# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 04-1027-4 | **Version number:** | 20.00 |
| **Revision date:** | 07/02/2025 | **Supersedes date:** | 01/08/2023 |
| **Transportation version number:** | | | |

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

## IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**1.1. Product identifier**
3M Scotch-Weld 3524 Low Density Void Filler Antimony Free

**Product Identification Numbers**
FS-9100-3960-1

7000080057

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Identified uses**
Structural adhesive.

**1.3. Details of the supplier of the safety data sheet**

**Address:** 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
**Telephone:** +353 1 280 3555
**E Mail:** tox.uk@mmm.com

**Website:** www.3M.com

**1.4. Emergency telephone number**
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

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

10-9736-9, 10-9737-7

## TRANSPORTATION INFORMATION

Refer to section 14 of the kit components for transport information.

# KIT LABEL

**2.1. Classification of the substance or mixture**
**CLP REGULATION (EC) No 1272/2008**

**CLASSIFICATION:**
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Acute Toxicity, Category 4 - Acute Tox. 4; H332
Skin Corrosion/ Irritation, Category 1C - Skin Corr. 1C; H314
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Reproductive Toxicity, Category 1B - Repr. 1B; H360FD
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

**2.2. Label elements**
**CLP REGULATION (EC) No 1272/2008**

**SIGNAL WORD**
DANGER.

**Symbols**
GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

**Pictograms**

Contains:
Barium diboron tetraoxide; bis-[4-(2,3-epoxipropoxi)phenyl]propane; Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine; Tris(methylphenyl) phosphate; 3,6-diazaoctanethylenediamin; 2,4,6-tris(dimethylaminomethyl)phenol.

**HAZARD STATEMENTS:**

| | |
|---|---|
| H302 + H332 | Harmful if swallowed or if inhaled. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H360FD | May damage fertility. May damage the unborn child. |
| H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P260B | Do not breathe dust. |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

**Response:**

| | |
|---|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| 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 CENTRE or doctor/physician. |

**SUPPLEMENTAL INFORMATION:**

**Supplemental Precautionary Statements:**
Restricted to professional users.

Refer to Safety Data Sheet for component % unknown values (www.3M.com/msds).

**Revision information:**
Label: CLP Ingredients - kit components information was modified.
Section 02: CLP Physical and Health Hazard Statements information was modified.
Label: CLP Classification information was modified.

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 10-9736-9 | **Version number:** | 23.02 |
| **Revision date:** | 06/08/2025 | **Supersedes date:** | 29/10/2023 |

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier
3M Scotch-Weld™ Low Density Void Filler 3524 B/A AF Part A

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses**
Industrial use.

### 1.3. Details of the supplier of the safety data sheet
**Address:** 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2
**Telephone:** +353 1 280 3555
**E Mail:** ner-productstewardship@mmm.com
**Website:** www.3M.com

### 1.4. Emergency telephone number
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

## SECTION 2: Hazard identification

### 2.1. Classification of the substance or mixture
**CLP REGULATION (EC) No 1272/2008**

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

**CLASSIFICATION:**
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Acute Toxicity, Category 4 - Acute Tox. 4; H332
Skin Corrosion/ Irritation, Category 1C - Skin Corr. 1C; H314
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Reproductive Toxicity, Category 1B - Repr. 1B; H360FD
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

**2.2. Label elements**
**CLP REGULATION (EC) No 1272/2008**

**SIGNAL WORD**
DANGER.

**Symbols**
GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

**Pictograms**

**Ingredients:**

| Ingredient | CAS Nbr | EC No. | % by Wt |
|---|---|---|---|
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | 500-191-5 | 15 - 40 |
| Barium diboron tetraoxide | 13701-59-2 | 237-222-4 | < 8 |
| 3,6-diazaoctanethylenediamin | 112-24-3 | 203-950-6 | < 5 |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | 202-013-9 | < 5 |

**HAZARD STATEMENTS:**

| | |
|---|---|
| H302 + H332 | Harmful if swallowed or if inhaled. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H360FD | May damage fertility. May damage the unborn child. |
| H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P260B | Do not breathe dust. |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

**Response:**

| | |
|---|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| 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 CENTRE or doctor/physician. |

**SUPPLEMENTAL INFORMATION:**

**Supplemental Precautionary Statements:**
Restricted to professional users.

5% of the mixture consists of components of unknown acute oral toxicity.
5% of the mixture consists of components of unknown acute dermal toxicity.
76% of the mixture consists of components of unknown acute inhalation toxicity.

### 2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.
This material does not contain any substances that are assessed to be a PBT or vPvB

## SECTION 3: Composition/information on ingredients

### 3.1. Substances
Not applicable

### 3.2. Mixtures

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Oxide glass chemicals | (CAS-No.) 65997-17-3<br>(EC-No.) 266-046-0 | 15 - 40 | Substance with a national occupational exposure limit |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | (CAS-No.) 68082-29-1<br>(EC-No.) 500-191-5 | 15 - 40 | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Chronic 2, H411 |
| Tris(methylphenyl) phosphate | (CAS-No.) 1330-78-5<br>(EC-No.) 215-548-8 | 10 - 20 | Repr. 2, H361f<br>Aquatic Acute 1, H400,M=1<br>Aquatic Chronic 1, H410,M=1 |
| Barium diboron tetraoxide | (CAS-No.) 13701-59-2<br>(EC-No.) 237-222-4 | < 8 | Acute Tox. 3, H301(LD50 = 100 mg/kg ATE values per Annex VI )<br>Acute Tox. 4, H332(LC50 = 1.5 mg/l ATE values per Annex VI )<br>Repr. 1B, H360FD<br>Aquatic Chronic 3, H412 |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | (CAS-No.) 84852-53-9<br>(EC-No.) 284-366-9<br>(REACH-No.) 01-2119474877-18 | < 7 | Substance not classified as hazardous |
| 3,6-diazaoctanethylenediamin | (CAS-No.) 112-24-3<br>(EC-No.) 203-950-6 | < 5 | Acute Tox. 4, H312<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412<br>Acute Tox. 4, H302<br>Eye Dam. 1, H318 |
| 2,4,6-tris(dimethylaminomethyl)phenol | (CAS-No.) 90-72-2<br>(EC-No.) 202-013-9<br>(REACH-No.) 01-2119560597-27 | < 5 | Acute Tox. 4, H302<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318 |
| Aluminium hydroxide | (CAS-No.) 21645-51-2<br>(EC-No.) 244-492-7<br>(REACH-No.) 01-2119529246-39 | < 5 | Substance with a national occupational exposure limit |

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

## 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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**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. Do not induce vomiting. Get immediate medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**
The most important symptoms and effects based on the CLP classification include:
Harmful if inhaled. Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). 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). Harmful if swallowed.

