# Safety Data Sheet



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|---|---|---|---|
| **Document group:** | 09-0182-7 | **Version number:** | 26.00 |
| **Revision date:** | 02/09/2016 | **Supersedes date:** | 28/07/2015 |

**Transportation version number:** 6.00 (18/03/2017)

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 DP-760

**Product Identification Numbers**
FS-9100-3299-4 FS-9100-4045-0

**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 United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT. |
| **Telephone:** | +44 (0)1344 858 000 |
| **E Mail:** | tox.uk@mmm.com |
| **Website:** | www.3M.com/uk |

**1.4. Emergency telephone number**
+44 (0)1344 858 000

**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:**

09-0180-1, 09-0181-9

## TRANSPORTATION INFORMATION

FS-9100-3299-4

**ADR/RID:** UN3259, AMINES, SOLID, CORROSIVE, N.O.S., LIMITED QUANTITY, (TRIETHYLENETETRAMINE), 8., II , (E), ADR Classification Code: C8.
**IMDG-CODE:** UN3259, AMINES, SOLID,CORROSIVE,N.O.S., (TRIETHYLENETETRAMINE), 8., II , IMDG-Code segregation code: 18 - ALKALIS, LIMITED QUANTITY, EMS: FA,SB.
**ICAO/IATA:** UN3259, AMINES, SOLID,CORROSIVE,N.O.S., (TRIETHYLENETETRAMINE), 8, II .

FS-9100-4045-0

**ADR/RID:** UN3259, AMINES, SOLID, CORROSIVE, N.O.S., LIMITED QUANTITY, (TRIETHYLENETETRAMINE), 8., II , (E), ADR Classification Code: C8.
**IMDG-CODE:** UN3259, AMINES, SOLID, CORROSIVE,N.O.S., (TRIETHYLENETETRAMINE), 8., II , IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.
**ICAO/IATA:** UN3259, AMINES, SOLID,CORROSIVE,N.O.S., (TRIETHYLENETETRAMINE), 8, II .

# KIT LABEL

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

**CLASSIFICATION:**
Acute Toxicity, Category 3 - Acute Tox. 3; H311
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314
Skin Sensitization, Category 1A - Skin Sens. 1A; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
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) | GHS06 (Skull and crossbones) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) |

**Pictograms**

**HAZARD STATEMENTS:**

| | |
|---|---|
| H311 | Toxic in contact with skin. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H341 | Suspected of causing genetic defects. |
| H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P260A | Do not breathe vapours. |

**Response:**

| | |
|---|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

**Disposal:**

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

**For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:**

**<=125 ml Hazard statements**

| | |
|---|---|
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H341 | Suspected of causing genetic defects. |

**<=125 ml Precautionary statements**

**Prevention:**

| | |
|---|---|
| P260A | Do not breathe vapours. |

**Response:**

| | |
|---|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

**Disposal:**

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

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

**Revision information:**

Kit: Component document group number(s) information was modified.
Section 2: <125ml Hazard - Environmental information was deleted.
Section 2: <125ml Precautionary - Disposal information was added.
Section 2: <125ml Precautionary - Prevention information was modified.
Section 2: H phrase reference information was added.
Label: CLP Classification information was added.
Label: CLP Environmental Hazard Statements information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: Graphic information was modified.

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 09-0181-9 | **Version number:** | 22.00 |
| **Revision date:** | 02/09/2016 | **Supersedes date:** | 28/07/2015 |

**Transportation version number:** 1.00 (26/01/2011)

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**
Scotch-Weld(TM) DP-760 Off-White: Part B

**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 United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
**Telephone:** +44 (0)1344 858 000
**E Mail:** tox.uk@mmm.com
**Website:** www.3M.com/uk

**1.4. Emergency telephone number**
+44 (0)1344 858 000

## SECTION 2: Hazard identification

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

**CLASSIFICATION:**
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
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 | % by Wt |
|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | 30 - 60 |
| Phenol-formaldehyde polymer, glycidyl ether | 28064-14-4 | 7 - 15 |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | 5 - 10 |

**HAZARD STATEMENTS:**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H341 | Suspected of causing genetic defects. |
| H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

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

**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. |

**Disposal:**

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

**For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:**

**<=125 ml Hazard statements**

| | |
|---|---|
| H317 | May cause an allergic skin reaction. |
| H341 | Suspected of causing genetic defects. |

**<=125 ml Precautionary statements**

**Prevention:**

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

**Response:**
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

8% of the mixture consists of components of unknown acute oral toxicity.

Contains 19% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

None known.

## SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | EU Inventory | % by Wt | Classification |
|---|---|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | 225-716-2 | 30 - 60 | Aquatic Chronic 2, H411 (Vendor)<br>Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Muta. 2, H341 (Self Classified) |
| Phenol-formaldehyde polymer, glycidyl ether | 28064-14-4 | | 7 - 15 | Skin Sens. 1, H317 (Self Classified) |
| Acrylic copolymer | Trade Secret | | 5 - 10 | Substance not classified as hazardous |
| Silica, vitreous | 60676-86-0 | 262-373-8 | 5 - 10 | Substance with a Community level exposure limit in the workplace |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane (REACH Reg. No.:01-2119456619-26) | 25068-38-6 | NLP 500-033-5 | 5 - 10 | Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP) |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | | 1 - 5 | Substance with a Community level exposure limit in the workplace |
| Titanium dioxide (REACH Reg. No.:01-2119489379-17) | 13463-67-7 | 236-675-5 | 1 - 3 | Substance with a Community level exposure limit in the workplace |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane (REACH Reg. No.:01-2119513212-58) | 2530-83-8 | 219-784-2 | 0.5 - 1.5 | Eye Dam. 1, H318 (Self Classified) |

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

get medical attention.

**Eye contact**
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

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

**4.2. Most important symptoms and effects, both acute and delayed**
See Section 11.1 Information on toxicological effects

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

## SECTION 5: Fire-fighting measures

**5.1. 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. |

**5.3. Advice for fire-fighters**
No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

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

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

**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 with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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**

For industrial or professional use only. 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. 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 acids.

**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 |
|---|---|---|---|---|
| Titanium dioxide | 13463-67-7 | UK HSC | TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m³ | |
| Silica, vitreous | 60676-86-0 | UK HSC | TWA(as respirable dust):0.08 mg/m³ | |
| Silicon dioxide | 60676-86-0 | UK HSC | TWA(as inhalable dust):6 mg/m3 | |
| Silicon dioxide | 67762-90-7 | UK HSC | TWA(as inhalable dust):6 mg/m3;TWA(as respirable dust):2.4 mg/m3 | |

UK HSC : UK Health and Safety Commission
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.

**8.2. Exposure controls**

**8.2.1. Engineering controls**
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

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

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the

substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. 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 | No data available | No data available |

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| **Physical state** | Solid. |
| **Specific Physical Form:** | Paste |
| **Appearance/Odour** | Thixotropic paste; off-white; epoxy odour. |
| **Odour threshold** | *No data available.* |
| **pH** | *Not applicable.* |
| **Boiling point/boiling range** | *Not applicable.* |
| **Melting point** | *No data available.* |
| **Flammability (solid, gas)** | Not classified |
| **Explosive properties** | Not classified |
| **Oxidising properties** | Not classified |
| **Flash point** | >=100 ºC [*Test Method:*Closed Cup] |
| **Autoignition temperature** | *Not applicable.* |
| **Flammable Limits(LEL)** | *Not applicable.* |
| **Flammable Limits(UEL)** | *Not applicable.* |
| **Vapour pressure** | *Not applicable.* |
| **Relative density** | 1.23 - 1.29 [*Ref Std:*WATER=1] |
| **Water solubility** | Negligible |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Evaporation rate** | *Not applicable.* |
| **Vapour density** | *Not applicable.* |
| **Decomposition temperature** | *No data available.* |
| **Viscosity** | 1,050 Pa-s |
| **Density** | >=1.23 g/cm3 |

**9.2. Other information**

| | |
|---|---|
| **Molecular weight** | *No data available.* |
| **Percent volatile** | 1 % weight |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
This material is considered to be non reactive under normal use conditions

**10.2 Chemical stability**
Stable.

**10.3 Possibility of hazardous reactions**
Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**
Heat.

**10.5 Incompatible materials**
Strong acids.

**10.6 Hazardous decomposition products**

| Substance | Condition |
|---|---|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

**The information below may not 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 3M assessments.**

**11.1 Information on Toxicological effects**

**Signs and Symptoms of Exposure**

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

**Inhalation**
No health effects are expected.

**Skin contact**
Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain.
Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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

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

**Additional Health Effects:**

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

**Carcinogenicity:**
Contains a chemical or chemicals which can cause cancer.

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

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE300 - 2,000 mg/kg |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | Dermal | Rabbit | LD50 > 4,000 mg/kg |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | Ingestion | Rat | LD50 500-5000 mg/kg |
| Phenol-formaldehyde polymer, glycidyl ether | Dermal | Rabbit | LD50 > 6,000 mg/kg |
| Phenol-formaldehyde polymer, glycidyl ether | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 1.7 mg/l |
| Phenol-formaldehyde polymer, glycidyl ether | Ingestion | Rat | LD50 > 4,000 mg/kg |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | Rat | LD50 > 1,600 mg/kg |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Rat | LD50 > 1,000 mg/kg |
| Silica, vitreous | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Silica, vitreous | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silica, vitreous | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Titanium dioxide | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Titanium dioxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.82 mg/l |
| Titanium dioxide | Ingestion | Rat | LD50 > 10,000 mg/kg |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Dermal | Rabbit | LD50 4,000 mg/kg |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.3 mg/l |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Ingestion | Rat | LD50 7,010 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | Rabbit | Irritant |
| Phenol-formaldehyde polymer, glycidyl ether | Rabbit | Minimal irritation |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Rabbit | Mild irritant |
| Silica, vitreous | Rabbit | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Titanium dioxide | Rabbit | No significant irritation |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Rabbit | Mild irritant |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | Rabbit | Severe irritant |
| Phenol-formaldehyde polymer, glycidyl ether | Rabbit | Mild irritant |

