Cumene 80-15-9 Water flea Experimental 48 hours EC50 18.84 mg/l Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours NOEC I mg/l Hydroperoxide LC50 3.9 mg/l EC50 18.80 mg/l I mg/l | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl | 27813-02-1 | Water flea Green algae | Experimental Experimental | 48 hours 72 hours | EC50 NOEC | >143 mg/l 97.2 mg/l |
| Cumene Hydroperoxide80-15-9Rainbow TroutExperimental96 hoursLC503.9 mg/lCumene Hydroperoxide80-15-9Water fleaExperimental48 hoursEC5018.84 mg/lCumene Hydroperoxide80-15-9Green algaeExperimental72 hoursNOEC1 mg/lHydroperoxide2,2'-119-47-1Green algaeEndpoint not reached72 hoursEC50>100 mg/lMethylenebis(6- tert-butyl-p-cresol)119-47-1Water fleaEndpoint not reached48 hoursEC50>100 mg/lMethylenebis(6- tert-butyl-p-cresol)119-47-1Water fleaEndpoint not reached48 hoursEC50>100 mg/l | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene | 27813-02-1 27813-02-1 | Water flea Green algae Water flea | Experimental Experimental Experimental | 48 hours 72 hours 21 days | EC50 NOEC | >143 mg/l 97.2 mg/l 45.2 mg/l |
| Cumene Hydroperoxide Cumene 80-15-9 Green algae Experimental 72 hours Hydroperoxide Cumene Hydroperoxide 2,2'- Methylenebis(6-tert-butyl-p-cresol) Mater flea Experimental 72 hours EC50 I mg/l NOEC I mg/l FC50 NOEC I mg/l FC50 S100 mg/l | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide Cumene | 27813-02-1 27813-02-1 80-15-9 | Water flea Green algae Water flea Bacteria | Experimental Experimental Experimental Experimental | 48 hours 72 hours 21 days 18 hours | EC50 NOEC NOEC EC10 | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l |
| Cumene Hydroperoxide 80-15-9 Green algae Experimental 72 hours NOEC 1 mg/l 2,2'- Methylenebis(6- tert-butyl-p-cresol) 119-47-1 Green algae Endpoint not reached 72 hours EC50 >100 mg/l 2,2'- Methylenebis(6- tert-butyl-p-cresol) 119-47-1 Water flea Endpoint not reached 48 hours EC50 >100 mg/l | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide Cumene Hydroperoxide Cumene Hydroperoxide Cumene | 27813-02-1 27813-02-1 80-15-9 80-15-9 | Water flea Green algae Water flea Bacteria Green algae | Experimental Experimental Experimental Experimental Experimental | 48 hours 72 hours 21 days 18 hours 72 hours | EC50 NOEC NOEC EC10 EC50 | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l 3.1 mg/l |
| 2,2'- Methylenebis(6- tert-butyl-p-cresol) 119-47-1 Green algae Endpoint not reached 72 hours FC50 >100 mg/l 2,2'- Methylenebis(6- tert-butyl-p-cresol) Water flea Endpoint not reached Endpoint not reached Endpoint not reached | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide Cumene Hydroperoxide Cumene Hydroperoxide Cumene Hydroperoxide Cumene Cumene | 27813-02-1 27813-02-1 80-15-9 80-15-9 80-15-9 | Water flea Green algae Water flea Bacteria Green algae Rainbow Trout | Experimental Experimental Experimental Experimental Experimental Experimental | 48 hours 72 hours 21 days 18 hours 72 hours 96 hours | EC50 NOEC NOEC EC10 EC50 LC50 | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l 3.1 mg/l 3.9 mg/l |
| 2,2'- | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide Cumene Hydroperoxide Cumene Hydroperoxide Cumene Hydroperoxide Cumene Hydroperoxide Cumene Cumene Hydroperoxide Cumene | 27813-02-1 27813-02-1 80-15-9 80-15-9 80-15-9 80-15-9 | Water flea Green algae Water flea Bacteria Green algae Rainbow Trout Water flea | Experimental Experimental Experimental Experimental Experimental Experimental Experimental | 48 hours 72 hours 21 days 18 hours 72 hours 96 hours 48 hours | EC50 NOEC NOEC EC10 EC50 LC50 EC50 | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l 3.1 mg/l 3.9 mg/l 18.84 mg/l |
| Methylenebis(6- tert-butyl-p-cresol) | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide Cumene | 27813-02-1 27813-02-1 80-15-9 80-15-9 80-15-9 80-15-9 | Water flea Green algae Water flea Bacteria Green algae Rainbow Trout Water flea Green algae | Experimental | 48 hours 72 hours 21 days 18 hours 72 hours 96 hours 48 hours 72 hours | EC50 NOEC NOEC EC10 EC50 LC50 EC50 NOEC | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l 3.1 mg/l 3.9 mg/l 18.84 mg/l 1 mg/l |
| | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide Cumene | 27813-02-1 27813-02-1 80-15-9 80-15-9 80-15-9 80-15-9 119-47-1 | Water flea Green algae Water flea Bacteria Green algae Rainbow Trout Water flea Green algae Green algae | Experimental | 48 hours 72 hours 21 days 18 hours 72 hours 96 hours 48 hours 72 hours 72 hours | EC50 NOEC EC10 EC50 LC50 EC50 NOEC EC50 | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l 3.1 mg/l 3.9 mg/l 18.84 mg/l 1 mg/l >100 mg/l |
| | Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Hydroxypropyl Methacrylate Cumene Hydroperoxide 2,2'- Methylenebis(6- tert-butyl-p-cresol) 2,2'- Methylenebis(6- | 27813-02-1 27813-02-1 80-15-9 80-15-9 80-15-9 80-15-9 119-47-1 | Water flea Green algae Water flea Bacteria Green algae Rainbow Trout Water flea Green algae Green algae | Experimental Endpoint not reached Endpoint not | 48 hours 72 hours 21 days 18 hours 72 hours 96 hours 48 hours 72 hours 72 hours | EC50 NOEC EC10 EC50 LC50 EC50 NOEC EC50 | >143 mg/l 97.2 mg/l 45.2 mg/l 0.103 mg/l 3.1 mg/l 3.9 mg/l 18.84 mg/l 1 mg/l >100 mg/l |

