

watco® SAFETY DATA SHEET

Concrex Flex - Curing Agent

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

1.1 Product identifier

Product name : Concrex Flex - Curing Agent
Product description : repair product
Product type : Liquid.
UFI : VYP0-F0CC-E00W-R0E2

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

| Identified uses | |
|--|--------|
| Consumer Industrial Professional | |
| Uses advised against | Reason |
| None identified. | - |

1.3 Details of the supplier of the safety data sheet

Watco UK Limited
Eastgate Court
195-205 High Street
Guildford
Surrey
GU1 3EH
Telephone no.: +44 (0) 1483 425000 (08:00 - 18:00)
Fax no.: +44 (0) 1483 428888
e-mail address of person responsible for this SDS : rpmeurohas@rustoleum.eu

1.4 Emergency telephone number

National advisory body/Poison Centre

Supplier

Telephone number United Kingdom: : +44 870 8200418 / +44 2038073798
Great Britain

Hours of operation : 24 / 7

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]

Skin Corr. 1, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
Repr. 2, H361
STOT RE 1, H372
Aquatic Chronic 2, H411

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

SECTION 2: Hazards identification

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

: H314 - Causes severe skin burns and eye damage.
 H317 - May cause an allergic skin reaction.
 H361 - Suspected of damaging fertility or the unborn child.
 H372 - Causes damage to organs through prolonged or repeated exposure.
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

General

: P103 - Read carefully and follow all instructions.
 P102 - Keep out of reach of children.
 P101 - If medical advice is needed, have product container or label at hand.

Prevention

: P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapour.

Response

: P391 - Collect spillage.
 P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage

: P405 - Store locked up.

Disposal

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

Hazardous ingredients

: Fatty acids, tall oil, reaction products with tetraethylenepentamine
 Phenol, styrenated
 2-piperazin-1-ylethylamine
 tetraethylenepentamine
 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine
 2,4,6-tris(dimethylaminomethyl)phenol

Supplemental label elements

: EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Supplemental label elements : Detergents - Regulation (EC) No 907/2006

: 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

Concrex Flex - Curing Agent

SECTION 2: Hazards identification

Containers to be fitted with child-resistant fastenings : Yes, applicable.

Tactile warning of danger : Yes, applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

United Kingdom: Great Britain

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|--|---|-----------|--|--|------|
| Fatty acids, tall oil, reaction products with tetraethylenepentamine | EC: 273-201-6 CAS: 68953-36-6 | ≥25 - ≤50 | Skin Sens. 1, H317 Aquatic Chronic 2, H411 | - | [1] |
| Phenol, styrenated | REACH #: 01-2119980970-27 EC: 262-975-0 CAS: 61788-44-1 | ≥10 - ≤25 | Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | - | [1] |
| 2-piperazin-1-ylethylamine | REACH #: 01-2119471486-30 EC: 205-411-0 CAS: 140-31-8 Index: 205-411-0 | ≥10 - ≤25 | Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361 STOT RE 1, H372 Aquatic Chronic 3, H412 | ATE [Oral] = 1470 mg/kg ATE [Dermal] = 866 mg/kg | [1] |
| tetraethylenepentamine | REACH #: 01-2119487290-37 EC: 203-986-2 CAS: 112-57-2 Index: 612-060-00-0 | ≤3 | Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg | [1] |
| 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine | REACH #: 01-2119560598-25 EC: 247-063-2 CAS: 25513-64-8 | ≤3 | Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 | ATE [Oral] = 910 mg/kg | [1] |
| Amines, coco alkyl | REACH #: 01-2119473798-17 EC: 262-977-1 CAS: 61788-46-3 Index: 612-285-00-4 | ≤3 | Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, immune system, liver) (oral) | ATE [Oral] = 1300 mg/kg STOT RE 2, H373: C ≥ 10% M [Acute] = 10 M [Chronic] = 10 | [1] |

SECTION 3: Composition/information on ingredients

| | | | | | |
|---|---|----|--|---|-----|
| 2,4,6-tris (dimethylaminomethyl) phenol | REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 | ≤3 | Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 See Section 16 for the full text of the H statements declared above. | - | [1] |
|---|---|----|--|---|-----|

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.