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Rabbit | Moderate irritant |
| Silica, vitreous | Rabbit | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Titanium dioxide | Rabbit | No significant irritation |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Rabbit | Corrosive |

## Skin Sensitisation

| Name | Species | Value |
|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | Guinea pig | Sensitising |
| Phenol-formaldehyde polymer, glycidyl ether | Human and animal | Sensitising |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Human and animal | Sensitising |
| Silica, vitreous | Human and animal | Not sensitising |
| Siloxanes and Silicones, di-Me, reaction products with silica | Human and animal | Not sensitising |
| Titanium dioxide | Human and animal | Not sensitising |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Guinea pig | Some positive data exist, but the data are not sufficient for classification |

## Respiratory Sensitisation

| Name | Species | Value |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Human | Some positive data exist, but the data are not sufficient for classification |

## Germ Cell Mutagenicity

| Name | Route | Value |
|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | In vivo | Mutagenic |
| Phenol-formaldehyde polymer, glycidyl ether | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | In vivo | Not mutagenic |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Silica, vitreous | In Vitro | Not mutagenic |
| Siloxanes and Silicones, di-Me, reaction products with silica | In Vitro | Not mutagenic |
| Titanium dioxide | In Vitro | Not mutagenic |
| Titanium dioxide | In vivo | Not mutagenic |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | In vivo | Not mutagenic |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | In Vitro | Some positive data exist, but the data are not sufficient for classification |

## Carcinogenicity

| Name | Route | Species | Value |
|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Silica, vitreous | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Siloxanes and Silicones, di-Me, reaction products with silica | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |

| | | | |
|---|---|---|---|
| Titanium dioxide | Ingestion | Multiple animal species | Not carcinogenic |
| Titanium dioxide | Inhalation | Rat | Carcinogenic. |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Dermal | Mouse | Not carcinogenic |

### Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Not toxic to female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Not toxic to male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | Not toxic to development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Not toxic to development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Silica, vitreous | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silica, vitreous | Inhalation | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silica, vitreous | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Ingestion | Not toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Ingestion | Some positive developmental data exist, but the data are not sufficient for classification | Rat | NOAEL 3,000 mg/kg/day | during organogenesis |

### Target Organ(s)

### Specific Target Organ Toxicity - single exposure

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

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | nervous system | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | auditory system \| heart \| endocrine system \| hematopoietic system \| liver \| eyes \| kidney and/or bladder | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Silica, vitreous | Inhalation | respiratory system \| silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation | respiratory system \| silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| Titanium dioxide | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 0.01 mg/l | 2 years |
| Titanium dioxide | Inhalation | pulmonary fibrosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane | Ingestion | heart \| endocrine system \| bone, teeth, nails, and/or hair \| hematopoietic system \| liver \| immune system \| nervous system \| kidney and/or bladder \| respiratory system | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 28 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.**

## 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 Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Water flea | Estimated | 21 days | NOEC | 0.3 mg/l |
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with | 25068-38-6 | Ricefish | Experimental | 96 hours | LC50 | 1.41 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1-chloro-2,3-epoxypropane | | | | | | |
| Silica, vitreous | 60676-86-0 | Common Carp | Experimental | 72 hours | LC50 | >10,000 mg/l |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Green algae | Experimental | 96 hours | EC50 | 13 mg/l |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Water flea | Experimental | 21 days | NOEC | 0.42 mg/l |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Green algae | Experimental | 96 hours | NOEC | 4.2 mg/l |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Water flea | Estimated | 48 hours | EC50 | 18 mg/l |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Common Carp | Experimental | 96 hours | LC50 | 4.2 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Zebra Fish | Experimental | 96 hours | LC50 | >10,000 mg/l |
| Titanium dioxide | 13463-67-7 | Fish | Experimental | 30 days | NOEC | >100 mg/l |
| Titanium dioxide | 13463-67-7 | Water flea | Experimental | 30 days | NOEC | 3 mg/l |
| Titanium dioxide | 13463-67-7 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Titanium dioxide | 13463-67-7 | Sheepshead Minnow | Experimental | 96 hours | LC50 | >240 mg/l |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilane | 2530-83-8 | Green algae | Experimental | 96 hours | EC50 | 350 mg/l |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilane | 2530-83-8 | Green Algae | Experimental | 96 hours | NOEC | 130 mg/l |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilan | 2530-83-8 | Water flea | Experimental | 21 days | NOEC | >=100 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| e | | | | | | |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilane | 2530-83-8 | Crustacea other | Experimental | 48 hours | LC50 | 324 mg/l |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilane | 2530-83-8 | Common Carp | Experimental | 96 hours | LC50 | 55 mg/l |
| Phenol-formaldehyde polymer, glycidyl ether | 28064-14-4 | | Data not available or insufficient for classification | | | |