**4.3. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Extinguishing media**
In case of fire: Use a dry chemical extinguisher to extinguish.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Amine compounds. | During combustion. |
| Carbon monoxide | During combustion. |
| Carbon dioxide. | During combustion. |
| Hydrogen Bromide | During combustion. |

**5.3. Advice 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 vapours, in accordance with good industrial hygiene practice. 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.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**6.4. Reference to other sections**
Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/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 oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

**7.2. Conditions for safe storage including any incompatibilities**
Store away from heat. Store away from oxidising agents.

**7.3. Specific end use(s)**
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

## 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 | CAS Nbr | Agency | Limit type | Additional comments |
|---|---|---|---|---|
| Borates | 13701-59-2 | Ireland OELs | TWA(8 hours):2 mg/m3 | |
| DUST, INERT OR NUISANCE | 21645-51-2 | Ireland OELs | TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3 | |
| DUST, INERT OR NUISANCE | 65997-17-3 | Ireland OELs | TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3 | |
| Mineral wool, with the exception of those specified elsewhere in this Annex | 65997-17-3 | Ireland OELs | TWA(8 hours):5 mg/m3(2 fiber/cc) | |
| Oxide glass chemicals | 65997-17-3 | Manufacturer | TWA(as non-fibrous, | |

| | | |
|---|---|---|
| | determined | respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3 |

Ireland OELs : Ireland. OELs
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**Biological limit values**
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

**Derived no effect level (DNEL)**

| Ingredient | Degradation Product | Population | Human exposure pattern | DNEL |
|---|---|---|---|---|
| Tris(methylphenyl) phosphate | | Worker | Dermal, Long-term exposure (8 hours), Systemic effects | 3.33 mg/kg bw/d |
| Tris(methylphenyl) phosphate | | Worker | Dermal, Short-term exposure, Local effects | 16 mg/cm2 |
| Tris(methylphenyl) phosphate | | Worker | Dermal, Short-term exposure, Systemic effects | 74 mg/kg bw/d |
| Tris(methylphenyl) phosphate | | Worker | Inhalation, Long-term exposure (8 hours), Systemic effects | 0.47 mg/m³ |
| Tris(methylphenyl) phosphate | | Worker | Inhalation, Short-term exposure, Systemic effects | 1.11 mg/m³ |

**Predicted no effect concentrations (PNEC)**

| Ingredient | Degradation Product | Compartment | PNEC |
|---|---|---|---|
| Tris(methylphenyl) phosphate | | Agricultural soil | 0.409 mg/kg d.w. |
| Tris(methylphenyl) phosphate | | Freshwater | 0.001 mg/l |
| Tris(methylphenyl) phosphate | | Freshwater sediments | 2.05 mg/kg d.w. |
| Tris(methylphenyl) phosphate | | Intermittent releases to water | 0.00146 mg/l |
| Tris(methylphenyl) phosphate | | Marine water | 0.0001 mg/l |
| Tris(methylphenyl) phosphate | | Marine water sediments | 0.205 mg/kg d.w. |
| Tris(methylphenyl) phosphate | | Sewage Treatment Plant | 10 mg/l |

**Recommended monitoring procedures:**Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

**8.2. Exposure controls**

In addition, refer to the annex for more information.

**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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

**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.

*Applicable Norms/Standards*
Use eye/face protection conforming to EN 166

**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:

| Material | Thickness (mm) | Breakthrough Time |
|---|---|---|
| Polymer laminate | >0.3 | 4-8 hours |

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

*Applicable Norms/Standards*
Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

The following protective clothing material(s) are also recommended:

**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 vapours and particulates
Half facepiece or full facepiece supplied-air respirator

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

*Applicable Norms/Standards*
Use a respirator conforming to EN 140 or EN 136
Use a respirator conforming to EN 140 or EN 136: filter types A & P

**8.2.3. Environmental exposure controls**
Refer to Annex

# SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Solid. |
| **Specific Physical Form:** | Paste |
| **Colour** | Off-White |
| **Odor** | Light Amine |
| **Odour threshold** | *No data available.* |
| **Melting point/freezing point** | *No data available.* |
| **Boiling point/boiling range** | *Not applicable.* |
| **Flammability** | Not applicable. |
| **Flammable Limits(LEL)** | *Not applicable.* |
| **Flammable Limits(UEL)** | *Not applicable.* |
| **Flash point** | 150 ºC [*Test Method:*Closed Cup] |
| **Autoignition temperature** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **pH** | *substance/mixture is non-soluble (in water)* |
| **Kinematic Viscosity** | *No data available.* |
| **Water solubility** | *No data available.* |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Vapour pressure** | *Not applicable.* |
| **Density** | 0.45 g/ml |
| **Relative density** | 0.45 [*Ref Std:*WATER=1] |
| **Relative Vapour Density** | *Not applicable.* |
| **Particle Characteristics** | *Not applicable.* |

**9.2. Other information**

**9.2.2 Other safety characteristics**

| | |
|---|---|
| **EU Volatile Organic Compounds** | *No data available.* |
| **Evaporation rate** | *Not applicable.* |
| **Percent volatile** | <=1 % |

# 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 polymerisation will not occur.

**10.4 Conditions to avoid**
None known.

**10.5 Incompatible materials**
Strong oxidising 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Signs and Symptoms of Exposure**

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

**Inhalation**
Harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. May cause additional health effects (see below).

**Skin contact**
Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

**Eye contact**
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision. Dust created by cutting, grinding, sanding, or machining may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion**
Harmful if swallowed.
Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. 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.

**Additional information:**
Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

**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-Dust/Mist(4 hr) | | No data available; calculated ATE >1 - =5 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >300 - =2,000 mg/kg |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | Dermal | Rat | LD50 > 2,000 mg/kg |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Oxide glass chemicals | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Oxide glass chemicals | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Tris(methylphenyl) phosphate | Dermal | Rabbit | LD50 3,700 mg/kg |
| Tris(methylphenyl) phosphate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.2 mg/l |
| Tris(methylphenyl) phosphate | Ingestion | Rat | LD50 15,750 mg/kg |
| Barium diboron tetraoxide | Inhalation-Dust/Mist (4 hours) | official classification | LC50 1.5 mg/l |
| Barium diboron tetraoxide | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| Barium diboron tetraoxide | Ingestion | Rabbit | LD50 100 mg/kg |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Dermal | Rabbit | LC50 > 2,000 mg/kg |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | Rat | LD50 > 5,000 mg/kg |
| 2,4,6-tris(dimethylaminomethyl)phenol | Dermal | Rat | LD50 1,280 mg/kg |
| 2,4,6-tris(dimethylaminomethyl)phenol | Ingestion | Rat | LD50 1,000 mg/kg |
| 3,6-diazaoctanethylenediamin | Dermal | Rat | LD50 1,465 mg/kg |
| 3,6-diazaoctanethylenediamin | Ingestion | Rat | LD50 1,591 mg/kg |
| Aluminium hydroxide | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Aluminium hydroxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.3 mg/l |
| Aluminium hydroxide | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | In vitro data | Irritant |
| Oxide glass chemicals | Professional judgement | No significant irritation |
| Tris(methylphenyl) phosphate | Rabbit | No significant irritation |
| Barium diboron tetraoxide | Rabbit | No significant irritation |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Rabbit | No significant irritation |
| 2,4,6-tris(dimethylaminomethyl)phenol | Rabbit | Corrosive |
| 3,6-diazaoctanethylenediamin | Rabbit | Corrosive |
| Aluminium hydroxide | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | Rabbit | Corrosive |
| Oxide glass chemicals | Professional judgement | No significant irritation |
| Tris(methylphenyl) phosphate | Rabbit | No significant irritation |
| Barium diboron tetraoxide | Rabbit | No significant irritation |