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

Type

[1] Substance classified with a health or environmental hazard

This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

SECTION 4: First aid measures

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

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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.

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

SECTION 7: Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|----------|---------------------------------|-------------------------|
| E2 | 200 tonne | 500 tonne |

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

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

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|--|------|----------------------|------------------------|------------|----------|
| 2,4,6-tris(dimethylaminomethyl) phenol | DNEL | Long term Inhalation | 0,31 mg/m ³ | Workers | Systemic |

PNECs

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---------------------------------------|------------------------|-------------|---------------|
| titanium dioxide | Fresh water | 0,127 mg/l | - |
| | Marine | >1 mg/l | - |
| | Sewage Treatment Plant | >100 mg/l | - |
| | Fresh water sediment | >1000 mg/kg | - |
| | Marine water sediment | >100 mg/kg | - |
| | Soil | 100 mg/kg | - |
| | Marine water | 0,0184 mg/l | - |
| | Fresh water | 0,184 mg/l | - |
| | Fresh water | 0,84 mg/l | - |
| 2,4,6-tris(dimethylaminomethyl)phenol | Fresh water | 0,84 mg/l | - |

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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 : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Use eye protection according to EN 166. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: chemical splash goggles and/or face shield. or safety glasses with side-shields.

Skin 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.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): nitrile rubber, Viton® or polyvinyl chloride (PVC) gloves

The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN374. 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.

SECTION 8: Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: (EN 467) Overalls buttoned to the neck and wrist. or lab coat
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour filter (Type AX) (as filter combination A-P2) (EN 141)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

- Physical state** : Liquid.
- Colour** : Grey.
- Odour** : Ammoniacal.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not relevant due to nature of the product.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosion limit** : Not available.
- Flash point** : Closed cup: >100°C (>212°F)
- Auto-ignition temperature** : Not relevant due to nature of the product.
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- pH : Justification** : Product is non-soluble (in water).
- Viscosity** : Dynamic: >460 mPa·s [Literature]
- Solubility(ies)** :

| Media | Result |
|------------|-------------|
| cold water | Not soluble |
| hot water | Not soluble |

- Solubility in water** : Not available.
- Miscible with water** : No.
- Partition coefficient: n-octanol/ water** : Not applicable.
- Vapour pressure** : <1,3 kPa (<10 mm Hg) [calculated.]
- Evaporation rate** : Not available.
- Relative density** : 1,08
- Density** : 1,078 g/cm³ [20°C (68°F)] [DIN 53217]
- Vapour density** : Not available.
- Explosive properties** : Not available.

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SECTION 9: Physical and chemical properties

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

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 : The product is stable.

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

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-------------|---------|-------------|----------|
| Phenol, styrenated | LD50 Dermal | Rabbit | >5010 mg/kg | - |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | 2500 mg/kg | - |
| 2-piperazin-1-ylethylamine | LD50 Oral | Rat | >2000 mg/kg | - |
| | LD50 Dermal | Rabbit | 880 mg/kg | - |
| | LD50 Dermal | Rabbit | 880 uL/kg | - |
| | LD50 Dermal | Rat | 866 mg/kg | - |
| | LD50 Oral | Rat | 1470 mg/kg | - |
| | LD50 Oral | Rat | 2140 mg/kg | - |
| tetraethylenepentamine 2,2,4(or 2,4,4)- trimethylhexane-1,6-diamine | LD50 Oral | Rat | 2140 mg/kg | - |
| | LD50 Oral | Rat | 910 mg/kg | - |
| Amines, coco alkyl 2,4,6-tris (dimethylaminomethyl) | LD50 Oral | Rat | 1300 mg/kg | - |
| | LD50 Dermal | Rabbit | 1242 mg/kg | - |
| phenol | LD50 Oral | Rat | 1673 mg/kg | - |