| Methylenebis(6- tert-butyl-p-cresol) | | | | | | |
|--|----------|------------------|--------------|----------|--------------------------------|-------------|
| 2,2'- Methylenebis(6- tert-butyl-p-cresol) | 119-47-1 | Medaka | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| 2,2'- Methylenebis(6- tert-butyl-p-cresol) | 119-47-1 | Green algae | Experimental | 72 hours | NOEC | 1.3 mg/l |
| Cumene | 98-82-8 | Activated sludge | Experimental | 3 hours | EC10 | >2,000 mg/l |
| Cumene | 98-82-8 | Green algae | Experimental | 72 hours | EC50 | 2.6 mg/l |
| Cumene | 98-82-8 | Mysid Shrimp | Experimental | 96 hours | EC50 | 1.2 mg/l |
| Cumene | 98-82-8 | Rainbow Trout | Experimental | 96 hours | LC50 | 2.7 mg/l |
| Cumene | 98-82-8 | Water flea | Experimental | 48 hours | EC50 | 2.14 mg/l |
| Cumene | 98-82-8 | Green algae | Experimental | 72 hours | NOEC | 0.22 mg/l |
| Cumene | 98-82-8 | Water flea | Experimental | 21 days | NOEC | 0.35 mg/l |

12.2. Persistence and degradability

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|--|------------|---|----------|-------------------------------|-------------------|-----------------------------------|
| | | | | | | |
| Phenoxyethyl Methacrylate | 10595-06-9 | Analogous Compound Biodegradation | 28 days | Biological Oxygen Demand | 22.3 %BOD/ThOD | OECD 301D - Closed Bottle Test |
| Phenoxyethyl Methacrylate | 10595-06-9 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 1 years (t 1/2) | OECD 111 Hydrolysis func of pH |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 84 %BOD/COD | OECD 301D - Closed Bottle Test |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | Experimental Hydrolysis | | Hydrolytic half-life basic pH | 10.9 days (t 1/2) | OECD 111 Hydrolysis func of pH |
| Acrylate Oligomer | 41637-38-1 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 24 %BOD/ThOD | OECD 301D - Closed Bottle Test |
| Acrylonitrile- Butadiene Polymer | 9010-81-5 | Data not availbl- insufficient | N/A | N/A | N/A | N/A |
| Hydroxypropyl Methacrylate | 27813-02-1 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 81 %BOD/ThOD | OECD 301C - MITI (I) |
| Cumene Hydroperoxide | 80-15-9 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 0 %BOD/ThOD | OECD 301C - MITI (I) |
| 2,2'- Methylenebis(6- tert-butyl-p-cresol) | 119-47-1 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 0 %BOD/ThOD | OECD 301C - MITI (I) |
| Cumene | 98-82-8 | Experimental Biodegradation | 14 days | Biological Oxygen Demand | 33 %BOD/ThOD | OECD 301C - MITI (I) |
| Cumene | 98-82-8 | Experimental Photolysis | | Photolytic half-life (in air) | 4.5 days (t 1/2) | |

12.3. Bioaccumulative potential

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|--------------------------------|------------|----------------------------------|----------|--------------------------------------|-------------|-----------------------------------|
| Phenoxyethyl Methacrylate | 10595-06-9 | Modeled Bioconcentration | | Bioaccumulation Factor | 5.8 | Catalogic™ |
| Phenoxyethyl Methacrylate | 10595-06-9 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 3.137 | OECD 117 log Kow HPLC method |
| 2-Hydroxyethyl Methacrylate | 868-77-9 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 0.42 | OECD 107 log Kow shke flsk mtd |
| Acrylate Oligomer | 41637-38-1 | Modeled Bioconcentration | | Bioaccumulation Factor | 7 | Catalogic™ |
| Acrylate Oligomer | 41637-38-1 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | ≥4.66 | OECD 117 log Kow HPLC method |
| Acrylonitrile- | 9010-81-5 | Data not available | N/A | N/A | N/A | N/A |

| Butadiene Polymer | | or insufficient for classification | | | | |
|--|------------|------------------------------------|---------|--------------------------------------|------|-----------------------------------|
| Hydroxypropyl Methacrylate | 27813-02-1 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 0.97 | EC A.8 Partition Coefficient |
| Cumene Hydroperoxide | 80-15-9 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 1.82 | |
| 2,2'- Methylenebis(6- tert-butyl-p-cresol) | 119-47-1 | Experimental BCF - Fish | 60 days | Bioaccumulation Factor | 840 | OECD305-Bioconcentration |
| Cumene | 98-82-8 | Modeled Bioconcentration | | Bioaccumulation Factor | 140 | Catalogic TM |
| Cumene | 98-82-8 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 3.55 | OECD 107 log Kow shke flsk mtd |

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: None assigned.

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: 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 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. 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