**12.2. Persistence and degradability**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Phenol-formaldehyde polymer, glycidyl ether | 28064-14-4 | Laboratory Biodegradation | 28 days | CO2 evolution | 10 % weight | OECD 301B - Modified sturm or CO2 |
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Experimental Biodegradation | 28 days | BOD | 0 % weight | OECD 301C - MITI test (I) |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilane | 2530-83-8 | Experimental Biodegradation | 28 days | Dissolv. Organic Carbon Deplet | 37 % weight | Other methods |
| p-(2,3-epoxypropoxy) -N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Experimental Biodegradation | 29 days | CO2 evolution | ≤10 % weight | OECD 301B - Modified sturm or CO2 |
| Titanium dioxide | 13463-67-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Silica, vitreous | 60676-86-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| [3-(2,3- | 2530-83-8 | Experimental | | Hydrolytic | 6.5 hours (t | Other methods |

| | | | | | | |
|---|---|---|---|---|---|---|
| Epoxypropoxy) propyl] trimethoxysilane | | Hydrolysis | | half-life | 1/2) | |
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Experimental Hydrolysis | | Hydrolytic half-life | 4.1 days (t 1/2) | Other methods |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Estimated Hydrolysis | | Hydrolytic half-life | <2 days (t 1/2) | Other methods |

**12.3 : Bioaccumulative potential**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline | 5026-74-4 | Estimated Bioconcentration | | Log Kow | 0.87 | Other methods |
| Phenol-formaldehyde polymer, glycidyl ether | 28064-14-4 | Estimated Bioconcentration | | Bioaccumulation factor | <=7.6 | Estimated: Bioconcentration factor |
| [3-(2,3-Epoxypropoxy) propyl] trimethoxysilane | 2530-83-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Titanium dioxide | 13463-67-7 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | 9.6 | Other methods |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Silica, vitreous | 60676-86-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Experimental BCF-Carp | 28 days | Bioaccumulation factor | <=42 | Other methods |

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

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

No information available at this time, contact manufacturer for more details

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

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**
See Section 11.1 Information on toxicological effects

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

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

ADR/IATA/IMDG: Not restricted for transport.

## SECTION 15: Regulatory information

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

**Carcinogenicity**

| Ingredient | CAS Nbr | Classification | Regulation |
|---|---|---|---|
| Titanium dioxide | 13463-67-7 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

**Global inventory status**
Contact 3M for more information. The components of this product are in compliance with the chemical notification requirements of TSCA.

**15.2. Chemical Safety Assessment**
Not applicable

## SECTION 16: Other information

**List of relevant H statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H341 | Suspected of causing genetic defects. |
| H411 | Toxic to aquatic life with long lasting effects. |

**Revision information:**

Section 2: <125ml Hazard - Environmental information was deleted.
Label: CLP Classification information was modified.
Label: CLP Environmental Hazard Statements information was modified.
Label: CLP Percent Unknown information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: Graphic information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 3: Reference to section 15 for Nota info information was deleted.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release personal information information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 9: Flash point information information was modified.
Section 9: Property description for optional properties information was added.
Section 9: Property description for optional properties information was deleted.
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: 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 12: Component ecotoxicity information information was modified.
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: Carcinogenicity information information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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.

**3M United Kingdom MSDSs are available at www.3M.com/uk**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 09-0180-1 | **Version number:** | 21.00 |
| **Revision date:** | 03/10/2016 | **Supersedes date:** | 06/07/2016 |

**Transportation version number:** 1.00 (16/06/2011)

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**
Scotch-Weld(TM) DP-760 Off-White: Part A

**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 United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
**Telephone:** +44 (0)1344 858 000
**E Mail:** tox.uk@mmm.com
**Website:** www.3M.com/uk

**1.4. Emergency telephone number**
+44 (0)1344 858 000

## SECTION 2: Hazard identification

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

**CLASSIFICATION:**
Acute Toxicity, Category 3 - Acute Tox. 3; H311
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314
Skin Sensitization, Category 1A - Skin Sens. 1A; H317
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) | GHS06 (Skull and crossbones) |GHS09 (Environment) |