| | | |
|---|---|---|
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Rabbit | No significant irritation |
| 2,4,6-tris(dimethylaminomethyl)phenol | Rabbit | Corrosive |
| 3,6-diazaoctanethylenediamin | Rabbit | Corrosive |
| Aluminium hydroxide | Rabbit | No significant irritation |

**Skin Sensitisation**

| Name | Species | Value |
|---|---|---|
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | Mouse | Sensitising |
| Tris(methylphenyl) phosphate | Professional judgement | Not classified |
| Barium diboron tetraoxide | Guinea pig | Not classified |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Guinea pig | Not classified |
| 2,4,6-tris(dimethylaminomethyl)phenol | Guinea pig | Not classified |
| 3,6-diazaoctanethylenediamin | Guinea pig | Sensitising |
| Aluminium hydroxide | Guinea pig | Not classified |

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

| Name | Route | Value |
|---|---|---|
| Oxide glass chemicals | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Tris(methylphenyl) phosphate | In Vitro | Not mutagenic |
| Tris(methylphenyl) phosphate | In vivo | Not mutagenic |
| Barium diboron tetraoxide | In Vitro | Not mutagenic |
| Barium diboron tetraoxide | In vivo | Not mutagenic |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | In Vitro | Not mutagenic |
| 2,4,6-tris(dimethylaminomethyl)phenol | In Vitro | Not mutagenic |
| 3,6-diazaoctanethylenediamin | In vivo | Not mutagenic |
| 3,6-diazaoctanethylenediamin | In Vitro | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Oxide glass chemicals | Inhalation | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Tris(methylphenyl) phosphate | Ingestion | Multiple animal species | Not carcinogenic |
| 3,6-diazaoctanethylenediamin | Dermal | Mouse | Not carcinogenic |
| Aluminium hydroxide | Not specified. | Multiple animal species | Not carcinogenic |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| Tris(methylphenyl) phosphate | Ingestion | Not classified for development | Rat | NOAEL 400 mg/kg/day | during gestation |

| | | | | | |
|---|---|---|---|---|---|
| Tris(methylphenyl) phosphate | Ingestion | Toxic to female reproduction | Multiple animal species | NOAEL Not available | premating into lactation |
| Tris(methylphenyl) phosphate | Ingestion | Toxic to male reproduction | Multiple animal species | NOAEL Not available | premating into lactation |
| Barium diboron tetraoxide | Ingestion | Toxic to female reproduction | Rat | NOAEL 800 mg/kg/day | 90 days |
| Barium diboron tetraoxide | Ingestion | Toxic to development | Rabbit | NOAEL 20 mg/kg/day | during organogenesis |
| Barium diboron tetraoxide | Ingestion | Toxic to male reproduction | Rat | NOAEL 350 mg/kg/day | 90 days |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| 2,4,6-tris(dimethylaminomethyl)phenol | Ingestion | Not classified for male reproduction | Rat | NOAEL 150 mg/kg/day | 2 generation |
| 2,4,6-tris(dimethylaminomethyl)phenol | Ingestion | Not classified for female reproduction | Rat | NOAEL 50 mg/kg/day | 2 generation |
| 2,4,6-tris(dimethylaminomethyl)phenol | Ingestion | Not classified for development | Rabbit | NOAEL 15 mg/kg/day | during gestation |
| 3,6-diazaoctanethylenediamin | Dermal | Not classified for development | Rabbit | NOAEL 125 mg/kg/day | during organogenesis |
| 3,6-diazaoctanethylenediamin | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | during organogenesis |
| Aluminium hydroxide | Ingestion | Not classified for development | Rat | NOAEL 768 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 |
|---|---|---|---|---|---|---|
| Tris(methylphenyl) phosphate | Ingestion | peripheral nervous system | Not classified | Chicken | NOAEL 2,000 mg/kg | |
| Barium diboron tetraoxide | Ingestion | nervous system | Not classified | Rat | NOAEL 200 mg/kg | |
| 2,4,6-tris(dimethylaminomethyl) phenol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| 3,6-diazaoctanethylenediamin | 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 |
|---|---|---|---|---|---|---|
| Oxide glass chemicals | Inhalation | respiratory system | Not classified | Human | NOAEL not available | occupational exposure |
| Tris(methylphenyl) phosphate | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 230 mg/kg/day | 13 weeks |
| Tris(methylphenyl) phosphate | Ingestion | endocrine system \| liver \| heart \| skin \| gastrointestinal tract \| bone, teeth, nails, and/or hair \| hematopoietic system \| immune system \| nervous system \| respiratory system | Not classified | Rat | NOAEL 750 mg/kg/day | 13 weeks |
| Barium diboron tetraoxide | Ingestion | hematopoietic system \| liver \| heart \| skin \| endocrine system \| bone, teeth, | Not classified | Rat | NOAEL 700 mg/kg/day | 90 days |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | nails, and/or hair \| immune system \| muscles \| nervous system \| eyes \| kidney and/or bladder \| respiratory system \| vascular system | | | | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 90 days |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | heart \| endocrine system \| immune system | Not classified | Rat | NOAEL 1,250 mg/kg/day | 28 days |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | hematopoietic system \| nervous system \| eyes \| kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 90 days |
| 2,4,6-tris(dimethylaminomethyl) phenol | Dermal | skin | Not classified | Rat | NOAEL 25 mg/kg/day | 4 weeks |
| 2,4,6-tris(dimethylaminomethyl) phenol | Dermal | liver \| nervous system \| auditory system \| hematopoietic system \| eyes | Not classified | Rat | NOAEL 125 mg/kg/day | 4 weeks |
| 2,4,6-tris(dimethylaminomethyl) 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 |

