



SAFETY DATA SHEET

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

1.1 Product identifier

Product name : Corrosion Resistant Primer EC-275
MSDS code : 004675
Product code : EC-275

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

| Identified uses | |
|--------------------------------|--------|
| Hardener for Aerospace coating | |
| Uses advised against | Reason |
| For professional use only. | |

1.3 Details of the supplier of the safety data sheet

AkzoNobel Aerospace Coatings
Rijksstraatweg 31
2171 AJ Sassenheim
P.O. Box 3
2170 BA Sassenheim
The Netherlands
e-mail address of person responsible for this SDS : PSRA_SSH@akzonobel.com

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : Not available.

Supplier

Telephone number : + 31 (0)71 308 6944
Hours of operation : 24 hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 2, H225
Acute Tox. 4, H302
Skin Corr. 1B, H314
Skin Sens. 1, H317
Repr. 2, H361fd (Fertility and Unborn child)
STOT SE 3, H336
STOT RE 2, H373
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

SECTION 2: Hazards identification

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : 16.2 percent of the mixture consists of component(s) of unknown toxicity

Ingredients of unknown ecotoxicity : Contains 16.2 % of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapor.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility. Suspected of damaging the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapor. Wear eye or face protection.

Response

: IF exposed or concerned: Get medical attention.

Storage

: Store in a well-ventilated place.

Disposal

: Not applicable.

Hazardous ingredients

: toluene
benzyl alcohol
N-(3-(trimethoxysilyl)propyl)ethylenediamine
Formaldehyde, polymer with benzenamine, hydrogenated
2-piperazin-1-ylethylamine
bisphenol A
2,4,6-tris(dimethylaminomethyl)phenol
4-nonylphenol, branched

Supplemental label elements

: Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings

: Not applicable.

Tactile warning of danger

: Not applicable.

SECTION 2: Hazards identification

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name | Identifiers | % | Classification Regulation (EC) No. 1272/2008 [CLP] | Type |
|--|---|-----------|--|---------|
| toluene | EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3 | ≥25 - ≤50 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d (Unborn child) STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 | [1] [2] |
| benzyl alcohol | EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5 | ≥10 - ≤25 | Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 | [1] |
| N-(3-(trimethoxysilyl)propyl) ethylenediamine | EC: 217-164-6 CAS: 1760-24-3 | ≤10 | Acute Tox. 4, H332 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | [1] |
| Formaldehyde, polymer with benzenamine, hydrogenated | CAS: 135108-88-2 | <10 | Acute Tox. 4, H302 Skin Corr. 1C, H314 Skin Sens. 1, H317 STOT RE 2, H373 (oral) Aquatic Chronic 3, H412 | [1] |
| 2-piperazin-1-ylethylamine | EC: 205-411-0 CAS: 140-31-8 Index: 612-105-00-4 | ≤10 | Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | [1] |
| bisphenol A | EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0 | ≤10 | Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361f (Fertility) STOT SE 3, H335 | [1] [2] |
| 2,4,6-tris (dimethylaminomethyl)phenol | EC: 202-013-9 CAS: 90-72-2 Index: 603-069-00-0 | ≤5 | Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 | [1] |
| 4-nonylphenol, branched | EC: 284-325-5 CAS: 84852-15-3 Index: 601-053-00-8 | ≤5 | Acute Tox. 4, H302 Skin Corr. 1B, H314 Repr. 2, H361fd (Fertility and Unborn child) Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10) See Section 16 for the full text of the H statements declared above. | [1] [5] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

SECTION 3: Composition/information on ingredients

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-----------------------------------|---|
| General | : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice. |
| Eye contact | : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention. |
| Inhalation | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| Skin contact | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. |
| Ingestion | : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting. |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine, Formaldehyde, polymer with benzenamine, hydrogenated, 2-piperazin-1-ylethylamine, bisphenol A. May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|----------------------------|---|
| Notes to physician | : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | : No specific treatment. |