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Phenol, styrenated | 2500 | N/A | N/A | N/A | N/A |
| 2-piperazin-1-ylethylamine | 1470 | 866 | N/A | N/A | N/A |
| tetraethylenepentamine | 500 | 1100 | N/A | N/A | N/A |
| 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine | 910 | N/A | N/A | N/A | N/A |
| Amines, coco alkyl | 1300 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|-------------------------|-------------|
| Phenol, styrenated | Eyes - Mild irritant | Rabbit | - | 0.1 Milliliters | - |
| | Skin - Mild irritant | Rabbit | - | 0.5 Milliliters | - |
| 2-piperazin-1-ylethylamine | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 5 milligrams | - |
| tetraethylenepentamine | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 5 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 495 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 5 milligrams | - |
| 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine | Skin - Severe irritant | Rabbit | - | - | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 50 Micrograms | - |
| 2,4,6-tris(dimethylaminomethyl) phenol | Skin - Mild irritant | Rat | - | 0.025 Milliliters | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 milligrams | - |
| | Skin - Severe irritant | Rat | - | 0.25 Milliliters | - |

Conclusion/Summary

- Skin** : Causes severe skin burns and eye damage.
Eyes : Causes serious eye damage.
Respiratory : Causes damage to organs through prolonged or repeated exposure.

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|--|-------------------|------------|-----------------|
| 2,4,6-tris(dimethylaminomethyl) phenol | skin | Guinea pig | Not sensitizing |

Conclusion/Summary

- Skin** : May cause an allergic skin reaction.
Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|--|-------------------|-----------|---------------------|---------|------|----------|
| 2,4,6-tris(dimethylaminomethyl) phenol | - | - | Negative | Rat | Oral | 28 days |

- Conclusion/Summary** : Suspected of damaging the unborn child. Suspected of damaging fertility.

Teratogenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

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SECTION 11: Toxicological information

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|------------------------------|
| Amines, coco alkyl | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|--------------------------|-------------------|---|
| 2-piperazin-1-ylethylamine Amines, coco alkyl | Category 1 Category 2 | - oral | - gastrointestinal tract, immune system, liver |

Aspiration hazard

| Product/ingredient name | Result |
|-------------------------|--------------------------------|
| Amines, coco alkyl | ASPIRATION HAZARD - Category 1 |

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

SECTION 11: Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

General : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|-------------------------------------|----------------------------|----------|
| 2-piperazin-1-ylethylamine | Acute LC50 2190000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| Amines, coco alkyl | Acute EC50 0,09 mg/l | Daphnia spec. | 48 hours |
| | Acute LC50 0,24 mg/l | Fish | 96 hours |
| | Acute NOEC 0,032 mg/l | Daphnia spec. | 48 hours |
| 2,4,6-tris (dimethylaminomethyl) phenol | Acute EC50 84 mg/l | Algae | 72 hours |
| | Acute LC50 180 to 240 mg/l | Fish | 96 hours |
| | Acute LC50 175 mg/l | Fish - Cyprinus carpio | 96 hours |

Conclusion/Summary : Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|-----------|-----------------------------|---------------------------|----------|
| Amines, coco alkyl | OECD 301D | 91 % - Readily - 28 days | 10 mg/l ThCO ₂ | - |
| 2,4,6-tris (dimethylaminomethyl) phenol | OECD 301D | 4 % - Not readily - 28 days | - | - |

Conclusion/Summary : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| Amines, coco alkyl | - | - | Readily |
| 2,4,6-tris (dimethylaminomethyl) phenol | - | - | Not readily |

12.3 Bioaccumulative potential

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SECTION 12: Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-----------|------------|
| 2-piperazin-1-ylethylamine | -1,48 | - | low |
| 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine Amines, coco alkyl | -0,3 | - | low |
| 2,4,6-tris(dimethylaminomethyl) phenol | >3 0,219 | >100 - | low low |

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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 : Yes.