**Aspiration Hazard**
For the component/components, either no data is currently available or the data is 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.**

**11.2. Information on other hazards**

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

# SECTION 12: Ecological information

**The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.**

**12.1. Toxicity**

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|---|---|---|---|---|---|---|
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | Activated sludge | Experimental | 3 hours | EC10 | 130 mg/l |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | Green algae | Experimental | 72 hours | EC50 | 4.34 mg/l |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | Water flea | Experimental | 48 hours | EC50 | 7.07 mg/l |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | Zebra Fish | Experimental | 96 hours | LC50 | 7.07 mg/l |
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | Green algae | Experimental | 72 hours | NOEC | 0.5 mg/l |
| Oxide glass chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Oxide glass chemicals | 65997-17-3 | Water flea | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Oxide glass chemicals | 65997-17-3 | Zebra Fish | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Oxide glass chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | NOEC | >=1,000 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Green algae | Experimental | 72 hours | ErC50 | 0.404 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Rainbow trout | Experimental | 96 hours | LC50 | 0.6 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Water flea | Experimental | 48 hours | EC50 | 0.146 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Midge | Analogous Compound | 28 days | NOEC | <37 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Flagfish | Experimental | 28 days | NOEC | 0.01 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Green algae | Experimental | 72 hours | ErC10 | 0.016 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Water flea | Experimental | 21 days | NOEC | 0.1 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Redworm | Analogous Compound | 14 days | LC50 | >1,000 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Redworm | Analogous Compound | 56 days | NOEC | 250 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Soil microbes | Analogous Compound | 28 days | EC50 | >1,010 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Wheat | Analogous Compound | 19 days | LC50 | >100 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Activated sludge | Experimental | 3 hours | EC50 | >1,000 mg/l |
| Barium diboron tetraoxide | 13701-59-2 | Activated sludge | Experimental | 3 hours | NOEC | 100 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| Barium diboron tetraoxide | 13701-59-2 | Green algae | Experimental | 72 hours | EC50 | 7.8 mg/l |
| Barium diboron tetraoxide | 13701-59-2 | Rainbow trout | Experimental | 96 hours | LC50 | 62 mg/l |
| Barium diboron tetraoxide | 13701-59-2 | Water flea | Experimental | 48 hours | EC50 | 20.3 mg/l |
| Barium diboron tetraoxide | 13701-59-2 | Green algae | Experimental | 72 hours | NOEC | 1.1 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Activated sludge | Experimental | 3 hours | NOEC | 10 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Green algae | Experimental | 96 hours | EC50 | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Rainbow trout | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Water flea | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Green algae | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium hydroxide | 21645-51-2 | Fish | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium hydroxide | 21645-51-2 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium hydroxide | 21645-51-2 | Water flea | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminium hydroxide | 21645-51-2 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | 100 mg/l |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Green algae | Experimental | 72 hours | EC50 | 27.4 mg/l |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Guppy | Experimental | 96 hours | LC50 | 570 mg/l |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Water flea | Experimental | 48 hours | EC50 | 37.4 mg/l |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Green algae | Experimental | 72 hours | NOEC | 0.468 mg/l |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Water flea | Experimental | 21 days | NOEC | 2.86 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | N/A | Experimental | 96 hours | LC50 | 718 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Common Carp | Experimental | 96 hours | LC50 | >100 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Green algae | Experimental | 72 hours | EC50 | 46.7 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Green algae | Experimental | 72 hours | NOEC | 6.44 mg/l |

### 12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Fatty acids, C18-unsaturated, dimers, | 68082-29-1 | Analogous Compound | 28 days | CO2 evolution | ≤8 %CO2 evolution/THC | OECD 301B - Modified sturm or CO2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | | Biodegradation | | | O2 evolution | |
| Oxide glass chemicals | 65997-17-3 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Biodegradation | 28 days | BOD | 80 %BOD/ThOD | OECD 301C - MITI test (I) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Aquatic Inherent Biodegrad. | 28 days | BOD | 100 %BOD/ThOD | OECD 302C - Modified MITI (II) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 44.4 days (t 1/2) | OECD 111 Hydrolysis func of pH |
| Barium diboron tetraoxide | 13701-59-2 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Experimental Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301C - MITI test (I) |
| Aluminium hydroxide | 21645-51-2 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Experimental Biodegradation | 20 days | BOD | 0 %BOD/ThOD | OECD 301D - Closed bottle test |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Experimental Biodegradation | 28 days | BOD | 4 %BOD/ThOD | OECD 301D - Closed bottle test |

### 12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | 68082-29-1 | Experimental Bioconcentration | | Log Kow | ≤3.55 | OECD 117 log Kow HPLC method |
| Oxide glass chemicals | 65997-17-3 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental BCF - Fish | 14 days | Bioaccumulation factor | 700 | |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Bioconcentration | | Log Kow | 5.93 | |
| Barium diboron tetraoxide | 13701-59-2 | Experimental Bioconcentration | | Log Kow | -0.70 | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Experimental Bioconcentration | | Log Kow | 3.55 | |
| Aluminium hydroxide | 21645-51-2 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 3,6-diazaoctanethylenediamin | 112-24-3 | Experimental BCF - Fish | 42 days | Bioaccumulation factor | <5.0 | OECD305-Bioconcentration |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | Experimental Bioconcentration | | Log Kow | -0.66 | 830.7550 Part.Coef Shake Flask |

### 12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|---|---|---|---|---|---|
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Mobility in Soil | Koc | 20,489 l/kg | OECD 121 Estim. of Koc by HPLC |

### 12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

**12.6. Endocrine disrupting properties**

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

**12.7. Other adverse effects**
No information available.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

**EU waste code (product as sold)**

| | |
|---|---|
| 08 04 09* | Waste adhesives and sealants containing organic solvents or other dangerous substances |
| 20 01 27* | Paint, inks, adhesives and resins containing dangerous substances |

## SECTION 14: Transportation information

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|---|---|---|---|
| **14.1 UN number or ID number** | UN3263 | UN3263 | UN3263 |
| **14.2 UN proper shipping name** | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.(TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL) | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.(TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL) | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.(TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL; TRICRESYL PHOSPHATE) |
| **14.3 Transport hazard class(es)** | 8 | 8 | 8 |
| **14.4 Packing group** | III | III | III |
| **14.5 Environmental hazards** | Environmentally Hazardous | Not applicable | Marine Pollutant |

| | | | |
|---|---|---|---|
| **14.6 Special precautions for user** | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |
| **14.7 Marine Transport in bulk according to IMO instruments** | No data available. | No data available. | No data available. |
| **Control Temperature** | No data available. | No data available. | No data available. |
| **Emergency Temperature** | No data available. | No data available. | No data available. |
| **ADR Classification Code** | C8 | Not applicable. | Not applicable. |
| **IMDG Segregation Code** | Not applicable. | Not applicable. | NONE |