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up

: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

: Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear antistatic footwear and clothing and floors should be of the

SECTION 7: Handling and storage

conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

Information on fire and explosion protection

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapors in all cases. In such circumstances, they should wear a compressed-air-fed respirator during the spraying process and until the particulate and solvent vapor concentrations have fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidizing agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep away from sources of ignition. No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|-------------------------|---|
| toluene | EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 384 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 191 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. |
| bisphenol A | EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Inhalable fraction |

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Not recommended: nitrile rubber, butyl rubber

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

SECTION 8: Exposure controls/personal protection

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

- Body protection** : Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

If workers could be exposed to concentrations above the exposure limit they must use a respirator to EN 140, fitted with a filter suitable for both particulates and vapours, to EN 14387, with an assigned protection factor of at least 10 (e.g. A2P3). Selection of any respiratory protective equipment should ensure that it is adequate to reduce exposure to protect the worker's health and is suitable for the wearer, task and environment, including consideration of the facial features of the wearer.
- Environmental exposure controls** : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Yellow to red.
- Odor** : Pungent.
- Odor threshold** : Not available.
- pH** : Neutral.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : 111°C
- Flash point** : Closed cup: 4°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)
- Vapor pressure** : Not available.
- Vapor density** : Highest known value: 4.4 (Air = 1) (2-piperazin-1-ylethylamine). Weighted average: 3 (Air = 1)
- Relative density** : 0.977
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): 1.13 cm²/s
- Explosive properties** : Not available.
- Oxidizing properties** : Not available.
- VOC content** : 458 g/l [ISO 11890-2]

SECTION 9: Physical and chemical properties

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine, Formaldehyde, polymer with benzenamine, hydrogenated, 2-piperazin-1-ylethylamine, bisphenol A. May produce an allergic reaction.

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-----------------------|---------|------------|----------|
| toluene | LD50 Oral | Rat | 636 mg/kg | - |
| benzyl alcohol | LC50 Inhalation Vapor | Rat | 1000 ppm | 8 hours |
| | LD50 Dermal | Rabbit | 2000 mg/kg | - |
| | LD50 Oral | Rat | 1230 mg/kg | - |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | LD50 Oral | Rat | 2413 mg/kg | - |
| bisphenol A | LD50 Oral | Rat | 1200 mg/kg | - |
| 2,4,6-tris(dimethylaminomethyl)phenol | LD50 Dermal | Rat | 1280 mg/kg | - |
| | LD50 Oral | Rat | 1200 mg/kg | - |

SECTION 11: Toxicological information

| | | | | |
|-------------------------|-----------|-----|------------|---|
| 4-nonylphenol, branched | LD50 Oral | Rat | 1300 mg/kg | - |
|-------------------------|-----------|-----|------------|---|

Conclusion/Summary : Not available.

Acute toxicity estimates

| Route | ATE value |
|------------------------------|--------------|
| Oral | 1742.4 mg/kg |
| Dermal | 5791.1 mg/kg |
| Inhalation (vapors) | 53.79 mg/l |
| Inhalation (dusts and mists) | 13.48 mg/l |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|--------------------------|-------------|
| toluene | Eyes - Mild irritant | Rabbit | - | 0.5 minutes | - |
| | Eyes - Mild irritant | Rabbit | - | 100 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 870 Micrograms | - |
| | Skin - Mild irritant | Pig | - | 24 hours 2 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 250 microliters | - |
| | Skin - Moderate irritant | Rabbit | - | 435 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| benzyl alcohol | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| | Skin - Mild irritant | Man | - | 48 hours 16 milligrams | - |
| | Skin - Moderate irritant | Pig | - | 100 Percent | - |
| N-(3-(trimethoxysilyl)propyl) ethylenediamine | Skin - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 15 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| 2-piperazin-1-ylethylamine | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 5 milligrams | - |
| bisphenol A | Eyes - Severe irritant | Rabbit | - | 24 hours 250 Micrograms | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 250 milligrams | - |
| 2,4,6-tris (dimethylaminomethyl) phenol | Eyes - Severe irritant | Rabbit | - | 24 hours 50 Micrograms | - |
| | Skin - Mild irritant | Rat | - | 0.025 Mililiters | - |
| | Skin - Severe irritant | Rat | - | 0.25 Mililiters | - |
| 4-nonylphenol, branched | Skin - Severe irritant | Rabbit | - | 24 hours 2 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 500 milligrams | - |

SECTION 11: Toxicological information

Conclusion/Summary : Not available.