**Pictograms**

**Ingredients:**

| Ingredient | CAS Nbr | % by Wt |
|---|---|---|
| Triethylenetetramine | 112-24-3 | 60 - 70 |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | 20 - 30 |
| Diethylenetriamine | 111-40-0 | 0.5 - 1.5 |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | < 1 |
| N-aminoethylpiperazine | 140-31-8 | < 1 |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | < 1 |

**HAZARD STATEMENTS:**

| | |
|---|---|
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H411 | Toxic to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P260A | Do not breathe vapours. |
| 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/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. |

**Disposal:**

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

**For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:**

**<=125 ml Hazard statements**

| | |
|---|---|
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |

**<=125 ml Precautionary statements**

**Prevention:**

| | |
|---|---|
| P260A | Do not breathe vapours. |
| 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/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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

### 2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

## SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | EU Inventory | % by Wt | Classification |
|---|---|---|---|---|
| Triethylenetetramine | 112-24-3 | 203-950-6 | 60 - 70 | Acute Tox. 3, H311; Skin Corr. 1B, H314; Skin Sens. 1A, H317; Aquatic Chronic 3, H412 (CLP) |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | NLP 500-033-5 | 20 - 30 | Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP) |
| Glass, oxide, chemicals | 65997-17-3 | 266-046-0 | 5 - 10 | Substance with a Community level exposure limit in the workplace |
| Titanium dioxide (REACH Reg. No.:01-2119489379-17) | 13463-67-7 | 236-675-5 | 1 - 5 | Substance with a Community level exposure limit in the workplace |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | | 1 - 5 | Substance with a Community level exposure limit in the workplace |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] (REACH Reg. No.:01-0000020228-74) | | ELINCS 484-050-2 | 0.5 - 1.5 | Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=10 (Vendor) |
| Diethylenetriamine | 111-40-0 | 203-865-4 | 0.5 - 1.5 | Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317 (CLP) Acute Tox. 2, H330 (Self Classified) |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | 203-867-5 | < 1 | Skin Corr. 1B, H314; Skin Sens. 1, H317; Repr. 1B, H360Df; STOT SE 3, H335 (CLP) |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | 203-986-2 | < 1 | Acute Tox. 3, H311; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP) |
| N-aminoethylpiperazine | 140-31-8 | 205-411-0 | < 1 | Acute Tox. 3, H311; Acute Tox. 4, H302; Skin Corr. 1B, H314; |

| | | | | |
|---|---|---|---|---|
| | | | | Skin Sens. 1B, H317; Aquatic Chronic 3, H412 (CLP) |

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**
See Section 11.1 Information on toxicological effects

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

## SECTION 5: Fire-fighting measures

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

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

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Aldehydes. | During combustion. |
| Amine compounds. | During combustion. |
| Carbon monoxide. | During combustion. |
| Carbon dioxide. | During combustion. |
| Oxides of nitrogen. | During combustion. |

**5.3. Advice for fire-fighters**
No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

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

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

**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**
For industrial or professional use only. Do not use in a confined area with minimal air exchange. 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. Use personal protective equipment (eg. gloves, respirators…) as required.

**7.2. Conditions for safe storage including any incompatibilities**
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases.

**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 |
|---|---|---|---|---|
| Diethylenetriamine | 111-40-0 | UK HSC | TWA:4.3 mg/m3(1 ppm) | SKIN |
| Titanium dioxide | 13463-67-7 | UK HSC | TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m³ | |
| Glass, oxide, chemicals | 65997-17-3 | UK HSC | TWA(as fiber):5 mg/m3(1 fibers/ml) | |
| Glass, oxide, chemicals | 65997-17-3 | Manufacturer determined | TWA(as dust):10 mg/m3 | |
| Silicon dioxide | 67762-90-7 | UK HSC | TWA(as inhalable dust):6 mg/m3;TWA(as respirable dust):2.4 mg/m3 | |

UK HSC : UK Health and Safety Commission
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.

**8.2. Exposure controls**

**8.2.1. Engineering controls**
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

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

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

| Material | Thickness (mm) | Breakthrough Time |
|---|---|---|
| Butyl rubber. | No data available | No data available |
| Polymer laminate | No data available | No data available |

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Butyl rubber
Apron - polymer laminate