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

## SECTION 15: Regulatory information

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

**Authorization status under REACH:**
The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

| **Ingredient** | **CAS Nbr** |
|---|---|
| Barium diboron tetraoxide | 13701-59-2 |

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

**Global inventory status**
Contact 3M for more information. 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.

**DIRECTIVE 2012/18/EU**
Seveso hazard categories, Annex 1, Part 1

| Hazard Categories | Qualifying quantity (tonnes) for the application of | |
|---|---|---|
| | Lower-tier requirements | Upper-tier requirements |
| E2 Hazardous to the Aquatic environment | 200 | 500 |

Seveso named dangerous substances, Annex 1, Part 2
None

**Regulation (EU) No 649/2012**
No chemicals listed

**15.2. Chemical Safety Assessment**
A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained

substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

## SECTION 16: Other information

**List of relevant H statements**

| | |
|---|---|
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H302 + H332 | Harmful if swallowed or if inhaled. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H332 | Harmful if inhaled. |
| H360FD | May damage fertility. May damage the unborn child. |
| H361f | Suspected of damaging fertility. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Revision information:**
Section 1: Address information was modified.
Section 1: E-mail address information was modified.
CLP: Ingredient table information was modified.
Section 02: CLP Physical and Health Hazard Statements information was modified.
Label: CLP Classification information was modified.
Label: CLP Percent Unknown information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 04: First Aid - Symptoms and Effects (CLP) information was modified.
Section 4: First aid for ingestion (swallowing) information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: glove data value information was added.
Section 8: glove data value information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was modified.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was deleted.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Odor information was modified.
Section 09: Particle Characteristics N/A information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Additional Information information was added.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Reproductive Toxicity Table information was modified.

Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was added.
Section 12: No Data text for mobility in soil information was deleted.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Seveso Substance Text information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

# Annex

| **1. Title** | |
|---|---|
| **Substance identification** | Tris(methylphenyl) phosphate;<br>EC No. 215-548-8;<br>CAS Nbr 1330-78-5; |
| **Exposure Scenario Name** | Formulation |
| **Lifecycle Stage** | Use at industrial sites |
| **Contributing activities** | PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing)<br>ERC 02 -Formulation into mixture |
| **Processes, tasks and activities covered** | Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Continuous release;<br>Duration of exposure per day at workplace [for one worker]: 8 hours/day;<br>Indoor use with Local Exhaust Ventilation;<br>Processing Temperature:: 20 - 26 degree Celsius; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Goggles - Chemical resistant;<br>Protective clothing / Wear suitable protective clothing;<br>Protective Gloves - Polyvinyl Chloride;<br>Ventilated Process Enclosures;<br>**Environmental:**<br>None needed; |
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Do not release directly to waterways; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| **1. Title** |
|---|

| | |
|---|---|
| **Substance identification** | Tris(methylphenyl) phosphate;<br>EC No. 215-548-8;<br>CAS Nbr 1330-78-5; |
| **Exposure Scenario Name** | Industrial Use of Adhesives |
| **Lifecycle Stage** | Use at industrial sites |
| **Contributing activities** | PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC 13 -Treatment of articles by dipping and pouring<br>ERC 05 -Use at industrial site leading to inclusion into/onto article |
| **Processes, tasks and activities covered** | Application of product. Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Continuous release;<br>Duration of exposure per day at workplace [for one worker]: 8 hours/day;<br>Indoor use with Local Exhaust Ventilation;<br>Processing Temperature:: 20 - 26 degree Celsius; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Goggles - Chemical resistant;<br>Protective clothing / Wear suitable protective clothing;<br>Protective Gloves - Polyvinyl Chloride;<br>Ventilated Process Enclosures;<br>**Environmental:**<br>None needed;<br>;<br>The following task-specific risk management measures apply in addition to those listed above:<br>**Task: PROC08a**;<br>**Human Health**;<br>Protective Clothing - Apron; |
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Do not release directly to waterways; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

DISCLAIMER: The information on this Safety Data Sheet 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 Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test 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 the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

**3M Ireland MSDSs are available at www.3M.com**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 10-9737-7 | **Version number:** | 21.00 |
| **Revision date:** | 10/12/2025 | **Supersedes date:** | 06/02/2025 |

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1. Product identifier**
3M Scotch-Weld Low Density Void Filler 3524 B/A AF Part B

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Identified uses**
Base for two-part epoxy adhesive.

**1.3. Details of the supplier of the safety data sheet**

| | |
|---|---|
| **Address:** | 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2 |
| **Telephone:** | +353 1 280 3555 |
| **E Mail:** | ner-productstewardship@mmm.com |
| **Website:** | www.3M.com |

**1.4. Emergency telephone number**
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

## SECTION 2: Hazard identification

**2.1. Classification of the substance or mixture**
**CLP REGULATION (EC) No 1272/2008**

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

**CLASSIFICATION:**
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Reproductive Toxicity, Category 2 - Repr. 2; H361f
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

**2.2. Label elements**
**CLP REGULATION (EC) No 1272/2008**

**SIGNAL WORD**
WARNING.

**Symbols**
GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

**Pictograms**

**Ingredients:**

| Ingredient | CAS Nbr | EC No. | % by Wt |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | 216-823-5 | < 60 |
| Tris(methylphenyl) phosphate | 1330-78-5 | 215-548-8 | 7 - 13 |

**HAZARD STATEMENTS:**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H317 | May cause an allergic skin reaction. |
| H361f | Suspected of damaging fertility. |
| 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 advice/attention. |
| P391 | Collect spillage. |

**2.3. Other hazards**

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

## SECTION 3: Composition/information on ingredients

**3.1. Substances**
Not applicable

**3.2. Mixtures**

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5<br>(REACH-No.) 01-2119456619-26 | < 60 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411 |
| Oxide glass chemicals | (CAS-No.) 65997-17-3<br>(EC-No.) 266-046-0 | 15 - 20 | Substance with a national occupational exposure limit |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | (CAS-No.) 84852-53-9<br>(EC-No.) 284-366-9<br>(REACH-No.) 01-2119474877-18 | < 20 | Substance not classified as hazardous |
| Tris(methylphenyl) phosphate | (CAS-No.) 1330-78-5<br>(EC-No.) 215-548-8 | 7 - 13 | Repr. 2, H361f<br>Aquatic Acute 1, H400,M=1<br>Aquatic Chronic 1, H410,M=1 |

Please see section 16 for the full text of any H statements referred to in this section

**Specific Concentration Limits**

| Ingredient | Identifier(s) | Specific Concentration Limits |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5 | (C >= 5%) Skin Irrit. 2, H315<br>(C >= 5%) Eye Irrit. 2, H319 |

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

## 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**
The most important symptoms and effects based on the CLP classification include:
Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

**4.3. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

**5.1. 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. |
| Carbon monoxide | During combustion. |
| Carbon dioxide. | During combustion. |
| Hydrogen Bromide | During combustion. |
| Hydrogen Chloride | During combustion. |

**5.3. Advice for fire-fighters**
When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus,tunic and trousers (leggings),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 vapours, in accordance with good industrial hygiene practice. 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.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**6.4. Reference to other sections**
Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/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 oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

**7.2. Conditions for safe storage including any incompatibilities**

Store away from acids. Store away from oxidising agents.

