

1. Identification

Product identifier : 81160-S Syrup
Product code : 81160S
Other means of identification : Not available.
Product type : Liquid.

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

Product use : Scale and Corrosion Inhibitor
Area of application : Industrial applications.

Supplier/Manufacturer : Dober
11230 Katherine's Crossing
Woodridge, IL 60517-5075

e-mail address of person responsible for this SDS : regulatory@dober-group.com

Emergency telephone number (with hours of operation) : Chem Tel: 1-813-248-0585 / 1-800-255-3924

Section 2. Hazards identification

Classification of the substance or mixture : H302 ACUTE TOXICITY (oral) - Category 4
H314 SKIN CORROSION - Category 1B
H318 SERIOUS EYE DAMAGE - Category 1
H317 SKIN SENSITISATION - Category 1
H350 CARCINOGENICITY - Category 1B
H360 REPRODUCTIVE TOXICITY (Fertility) - Category 1B
H360 REPRODUCTIVE TOXICITY (Unborn child) - Category 1B
H371 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (blood system) - Category 2
H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (blood system, cardiovascular system, central nervous system (CNS), kidneys) - Category 2
H401 ACUTE AQUATIC HAZARD - Category 2

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child.
H371 - May cause damage to organs. (blood system)
H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, cardiovascular system, central nervous system (CNS), kidneys)

Section 2. Hazards identification

H401 - Toxic to aquatic life.

Precautionary statements

Prevention

- : P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P281 - Use personal protective equipment as required.

Response

- : P310 - Immediately call a POISON CENTER or doctor/physician.
- P314 - Get medical advice/attention if you feel unwell.
- P321 - Specific treatment (see First Aid on this label).
- P330 - Rinse mouth.
- P363 - Wash contaminated clothing before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
- P301 + P330 + P331 - IF SWALLOWED: Rinse mouth and do not induce vomiting
- P303 + P361 + P353 - IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Immediately 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

Storage

- : P405 - Store locked up.

Disposal

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

Supplemental label elements

- : Not applicable.

Other hazards which do not result in classification : Causes digestive tract burns.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

EC number : Mixture.

| Ingredient name | % | CAS number |
|---------------------------------|-----------|------------|
| sodium nitrite | ≥10 - <25 | 7632-00-0 |
| disodium tetraborate, anhydrous | ≤10 | 1330-43-4 |
| sodium nitrate | ≤10 | 7631-99-4 |
| disodium trioxosilicate | ≤6.9 | 6834-92-0 |
| sodium mercaptobenzothiazole | ≤1 | 2492-26-4 |
| phenolphthalein | ≤0.3 | 77-09-8 |

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Most important symptoms/effects, acute and delayed

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** : Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

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

Section 4. First aid measures

- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- 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.
- 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 nitrogen oxides
 metal oxide/oxides
 carbon dioxide
 carbon monoxide
 sulfur oxides

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.

Section 6. Accidental release measures

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".

Section 6. Accidental release measures

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.

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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

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. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

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. Separate from acids. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---------------------------------|--|
| disodium tetraborate, anhydrous | DOL OEL (South Africa, 8/1995). Notes: Recommended limit TWA: 1 mg/m ³ 8 hours. |

Section 8. Exposure controls/personal protection

- 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.
- 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.
- 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. 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.
- Skin protection**
- 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.
- 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.
- 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.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear.]
- Colour** : Red./Purple.
- Odour** : Mild.
- Odour threshold** : Not available.
- pH** : 12.1 to 12.45
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.

Section 9. Physical and chemical properties

| | |
|---|--|
| Lower and upper explosive (flammable) limits | : Not available. |
| Vapour pressure | : Not available. |
| Vapour density | : Not available. |
| Relative density | : 1.388 to 1.42 |
| Solubility | : Easily soluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water | : Not available. |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : Not available. |
| Viscosity | : Not available. |
| Flow time (ISO 2431) | : Not available. |

Section 10. Stability and reactivity

| | |
|---|---|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur. |
| Conditions to avoid | : No specific data. |
| Incompatible materials | : Reactive or incompatible with the following materials: acids Reactive or incompatible with the following materials: oxidizing materials and reducing materials. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------------|---------------------------------|---------|-------------|----------|
| sodium nitrite | LC50 Inhalation Dusts and mists | Rat | 5.5 mg/l | 4 hours |
| | LD50 Oral | Rat | 85 mg/kg | - |
| disodium tetraborate, anhydrous | LD50 Oral | Rat | 1200 mg/kg | - |
| sodium nitrate | LD50 Oral | Rat | 1267 mg/kg | - |
| disodium trioxosilicate | LD50 Oral | Rat | 1153 mg/kg | - |
| sodium mercaptobenzothiazole | LD50 Dermal | Rabbit | >5010 mg/kg | - |
| | LD50 Oral | Rat | 5200 mg/kg | - |

Conclusion/Summary : Not available.