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| **Physical state** | Solid. |
| **Specific Physical Form:** | Paste |
| **Appearance/Odour** | off-white; amine odour. |
| **Odour threshold** | *No data available.* |
| **pH** | *Not applicable.* |
| **Boiling point/boiling range** | *Not applicable.* |
| **Melting point** | *Not applicable.* |
| **Flammability (solid, gas)** | Not classified |
| **Explosive properties** | Not classified |

| | |
|---|---|
| **Oxidising properties** | Not classified |
| **Flash point** | >=100 ºC [*Test Method:*Closed Cup] |
| **Autoignition temperature** | *Not applicable.* |
| **Flammable Limits(LEL)** | *Not applicable.* |
| **Flammable Limits(UEL)** | *Not applicable.* |
| **Vapour pressure** | *Not applicable.* |
| **Relative density** | 0.79 - 0.85 [*Ref Std:*WATER=1] |
| **Water solubility** | *No data available.* |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Evaporation rate** | *No data available.* |
| **Vapour density** | *Not applicable.* |
| **Decomposition temperature** | *No data available.* |
| **Viscosity** | *No data available.* |
| **Density** | 0.79 - 0.85 g/ml |

**9.2. Other information**

| | |
|---|---|
| **Molecular weight** | *No data available.* |
| **Percent volatile** | 1 % weight |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
This material is considered to be non reactive under normal use conditions

**10.2 Chemical stability**
Stable.

**10.3 Possibility of hazardous reactions**
Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**
Heat.

**10.5 Incompatible materials**
Strong bases.
Water

**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 3M assessments.**

**11.1 Information on Toxicological effects**

**Signs and Symptoms of Exposure**

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

**Inhalation**
Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

**Skin contact**
Toxic in contact with skin.
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.

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

**Ingestion**
May be harmful if swallowed.
Gastrointestinal 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 ATE200 - 1,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE2,000 - 5,000 mg/kg |
| Triethylenetetramine | Dermal | Rabbit | LD50 550 mg/kg |
| Triethylenetetramine | Ingestion | Rat | LD50 2,500 mg/kg |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | Rat | LD50 > 1,600 mg/kg |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Rat | LD50 > 1,000 mg/kg |
| Glass, oxide, chemicals | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Glass, oxide, chemicals | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Titanium dioxide | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Titanium dioxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.82 mg/l |
| Titanium dioxide | Ingestion | Rat | LD50 > 10,000 mg/kg |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1- | Dermal | Rat | LD50 > 2,000 |

| | | | |
|---|---|---|---|
| oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | | | |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.3 |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | Ingestion | Rat | LD50 > 2,000 |
| 3,6,9-Triazaundecamethylenediamine | Dermal | Rabbit | LD50 660 mg/kg |
| 3,6,9-Triazaundecamethylenediamine | Ingestion | Rat | LD50 2,140 mg/kg |
| N-aminoethylpiperazine | Dermal | Rabbit | LD50 865 mg/kg |
| N-aminoethylpiperazine | Ingestion | Rat | LD50 1,470 mg/kg |
| Diethylenetriamine | Dermal | Rabbit | LD50 1,045 mg/kg |
| Diethylenetriamine | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.07 mg/l |
| Diethylenetriamine | Ingestion | Rat | LD50 819 mg/kg |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name | Species | Value |
|---|---|---|
| Triethylenetetramine | Rabbit | Corrosive |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Rabbit | Mild irritant |
| Glass, oxide, chemicals | Professional judgement | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Titanium dioxide | Rabbit | No significant irritation |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | Rabbit | No significant irritation |
| N-aminoethylpiperazine | Rabbit | Corrosive |
| Diethylenetriamine | Rabbit | Corrosive |

### Serious Eye Damage/Irritation

| Name | Species | Value |
|---|---|---|
| Triethylenetetramine | Rabbit | Corrosive |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Rabbit | Moderate irritant |
| Glass, oxide, chemicals | Professional judgement | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit | No significant irritation |
| Titanium dioxide | Rabbit | No significant irritation |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | Rabbit | Mild irritant |
| N-aminoethylpiperazine | Rabbit | Corrosive |
| Diethylenetriamine | Rabbit | Corrosive |

### Skin Sensitisation

| Name | Species | Value |
|---|---|---|
| Triethylenetetramine | Guinea pig | Sensitising |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Human and animal | Sensitising |

| | | |
|---|---|---|
| Siloxanes and Silicones, di-Me, reaction products with silica | Human and animal | Not sensitising |
| Titanium dioxide | Human and animal | Not sensitising |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | Mouse | Not sensitising |
| N-aminoethylpiperazine | Guinea pig | Sensitising |
| Diethylenetriamine | Guinea pig | Sensitising |

## Respiratory Sensitisation

| Name | Species | Value |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Human | Some positive data exist, but the data are not sufficient for classification |
| Diethylenetriamine | Human | Sensitising |

## Germ Cell Mutagenicity

| Name | Route | Value |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | In vivo | Not mutagenic |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Glass, oxide, chemicals | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Siloxanes and Silicones, di-Me, reaction products with silica | In Vitro | Not mutagenic |
| Titanium dioxide | In Vitro | Not mutagenic |
| Titanium dioxide | In vivo | Not mutagenic |
| N-aminoethylpiperazine | In vivo | Not mutagenic |
| N-aminoethylpiperazine | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Diethylenetriamine | In Vitro | Not mutagenic |