**7.3. Specific end use(s)**
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

# 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 | CAS Nbr | Agency | Limit type | Additional comments |
|---|---|---|---|---|
| Dusts non-specific | 65997-17-3 | Ireland OELs | TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3 | |
| Mineral wool | 65997-17-3 | Ireland OELs | TWA(8 hours):5 mg/m3(2 fiber/cc) | |
| Oxide glass chemicals | 65997-17-3 | Manufacturer determined | TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3 | |

Ireland OELs : Ireland. OELs
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**Biological limit values**
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

**Derived no effect level (DNEL)**

| Ingredient | Degradation Product | Population | Human exposure pattern | DNEL |
|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Dermal, Long-term exposure (8 hours), Systemic effects | 8.3 mg/kg bw/d |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Dermal, Short-term exposure, Systemic effects | 8.3 mg/kg bw/d |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Inhalation, Long-term exposure (8 hours), Systemic effects | 12.3 mg/m³ |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Worker | Inhalation, Short-term exposure, Systemic effects | 12.3 mg/m³ |
| Tris(methylphenyl) phosphate | | Worker | Dermal, Long-term exposure (8 hours), Systemic effects | 3.33 mg/kg bw/d |
| Tris(methylphenyl) phosphate | | Worker | Dermal, Short-term exposure, Local effects | 16 mg/cm2 |
| Tris(methylphenyl) phosphate | | Worker | Dermal, Short-term exposure, Systemic effects | 74 mg/kg bw/d |

| | | | | |
|---|---|---|---|---|
| Tris(methylphenyl) phosphate | | Worker | Inhalation, Long-term exposure (8 hours), Systemic effects | 0.47 mg/m³ |
| Tris(methylphenyl) phosphate | | Worker | Inhalation, Short-term exposure, Systemic effects | 1.11 mg/m³ |

**Predicted no effect concentrations (PNEC)**

| Ingredient | Degradation Product | Compartment | PNEC |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Freshwater | 0.003 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Freshwater sediments | 0.5 mg/kg d.w. |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Intermittent releases to water | 0.013 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Marine water | 0.0003 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Marine water sediments | 0.5 mg/kg d.w. |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | | Sewage Treatment Plant | 10 mg/l |
| Tris(methylphenyl) phosphate | | Agricultural soil | 0.409 mg/kg d.w. |
| Tris(methylphenyl) phosphate | | Freshwater | 0.001 mg/l |
| Tris(methylphenyl) phosphate | | Freshwater sediments | 2.05 mg/kg d.w. |
| Tris(methylphenyl) phosphate | | Intermittent releases to water | 0.00146 mg/l |
| Tris(methylphenyl) phosphate | | Marine water | 0.0001 mg/l |
| Tris(methylphenyl) phosphate | | Marine water sediments | 0.205 mg/kg d.w. |
| Tris(methylphenyl) phosphate | | Sewage Treatment Plant | 10 mg/l |

**Recommended monitoring procedures:**Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

**8.2. Exposure controls**

In addition, refer to the annex for more information.

**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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

**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.

*Applicable Norms/Standards*
Use eye protection conforming to EN 16321

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended:

| Material | Thickness (mm) | Breakthrough Time |
|---|---|---|
| Butyl rubber. | >0.3 | 1-4 hours |
| Nitrile rubber. | >0.3 | 1-4 hours |

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

*Applicable Norms/Standards*
Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

**Respiratory protection**

Wear respiratory protection if ventilation is inadequate to prevent overexposure.
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 vapours and particulates
Half facepiece or full facepiece supplied-air respirator

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

*Applicable Norms/Standards*
Use a respirator conforming to EN 140 or EN 136
Use a respirator conforming to EN 140 or EN 136: filter types A & P

**8.2.3. Environmental exposure controls**
Refer to Annex

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Solid. |
| **Specific Physical Form:** | Paste |
| **Colour** | Blue |
| **Odor** | Light Epoxy |
| **Odour threshold** | *No data available.* |
| **Melting point/freezing point** | *No data available.* |
| **Boiling point/boiling range** | 200 ºC |
| **Flammability** | Not applicable. |
| **Flammable Limits(LEL)** | *Not applicable.* |
| **Flammable Limits(UEL)** | *Not applicable.* |
| **Flash point** | 150 ºC [*Test Method:*Closed Cup] |
| **Autoignition temperature** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **pH** | *substance/mixture is non-soluble (in water)* |
| **Kinematic Viscosity** | *No data available.* |
| **Water solubility** | *No data available.* |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Vapour pressure** | *Not applicable.* |
| **Density** | *No data available.* |
| **Relative density** | 0.5 [*Ref Std:*WATER=1] |
| **Relative Vapour Density** | *Not applicable.* |
| **Particle Characteristics** | *Not applicable.* |

**9.2. Other information**

**9.2.2 Other safety characteristics**

| | |
|---|---|
| **EU Volatile Organic Compounds** | *No data available.* |
| **Evaporation rate** | *Not applicable.* |
| **Percent volatile** | 1 % weight |

## 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 polymerisation will not occur.

**10.4 Conditions to avoid**
None known.

**10.5 Incompatible materials**
Strong acids.
Strong oxidising 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Signs and Symptoms of Exposure**

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

**Inhalation**
Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. May cause additional health effects (see below).

**Skin contact**
Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

**Eye contact**
Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Dust created by cutting, grinding, sanding, or machining may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion**
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. 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.