Sensitization

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|--------------------------|------------------------------------|--|
| toluene bisphenol A | Category 3 Category 3 | Not applicable. Not applicable. | Narcotic effects Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|--------------------------|------------------------|----------------------------------|
| toluene Formaldehyde, polymer with benzenamine, hydrogenated | Category 2 Category 2 | Not determined Oral | Not determined Not determined |

Aspiration hazard

| Product/ingredient name | Result |
|-------------------------|--------------------------------|
| toluene | ASPIRATION HAZARD - Category 1 |

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

| Product/ingredient name | Result | Species | Exposure |
|----------------------------|--|---|----------|
| benzyl alcohol | Acute LC50 10000 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| 2-piperazin-1-ylethylamine | Acute LC50 2190000 to 2460000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| bisphenol A | Acute EC50 1000 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 1.506 mg/l | Algae - Prorocentrum minimum | 72 hours |
| | Acute EC50 7.75 mg/l Fresh water | - Exponential growth phase Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 1.34 mg/l Marine water | Crustaceans - Americamysis bahia - Larvae | 48 hours |
| | Acute LC50 3.5 mg/l Marine water | Fish - Rivulus marmoratus - Embryo | 96 hours |
| | Chronic NOEC 2 mg/l Fresh water | Algae - Chlorolobion braunii - | 4 days |

SECTION 12: Ecological information

| | | | |
|-------------------------|--|---|----------|
| 4-nonylphenol, branched | Chronic NOEC 0.05 mg/l Fresh water | Exponential growth phase Crustaceans - Asellus aquaticus - Juvenile (Fledgling, Hatchling, Weanling) | 21 days |
| | Chronic NOEC 30 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 21 days |
| | Chronic NOEC 0.2 µg/l Fresh water | Fish - Carassius auratus - Adult | 90 days |
| | Acute EC50 0.03 mg/l Marine water | Algae - Skeletonema costatum | 72 hours |
| | Acute EC50 0.027 mg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 137 to 160 µg/l Marine water | Crustaceans - Eohaustorius estuarius - Adult | 48 hours |
| | Acute LC50 17 µg/l Marine water | Fish - Pleuronectes americanus - Larvae | 96 hours |
| | Chronic EC10 0.012 mg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Chronic NOEC 5 µg/l Fresh water | Crustaceans - Gammarus fossarum - Adult | 21 days |
| | Chronic NOEC 7.4 µg/l Fresh water | Fish - Pimephales promelas - Embryo | 33 days |

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|------------|-----------|
| toluene | 2.73 | 90 | low |
| benzyl alcohol | 0.87 | - | low |
| Formaldehyde, polymer with benzenamine, hydrogenated | - | 209 to 219 | low |
| 2-piperazin-1-ylethylamine | -1.48 | - | low |
| bisphenol A | 3.4 | 20 to 67 | low |
| 2,4,6-tris (dimethylaminomethyl) phenol | 0.219 | - | low |
| 4-nonylphenol, branched | 5.4 | 740 | high |

12.4 Mobility in soil

**Soil/water partition
coefficient (K_{oc})** : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.
- Disposal considerations** : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

| Waste code | Waste designation |
|------------|--------------------------------|
| 08 01 99 | wastes not otherwise specified |

Packaging






- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

| Type of packaging | European waste catalogue (EWC) |
|-------------------|---|
| CEPE Guidelines | 15 01 10* packaging containing residues of or contaminated by hazardous substances |

- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

SECTION 14: Transport information

| | ADR/RID | IMDG | IATA |
|----------------------------|---|--|--|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL |
| Transport hazard class(es) | 3   | 3   | 3  |
| Packing group | II | II | II |
| Environmental hazards | Yes. | N-(3-(trimethoxysilyl)propyl) ethylenediamine, 4-nonylphenol, branched | No. |
| Additional information | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Special provisions 640 (C) Tunnel code (D/E) | F-E, _S-E_ The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. | The environmentally hazardous substance mark may appear if required by other transportation regulations. |

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code : Not applicable.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

| Ingredient name | Intrinsic property | Status | Reference number | Date of revision |
|-------------------------|---|-----------|------------------|------------------|
| 4-nonylphenol, branched | Substance of equivalent concern for environment | Candidate | ED/169/2012 | 12/19/2012 |

SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : Not applicable.

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|-------------------------|----------------------|-------------------|-------------------------------|----------------------------|
| toluene | - | - | Repr. 2, H361d (Unborn child) | - |
| bisphenol A | - | - | - | Repr. 2, H361f (Fertility) |
| 4-nonylphenol, branched | - | - | Repr. 2, H361d (Unborn child) | Repr. 2, H361f (Fertility) |

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

| Ingredient name | Annex | Status |
|-------------------------|------------------|--------|
| 4-nonylphenol, branched | Annex I - Part 1 | Listed |
| - | Annex I - Part 2 | Listed |

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

CEPE code : 1

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|---|---|
| Flam. Liq. 2, H225 Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Repr. 2, H361fd (Fertility and Unborn child) STOT SE 3, H336 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method |

Full text of abbreviated H statements

| | |
|-------------------------------------|---|
| H225 | Highly flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| 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. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361d (Unborn child) | Suspected of damaging the unborn child. |
| H361f (Fertility) | Suspected of damaging fertility. |
| H361fd (Fertility and Unborn child) | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H373 (oral) | May cause damage to organs through prolonged or repeated exposure if swallowed. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| 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. |

Full text of classifications [CLP/GHS]

SECTION 16: Other information

| | |
|--|--|
| Acute Tox. 4, H302 | ACUTE TOXICITY (oral) - Category 4 |
| Acute Tox. 4, H312 | ACUTE TOXICITY (dermal) - Category 4 |
| Acute Tox. 4, H332 | ACUTE TOXICITY (inhalation) - Category 4 |
| Aquatic Acute 1, H400 | AQUATIC HAZARD (ACUTE) - Category 1 |
| Aquatic Chronic 1, H410 | AQUATIC HAZARD (LONG-TERM) - Category 1 |
| Aquatic Chronic 2, H411 | AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Aquatic Chronic 3, H412 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Asp. Tox. 1, H304 | ASPIRATION HAZARD - Category 1 |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Eye Irrit. 2, H319 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 |
| Flam. Liq. 2, H225 | FLAMMABLE LIQUIDS - Category 2 |
| Repr. 2, H361d (Unborn child) | TOXIC TO REPRODUCTION (Unborn child) - Category 2 |
| Repr. 2, H361f (Fertility) | TOXIC TO REPRODUCTION (Fertility) - Category 2 |
| Repr. 2, H361fd (Fertility and Unborn child) | TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 2 |
| Skin Corr. 1B, H314 | SKIN CORROSION/IRRITATION - Category 1B |
| Skin Corr. 1C, H314 | SKIN CORROSION/IRRITATION - Category 1C |
| Skin Irrit. 2, H315 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1, H317 | SKIN SENSITIZATION - Category 1 |
| STOT RE 2, H373 (oral) | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (oral) - Category 2 |
| STOT RE 2, H373 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |
| STOT SE 3, H335 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| STOT SE 3, H336 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |

Notice to reader**FOR PROFESSIONAL USE ONLY**

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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