## Carcinogenicity

| Name | Route | Species | Value |
|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Glass, oxide, chemicals | Inhalation | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Siloxanes and Silicones, di-Me, reaction products with silica | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Titanium dioxide | Ingestion | Multiple animal species | Not carcinogenic |
| Titanium dioxide | Inhalation | Rat | Carcinogenic. |
| Diethylenetriamine | Dermal | Multiple animal species | Not carcinogenic |

## Reproductive Toxicity

## Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Not toxic to female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| 4,4'-Isopropylidenediphenol, oligomeric | Ingestion | Not toxic to male reproduction | Rat | NOAEL 750 | 2 generation |

| | | | | | |
|---|---|---|---|---|---|
| reaction products with 1-chloro-2,3-epoxypropane | | | | mg/kg/day | |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | Not toxic to development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | Not toxic to development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| N-aminoethylpiperazine | Ingestion | Not toxic to female reproduction | Rat | NOAEL 598 mg/kg/day | premating & during gestation |
| N-aminoethylpiperazine | Ingestion | Not toxic to male reproduction | Rat | NOAEL 409 mg/kg/day | 32 days |
| N-aminoethylpiperazine | Ingestion | Not toxic to development | Rat | NOAEL 899 mg/kg/day | premating & during gestation |
| Diethylenetriamine | Ingestion | Not toxic to male reproduction | Rat | NOAEL 300 mg/kg/day | 28 days |
| Diethylenetriamine | Ingestion | Not toxic to development | Rat | NOAEL 300 mg/kg/day | premating & during gestation |
| Diethylenetriamine | Ingestion | Some positive female reproductive data exist, but the data are not sufficient for classification | Rat | NOAEL 30 mg/kg/day | premating & during gestation |

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

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

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Dermal | nervous system | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Ingestion | auditory system \| heart \| endocrine system \| hematopoietic system \| liver \| eyes \| kidney and/or bladder | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Glass, oxide, chemicals | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL not available | occupational exposure |

| | | | | | | |
|---|---|---|---|---|---|---|
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation | respiratory system \| silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| Titanium dioxide | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 0.01 mg/l | 2 years |
| Titanium dioxide | Inhalation | pulmonary fibrosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| N-aminoethylpiperazine | Ingestion | heart \| endocrine system \| hematopoietic system \| liver \| nervous system \| kidney and/or bladder | All data are negative | Rat | NOAEL 598 mg/kg/day | 28 days |
| Diethylenetriamine | Ingestion | endocrine system \| liver \| kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1,210 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.**

## 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 Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|---|---|---|---|---|---|---|
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | 484-050-2 | Green Algae | Experimental | 72 hours | NOEC | 0.0073 mg/l |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12- | 484-050-2 | Green Algae | Experimental | 72 hours | EC50 | 0.025 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | | | | | | |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | 484-050-2 | Common Carp | Experimental | 96 hours | LC50 | >100 mg/l |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Water flea | Estimated | 21 days | NOEC | 0.3 mg/l |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Ricefish | Experimental | 96 hours | LC50 | 1.41 mg/l |
| Glass, oxide, chemicals | 65997-17-3 | Water flea | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Glass, oxide, chemicals | 65997-17-3 | Zebra Fish | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Glass, oxide, chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | NOEC | >=1,000 mg/l |
| Glass, oxide, chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Triethylenetetramine | 112-24-3 | Green algae | Experimental | 72 hours | EC50 | 20 mg/l |
| Triethylenetetramine | 112-24-3 | Guppy | Experimental | 96 hours | LC50 | 570 mg/l |
| Triethylenetetr | 112-24-3 | Water flea | Experimental | 48 hours | EC50 | 31.1 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| amine | | | | | | |
| Diethylenetriamine | 111-40-0 | Green algae | Experimental | 72 hours | NOEC | 10.2 mg/l |
| Diethylenetriamine | 111-40-0 | Three-spined stickleback | Experimental | 28 days | NOEC | >10 mg/l |
| Diethylenetriamine | 111-40-0 | Golden Orfe | Experimental | 96 hours | LC50 | 248 mg/l |
| Diethylenetriamine | 111-40-0 | Water flea | Experimental | 21 days | NOEC | 5.6 mg/l |
| Diethylenetriamine | 111-40-0 | Green Algae | Experimental | 96 hours | EC50 | 345.6 mg/l |
| Diethylenetriamine | 111-40-0 | Water flea | Experimental | 48 hours | EC50 | 16 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Zebra Fish | Experimental | 96 hours | LC50 | >10,000 mg/l |
| Titanium dioxide | 13463-67-7 | Fish | Experimental | 30 days | NOEC | >100 mg/l |
| Titanium dioxide | 13463-67-7 | Water flea | Experimental | 30 days | NOEC | 3 mg/l |
| Titanium dioxide | 13463-67-7 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Titanium dioxide | 13463-67-7 | Sheepshead Minnow | Experimental | 96 hours | LC50 | >240 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Green Algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Water flea | Experimental | 48 hours | EC50 | 32 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Green Algae | Experimental | 72 hours | NOEC | 31 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Golden Orfe | Experimental | 96 hours | LC50 | 368 mg/l |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | Green algae | Experimental | 72 hours | EC50 | 353.6 mg/l |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | Fathead minnow | Experimental | 96 hours | LC50 | 640 mg/l |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | Green Algae | Experimental | 72 hours | NOEC | 0.018 mg/l |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | Green Algae | Experimental | 72 hours | EC50 | 0.12 mg/l |
| 3,6,9-Triazaundecam | 112-57-2 | Water flea | Experimental | 21 days | NOEC | 0.14 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| ethylenediamine | | | | | | |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | Water flea | Experimental | 48 hours | EC50 | 13 mg/l |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | Ricefish | Experimental | 96 hours | LC50 | >70 mg/l |