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

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | Rat | LD50 > 1,600 mg/kg |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Rat | LD50 > 1,000 mg/kg |
| Oxide glass chemicals | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Oxide glass chemicals | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Dermal | Rabbit | LC50 > 2,000 mg/kg |

| | | | |
|---|---|---|---|
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Tris(methylphenyl) phosphate | Dermal | Rabbit | LD50 3,700 mg/kg |
| Tris(methylphenyl) phosphate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.2 mg/l |
| Tris(methylphenyl) phosphate | Ingestion | Rat | LD50 15,750 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Rabbit | Mild irritant |
| Oxide glass chemicals | Professional judgement | No significant irritation |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Rabbit | No significant irritation |
| Tris(methylphenyl) phosphate | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Rabbit | Moderate irritant |
| Oxide glass chemicals | Professional judgement | No significant irritation |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Rabbit | No significant irritation |
| Tris(methylphenyl) phosphate | Rabbit | No significant irritation |

**Skin Sensitisation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Human and animal | Sensitising |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Guinea pig | Not classified |
| Tris(methylphenyl) phosphate | Professional judgement | Not classified |

**Respiratory Sensitisation**

| Name | Species | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Human | Not classified |

**Germ Cell Mutagenicity**

| Name | Route | Value |
|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | In vivo | Not mutagenic |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Oxide glass chemicals | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | In Vitro | Not mutagenic |
| Tris(methylphenyl) phosphate | In Vitro | Not mutagenic |
| Tris(methylphenyl) phosphate | In vivo | Not mutagenic |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Oxide glass chemicals | Inhalation | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Tris(methylphenyl) phosphate | Ingestion | Multiple animal species | Not carcinogenic |

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | Not classified for development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | during gestation |
| Tris(methylphenyl) phosphate | Ingestion | Not classified for development | Rat | NOAEL 400 mg/kg/day | during gestation |
| Tris(methylphenyl) phosphate | Ingestion | Toxic to female reproduction | Multiple animal species | NOAEL Not available | premating into lactation |
| Tris(methylphenyl) phosphate | Ingestion | Toxic to male reproduction | Multiple animal species | NOAEL Not available | premating into lactation |

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Tris(methylphenyl) phosphate | Ingestion | peripheral nervous system | Not classified | Chicken | NOAEL 2,000 mg/kg | |

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 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 |
| Oxide glass chemicals | Inhalation | respiratory system | Not classified | Human | NOAEL not available | occupational exposure |
| 1,1'-(Ethane-1,2- | Ingestion | liver | Not classified | Rat | NOAEL | 90 days |

| | | | | | | |
|---|---|---|---|---|---|---|
| diyl)bis[pentabromobenzene] | | | | | 1,000 mg/kg/day | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | heart \| endocrine system \| immune system | Not classified | Rat | NOAEL 1,250 mg/kg/day | 28 days |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | Ingestion | hematopoietic system \| nervous system \| eyes \| kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 90 days |
| Tris(methylphenyl) phosphate | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 230 mg/kg/day | 13 weeks |
| Tris(methylphenyl) phosphate | Ingestion | endocrine system \| liver \| heart \| skin \| gastrointestinal tract \| bone, teeth, nails, and/or hair \| hematopoietic system \| immune system \| nervous system \| respiratory system | Not classified | Rat | NOAEL 750 mg/kg/day | 13 weeks |

**Aspiration Hazard**
For the component/components, either no data is currently available or the data is 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.**

**11.2. Information on other hazards**

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

## SECTION 12: Ecological information

**The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.**

**12.1. Toxicity**

No product test data available.

| Material | CAS # | Organism | Type | Exposure | Test endpoint | Test result |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Activated sludge | Analogous Compound | 3 hours | IC50 | >100 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Rainbow trout | Estimated | 96 hours | LC50 | 2 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Water flea | Estimated | 48 hours | EC50 | 1.8 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Green algae | Experimental | 72 hours | ErC50 | >11 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Green algae | Experimental | 72 hours | NOEC | 4.2 mg/l |
| bis-[4-(2,3-epoxipropoxi)phenyl]pr | 1675-54-3 | Water flea | Experimental | 21 days | NOEC | 0.3 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| opane | | | | | | |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Activated sludge | Experimental | 3 hours | NOEC | 10 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Green algae | Experimental | 96 hours | EC50 | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Rainbow trout | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Water flea | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Green algae | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Oxide glass chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Oxide glass chemicals | 65997-17-3 | Water flea | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Oxide glass chemicals | 65997-17-3 | Zebra Fish | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Oxide glass chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | NOEC | >=1,000 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Green algae | Experimental | 72 hours | ErC50 | 0.404 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Rainbow trout | Experimental | 96 hours | LC50 | 0.6 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Water flea | Experimental | 48 hours | EC50 | 0.146 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Midge | Analogous Compound | 28 days | NOEC | <37 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Flagfish | Experimental | 28 days | NOEC | 0.01 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Green algae | Experimental | 72 hours | ErC10 | 0.016 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Water flea | Experimental | 21 days | NOEC | 0.1 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Redworm | Analogous Compound | 14 days | LC50 | >1,000 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Redworm | Analogous Compound | 56 days | NOEC | 250 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Soil microbes | Analogous Compound | 28 days | EC50 | >1,010 mg/l |
| Tris(methylphenyl) phosphate | 1330-78-5 | Wheat | Analogous Compound | 19 days | LC50 | >100 mg/kg (Dry Weight) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Activated sludge | Experimental | 3 hours | EC50 | >1,000 mg/l |

### 12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Experimental Biodegradation | 28 days | BOD | 5 %BOD/COD | OECD 301F - Manometric respirometry |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 117 hours (t 1/2) | OECD 111 Hydrolysis func of pH |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Experimental Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301C - MITI test (I) |
| Oxide glass chemicals | 65997-17-3 | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Biodegradation | 28 days | BOD | 80 %BOD/ThOD | OECD 301C - MITI test (I) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Aquatic Inherent Biodegrad. | 28 days | BOD | 100 %BOD/ThOD | OECD 302C - Modified MITI (II) |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | 44.4 days (t 1/2) | OECD 111 Hydrolysis func of pH |

**12.3 : Bioaccumulative potential**

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Experimental Bioconcentration | | Log Kow | 3.242 | OECD 117 log Kow HPLC method |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 | Experimental Bioconcentration | | Log Kow | 3.55 | |
| Oxide glass chemicals | 65997-17-3 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental BCF - Fish | 14 days | Bioaccumulation factor | 700 | |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Bioconcentration | | Log Kow | 5.93 | |

**12.4. Mobility in soil**

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|---|---|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Modeled Mobility in Soil | Koc | 450 l/kg | Episuite™ |
| Tris(methylphenyl) phosphate | 1330-78-5 | Experimental Mobility in Soil | Koc | 20,489 l/kg | OECD 121 Estim. of Koc by HPLC |

**12.5. Results of the PBT and vPvB assessment**

This material does not contain any substances that are assessed to be a PBT or vPvB

**12.6. Endocrine disrupting properties**

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

**12.7. Other adverse effects**
No information available.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

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

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are

complied with and always use a licensed waste contractor.