European waste catalogue (EWC)

| Waste code | Waste designation |
|------------|--|
| 10 13 11 | wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10 |

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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|--|--|--|--|
| 14.1 UN number or ID number | UN2735 | UN2735 | UN2735 | UN2735 |
| 14.2 UN proper shipping name | Polyamines, liquid, corrosive, N.O.S. (2-piperazin-1-ylethylamine) | Polyamines, liquid, corrosive, N.O.S. (2-piperazin-1-ylethylamine) | Polyamines, liquid, corrosive, N.O.S. (2-piperazin-1-ylethylamine). Marine pollutant (Fatty acids, tall oil, reaction products with tetraethylenepentamine, Phenol, styrenated) | Polyamines, liquid, corrosive, N.O.S. (2-piperazin-1-ylethylamine) |
| 14.3 Transport hazard class(es) | 8   | 8   | 8   | 8  |
| 14.4 Packing group | II | II | II | II |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |
| <u>Additional information</u> | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Limited quantity : ≤ 1L Tunnel code (E) | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules : F-A, S-B | The environmentally hazardous substance mark may appear if required by other transportation regulations. Quantity limitation Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0,5 L. Packaging instructions: Y840. |

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 IMO instruments : Not available.

SECTION 15: Regulatory information

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

Other EU regulations

VOC for Ready-for-Use Mixture : IIA/j. Two-pack reactive performance coatings for specific end use such as floors.
EU limit value for this product : 500g/l (2010.)
This product contains a maximum of 10 g/l VOC.

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

United Kingdom: Great Britain

UK (GB) /REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Aerosol dispensers :

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

E2

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

International regulations

Stockholm Convention on Persistent Organic Pollutants

| List name | Ingredient name | Status |
|-------------|-----------------|--------|
| Not listed. | | |

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

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| List name | Ingredient name | Status |
|-------------|-----------------|--------|
| Not listed. | | |

CN code : 3214 10 10 00

Inventory list

| | |
|--------------------------------|---|
| Australia | : All components are listed or exempted. |
| Canada | : At least one component is not listed in DSL but all such components are listed in NDSL. |
| China | : All components are listed or exempted. |
| Eurasian Economic Union | : Russian Federation inventory : Not determined. |
| Japan | : Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : Not determined. |
| New Zealand | : All components are listed or exempted. |
| Philippines | : All components are listed or exempted. |
| Republic of Korea | : All components are listed or exempted. |
| Taiwan | : Not determined. |
| Thailand | : Not determined. |
| Turkey | : Not determined. |
| United States | : Not determined. |
| Viet Nam | : Not determined. |

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

✔ 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
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

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

| Classification | Justification |
|-------------------------|-----------------|
| Skin Corr. 1, H314 | Expert judgment |
| Eye Dam. 1, H318 | Expert judgment |
| Skin Sens. 1, H317 | Expert judgment |
| Repr. 2, H361 | Expert judgment |
| STOT RE 1, H372 | Expert judgment |
| Aquatic Chronic 2, H411 | Expert judgment |

Full text of abbreviated H statements

United Kingdom: Great Britain

SECTION 16: Other information

| | | |
|--|---|---|
| Full text of abbreviated H statements | : | H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. 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. H318 Causes serious eye damage. H335 May cause respiratory irritation. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure. 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] | : | Acute Tox. 3 ACUTE TOXICITY - Category 3 Acute Tox. 4 ACUTE TOXICITY - Category 4 Aquatic Acute 1 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 Aquatic Chronic 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 Aquatic Chronic 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 Asp. Tox. 1 ASPIRATION HAZARD - Category 1 Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 Repr. 2 REPRODUCTIVE TOXICITY - Category 2 Skin Corr. 1 SKIN CORROSION/IRRITATION - Category 1 Skin Corr. 1A SKIN CORROSION/IRRITATION - Category 1A Skin Corr. 1B SKIN CORROSION/IRRITATION - Category 1B Skin Corr. 1C SKIN CORROSION/IRRITATION - Category 1C Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2 Skin Sens. 1 SKIN SENSITISATION - Category 1 Skin Sens. 1A SKIN SENSITISATION - Category 1A STOT RE 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1 STOT RE 2 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |
|---|---|---|

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Notice to reader

IMPORTANT NOTE: The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage,

SECTION 16: Other information

application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.