Irritation/Corrosion

Section 11. Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|------------|-------|-------------------------|-------------|
| sodium nitrite | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| disodium trioxosilicate | Skin - Moderate irritant | Guinea pig | - | 24 hours 250 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 250 milligrams | - |

Conclusion/Summary

Skin : Not available.

Eyes : Not available.

Respiratory : Not available.

Sensitisation

Conclusion/Summary

Skin : Not available.

Respiratory : 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)

| Name | Category | Route of exposure | Target organs |
|-------------------------|--------------------------|-----------------------------------|--|
| sodium nitrate | Category 2 Category 3 | Not determined Not applicable. | blood system Respiratory tract irritation |
| disodium trioxosilicate | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|---------------------------------|------------|-------------------|--|
| sodium nitrite | Category 2 | Not determined | blood system and cardiovascular system |
| disodium tetraborate, anhydrous | Category 2 | Not determined | central nervous system (CNS) and kidneys |

Aspiration hazard

Not available.

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

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.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

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

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

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

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|-------|-------------|
| Oral | 409.3 mg/kg |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---------------------------------|----------------------------------|---------|----------|
| sodium nitrite | Acute EC50 >100 mg/l Fresh water | Algae | 72 hours |
| | Acute EC50 15.4 mg/l Fresh water | Daphnia | 48 hours |
| | Acute LC50 0.54 mg/l Fresh water | Fish | 96 hours |
| disodium tetraborate, anhydrous | Acute LC50 86 mg/l | Daphnia | 48 hours |
| | Acute LC50 74 mg/l | Fish | 96 hours |
| sodium nitrate | Acute EC50 3581 mg/l | Daphnia | 48 hours |
| | Acute LC50 >98.9 mg/l | Fish | 96 hours |
| disodium trioxosilicate | Acute EC50 207 mg/l | Algae | 72 hours |
| | Acute EC50 1700 mg/l | Daphnia | 48 hours |
| | Acute LC50 210 mg/l | Fish | 96 hours |
| phenolphthalein | Acute EC50 8.9 mg/l | Algae | 72 hours |
| | Acute EC50 >100 mg/l | Daphnia | 48 hours |

Conclusion/Summary : Not available.

Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|-------------------------|---|--------------------------|------|----------|
| phenolphthalein | OECD 301F Ready Biodegradability - Manometric Respirometry Test | 76 % - Readily - 28 days | - | - |

Conclusion/Summary : Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| sodium nitrite | - | - | Readily |
| phenolphthalein | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------------|--------------------|-----|-----------|
| sodium nitrite | -3.7 | 3.2 | low |
| disodium tetraborate, anhydrous | -1.53 | - | low |
| sodium mercaptobenzothiazole | -0.48 | - | low |
| phenolphthalein | 0.9 | - | low |

Mobility in soil




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

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

Section 13. Disposal considerations

Disposal methods : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spill material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | UN | IMDG | IATA |
|-----------------------------------|---|---|--|
| UN number | UN1719 | UN1719 | UN1719 |
| UN proper shipping name | CAUSTIC ALKALI LIQUID, N. O.S. (Disodium Trioxosilicate) | CAUSTIC ALKALI LIQUID, N. O.S. (Disodium Trioxosilicate) | Caustic alkali liquid, n.o.s. (Disodium Trioxosilicate) |
| Transport hazard class(es) | 8  | 8  | 8  |
| Packing group | II | II | II |
| Environmental hazards | No. | No. | No. |
| Additional information | Special provisions 274 | Emergency schedules (EmS) F-A, S-B Special provisions 274 | Passenger and Cargo Aircraft Quantity limitation: 1 L Packaging instructions: 851 Cargo Aircraft Only Quantity limitation: 30 L Packaging instructions: 855 Limited Quantities - Passenger Aircraft Quantity limitation: 0.5 L Packaging instructions: Y840 Special provisions A3, A803 |

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.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

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.

Section 16. Other information

History

| | |
|---------------------------------------|--|
| Date of issue/Date of revision | : 2017/03/01 |
| Date of previous issue | : No previous validation |
| Version | : 1 |
| Prepared by | : Sphera Solutions |
| Key to abbreviations | : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations |

Procedure used to derive the classification

| Classification | Justification |
|--|-----------------------|
| Acute Tox. 4, H302 | Calculation method |
| Skin Corr. 1B, H314 | Expert judgment |
| Eye Dam. 1, H318 | On basis of test data |
| Skin Sens. 1, H317 | Calculation method |
| Carc. 1B, H350 | Calculation method |
| Repr. 1B, H360 (Fertility) | Calculation method |
| Repr. 1B, H360 (Unborn child) | Calculation method |
| STOT SE 2, H371 (blood system) | Calculation method |
| STOT RE 2, H373 (blood system, cardiovascular system, central nervous system (CNS), kidneys) | Calculation method |
| Aquatic Acute 2, H401 | Calculation method |

| | |
|-------------------|---|
| References | : GHS - Globally Harmonized System of Classification and Labeling of Chemicals International transport regulations |
|-------------------|---|

▣ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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.