**EU waste code (product as sold)**

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

## SECTION 14: Transportation information

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|---|---|---|---|
| **14.1 UN number or ID number** | UN3077 | UN3077 | UN3077 |
| **14.2 UN proper shipping name** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(TRICRESYL PHOSPHATE) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(TRICRESYL PHOSPHATE) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(TRICRESYL PHOSPHATE) |
| **14.3 Transport hazard class(es)** | 9 | 9 | 9 |
| **14.4 Packing group** | III | III | III |
| **14.5 Environmental hazards** | Environmentally Hazardous | Not applicable | Marine Pollutant |
| **14.6 Special precautions for user** | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |
| **14.7 Marine Transport in bulk according to IMO instruments** | No data available. | No data available. | No data available. |
| **Control Temperature** | No data available. | No data available. | No data available. |
| **Emergency Temperature** | No data available. | No data available. | No data available. |
| **ADR Classification Code** | M7 | Not applicable. | Not applicable. |
| **IMDG Segregation Code** | Not applicable. | Not applicable. | NONE |

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

## SECTION 15: Regulatory information

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

**Carcinogenicity**

| Ingredient | CAS Nbr | Classification | Regulation |
|---|---|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 | Gr. 3: Not classifiable | International Agency for Research on Cancer |

**Restrictions on the manufacture, placing on the market and use:**
The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

| Ingredient | CAS Nbr |
|---|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 1675-54-3 |

Restriction status: listed in REACH Annex XVII
Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

**Authorization status under REACH:**
The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

| Ingredient | CAS Nbr |
|---|---|
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] | 84852-53-9 |

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

**Global inventory status**
Contact 3M for more information. 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.

**DIRECTIVE 2012/18/EU**
Seveso hazard categories, Annex 1, Part 1

| Hazard Categories | Qualifying quantity (tonnes) for the application of | |
|---|---|---|
| | Lower-tier requirements | Upper-tier requirements |
| E2 Hazardous to the Aquatic environment | 200 | 500 |

Seveso named dangerous substances, Annex 1, Part 2
None

**Regulation (EU) No 649/2012**
No chemicals listed

**15.2. Chemical Safety Assessment**
A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

## SECTION 16: Other information

**List of relevant H statements**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H361f | Suspected of damaging fertility. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

H411 Toxic to aquatic life with long lasting effects.

**Revision information:**
Section 1: Address information was modified.
Section 1: E-mail address information was modified.
CLP: Ingredient table information was modified.
Label: CLP Percent Unknown information was deleted.
Section 3: Composition/ Information of ingredients table information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: Skin protection - protective clothing information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 15: Authorization status under REACH: SVHC Authorization ingredient information information was added.

# Annex

| **1. Title** | |
|---|---|
| **Substance identification** | Tris(methylphenyl) phosphate;<br>EC No. 215-548-8;<br>CAS Nbr 1330-78-5; |
| **Exposure Scenario Name** | Formulation |
| **Lifecycle Stage** | Use at industrial sites |
| **Contributing activities** | PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing)<br>ERC 02 -Formulation into mixture |
| **Processes, tasks and activities covered** | Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Continuous release;<br>Duration of exposure per day at workplace [for one worker]: 8 hours/day;<br>Indoor use with Local Exhaust Ventilation;<br>Processing Temperature:: 20 - 26 degree Celsius; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Goggles - Chemical resistant;<br>Protective clothing / Wear suitable protective clothing;<br>Protective Gloves - Polyvinyl Chloride; |

| | |
|---|---|
| | Ventilated Process Enclosures;<br>**Environmental:**<br>None needed; |
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Do not release directly to waterways; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| **1. Title** | |
|---|---|
| **Substance identification** | |
| **Exposure Scenario Name** | Formulation |
| **Lifecycle Stage** | Formulation or re-packing |
| **Contributing activities** | PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing)<br>ERC 02 -Formulation into mixture |
| **Processes, tasks and activities covered** | Batch manufacture of a chemical substance or formulation (including polymerisation reactions). |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Duration of use: 8 hours/day;<br>Emission days per year: <= 225 days per year; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;<br>**Environmental:**<br>Waste Water treatment - Incineration; |
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Prevent leaks and prevent soil / water pollution caused by leaks; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| **1. Title** | |
|---|---|
| **Substance identification** | Tris(methylphenyl) phosphate;<br>EC No. 215-548-8;<br>CAS Nbr 1330-78-5; |
| **Exposure Scenario Name** | Industrial Use of Adhesives |
| **Lifecycle Stage** | Use at industrial sites |
| **Contributing activities** | PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC 13 -Treatment of articles by dipping and pouring<br>ERC 05 -Use at industrial site leading to inclusion into/onto article |
| **Processes, tasks and activities covered** | Application of product. Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid. |

| | |
|---|---|
| | **General operating conditions:**<br>Continuous release;<br>Duration of exposure per day at workplace [for one worker]: 8 hours/day;<br>Indoor use with Local Exhaust Ventilation;<br>Processing Temperature:: 20 - 26 degree Celsius; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Goggles - Chemical resistant;<br>Protective clothing / Wear suitable protective clothing;<br>Protective Gloves - Polyvinyl Chloride;<br>Ventilated Process Enclosures;<br>**Environmental:**<br>None needed;<br>;<br>The following task-specific risk management measures apply in addition to those listed above:<br>**Task: PROC08a**;<br>**Human Health**;<br>Protective Clothing - Apron; |
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Do not release directly to waterways; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

| | |
|---|---|
| **1. Title** | |
| **Substance identification** | bis-[4-(2,3-epoxipropoxi)phenyl]propane;<br>EC No. 216-823-5;<br>CAS Nbr 1675-54-3; |
| **Exposure Scenario Name** | Industrial Use of Adhesives |
| **Lifecycle Stage** | Use at industrial sites |
| **Contributing activities** | PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC 13 -Treatment of articles by dipping and pouring<br>ERC 05 -Use at industrial site leading to inclusion into/onto article |
| **Processes, tasks and activities covered** | Application of product with a roller or brush. Application of product with applicator gun. Application with a wipe. Transfers without dedicated controls, including loading, filling, dumping, bagging. |
| **2. Operational conditions and risk management measures** | |
| **Operating Conditions** | **Physical state:**Liquid.<br>**General operating conditions:**<br>Duration of use: 8 hours/day;<br>Emission days per year: 220 days/year;<br>Frequency of exposure at workplace [for one worker]: 5 days/week; |
| **Risk management measures** | Under the operational conditions described above the following risk management measures apply:<br>**General risk management measures:**<br>**Human health:**<br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;<br>**Environmental:**<br>None needed; |

| | |
|---|---|
| **Waste management measures** | Do not apply industrial sludge to natural soils;<br>Prevent discharge of undissolved substance to or recover from wastewater; |
| **3. Prediction of exposure** | |
| **Prediction of exposure** | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

DISCLAIMER: The information on this Safety Data Sheet 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 Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test 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 the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

**3M Ireland MSDSs are available at www.3M.com**