**12.2. Persistence and degradability**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Triethylenetetramine | 112-24-3 | Experimental Biodegradation | 20 days | BOD | 0 % weight | OECD 301D - Closed bottle test |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | Experimental Biodegradation | 28 days | BOD | 0 % weight | OECD 301D - Closed bottle test |
| N-aminoethylpiperazine | 140-31-8 | Experimental Biodegradation | 28 days | BOD | 0 % weight | OECD 301C - MITI test (I) |
| Diethylenetriamine | 111-40-0 | Experimental Biodegradation | 14 days | BOD | 0 % weight | OECD 301C - MITI test (I) |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide] | 484-050-2 | Experimental Biodegradation | 28 days | CO2 evolution | 7 | Other methods |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Experimental Biodegradation | 28 days | BOD | 0 % weight | OECD 301C - MITI test (I) |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | Experimental Biodegradation | 28 days | BOD | >66.3 % weight | OECD 301F - Manometric respirometry |
| Glass, oxide, chemicals | 65997-17-3 | Data not available or insufficient for | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | classification | | | | |
| Titanium dioxide | 13463-67-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Estimated Hydrolysis | | Hydrolytic half-life | <2 days (t 1/2) | Other methods |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | Estimated Photolysis | | Photolytic half-life (in air) | 3.2 hours (t 1/2) | Other methods |

**12.3 : Bioaccumulative potential**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Titanium dioxide | 13463-67-7 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | 9.6 | Other methods |
| Triethylenetetramine | 112-24-3 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | <5.0 | OECD 305E - Bioaccumulation flow-through fish test |
| N-aminoethylpiperazine | 140-31-8 | Experimental Bioconcentration | | Log Kow | 0.3 | Other methods |
| Diethylenetriamine | 111-40-0 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | 6.3 | OECD 305E - Bioaccumulation flow-through fish test |
| 2-(2-Aminoethylamino)ethanol | 111-41-1 | Experimental BCF-Carp | 42 days | Bioaccumulation factor | <3.7 | OECD 305A-Bioaccum. Seq Static |
| Glass, oxide, chemicals | 65997-17-3 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 3,6,9-Triazaundecamethylenediamine | 112-57-2 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1- | 484-050-2 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| oxooctyl)amino ]alkyl]octadeca namide and N,N'-1,2-alkandiylbis[12 - hydroxyoctade canamide] | | | | | | |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 25068-38-6 | Experimental BCF-Carp | 28 days | Bioaccumulatio n factor | <=42 | Other methods |

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

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

No information available at this time, contact manufacturer for more details

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

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**
See Section 11.1 Information on toxicological effects

Dispose of completely cured (or polymerised) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

ADR: UN3259 Amines, Solid, Corrosive, N.O.S (Triethylenetetramine); 8; II; (E); C8
IMDG: UN3259 Amines, Solid, Corrosive, N.O.S (Triethylenetetramine); 8; II; EmS: F-A, S-B
IATA: UN3259 Amines, Solid, Corrosive, N.O.S (Triethylenetetramine); 8; II

## SECTION 15: Regulatory information

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

**Carcinogenicity**

| Ingredient | CAS Nbr | Classification | Regulation |
|---|---|---|---|
| Titanium dioxide | 13463-67-7 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

**Global inventory status**
Contact 3M for more information. The components of this product are in compliance with the chemical notification requirements of TSCA.

**15.2. Chemical Safety Assessment**
Not applicable

## SECTION 16: Other information

**List of relevant H statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| 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. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H335 | May cause respiratory irritation. |
| H360Df | May damage the unborn child. 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:**

Label: Graphic information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 14: Transportation classification information was modified.

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.

**3M United Kingdom MSDSs are available at www.3M.com/uk**