SAFETY DATA SHEET

Intergard 821 Part B

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013

Section 1. Chemical product and company identification

GHS product identifier Product code : Intergard 821 Part B

: EAA821

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

| Identified uses | | | | |
|--|---|-----|------------------------|--|
| Professional application of c | oatings and inks | | | |
| Uses | advised against | | Reason | |
| All Other Uses | | | | |
| Manufacturer | : International Paint Ltd. Stoneygate Lane Felling Gateshead Tyne and Wear NE10 0JY UK Tel: +44 (0)191 469 6111 | Fax | :: +44 (0)191 438 3711 | |
| Emergency telephone number (with hours of operation) | : +44 (0)191 469 6111 (24H) | | | |
| e-mail address of person responsible for this SDS | : sdsfellinguk@akzonobel.com | | | |

Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

| Classification of the substance or mixture | | SKIN CORF SERIOUS E SKIN SENS TOXIC TO I TOXIC TO I ACUTE AQ | ITIZATION - REPRODUC | TATION - Ca E/ EYE IRRIT Category 1 TION (Fertility TION (Unborr RD - Categor | ATION - Categ /) - Category 1I h child) - Categ ry 1 | B |
|--|---|---|-------------------------|--|---|---|
| <u>GHS label elements</u> Hazard pictograms | : | ~ | | ~ | ~ | |



Signal word

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: Danger

X.International.

Section 2. Hazards identification

| Hazard statements | Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May damage fertility. Suspected of damaging the unborn child. Very toxic to aquatic life with long lasting effects. |
|-----------------------------|---|
| Precautionary statements | |
| Prevention | : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Avoid breathing dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. |
| Response | : Collect spillage. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention. 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 physician. |
| Storage | : Store locked up. |
| Disposal | : Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | : |

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

Section 3. Composition/information on ingredients

| Substance/mixture : Mixture | | | | | |
|------------------------------------|-----------|------------|--|--|--|
| Ingredient name | % | CAS number | | | |
| benzyl alcohol | ≥10 - ≤25 | 100-51-6 | | | |
| N-aminoethylpiperazine | ≤10 | 140-31-8 | | | |
| m-phenylenebis(methylamine) | ≤5 | 1477-55-0 | | | |
| bisphenol A | ≤3 | 80-05-7 | | | |
| 4-nonylphenol, branched | ≤3 | 84852-15-3 | | | |
| 3,6,9-triazaundecamethylenediamine | <1 | 112-57-2 | | | |

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.

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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 | <u> </u> |
|--------------------------------|---|
| Eye contact | : Causes serious eye damage. |
| Inhalation | : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| Skin contact | : Causes severe burns. May cause an allergic skin reaction. |
| Ingestion | : Harmful if swallowed. May cause burns to mouth, throat and stomach. |
| Over-exposure signs/sympto | oms |
| 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 |

Section 4. First aid measures

| 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 |
| Indication of immediate med | ical 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 | : None known. |
| Specific hazards arising from the chemical | This material is very 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 thermal decomposition products | : Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/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. |

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Section 6. Accidental release measures

| Personal precautions, protec | 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. 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". | | | |
| 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. | | | |
| Methods and material for containment and cleaning up | | | | | |
| Small spill | : | Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. | | | |
| Large spill | : | Move containers from spill area. Approach the release from upwind. Prevent entry | | | |

Large spill
 Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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 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. |
|--|---|--|
| 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. 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. |

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Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | | | Exposure limits |
|----------------------------------|---|---|---|
| m-phenylenebis(methylamir | ie) | | ACGIH TLV (United States, 3/2015). Absorbed through skin. C: 0.1 mg/m ³ |
| Appropriate engineering controls | enc | losures, local exhaust ventilation of | es, gas, vapour or mist, use process or other engineering controls to keep worker slow any recommended or statutory limits. |
| Environmental exposure controls | they case | comply with the requirements of | ocess equipment should be checked to ensure environmental protection legislation. In some neering modifications to the process e emissions to acceptable levels. |
| Individual protection measu | res | | |
| Hygiene measures | eati App Con cont | ng, smoking and using the lavator ropriate techniques should be use taminated work clothing should no | bughly after handling chemical products, before y and at the end of the working period. ed to remove potentially contaminated clothing. of be allowed out of the workplace. Wash . Ensure that eyewash stations and safety location. |
| Eye/face protection | asso gaso unle gog | essment indicates this is necessar es or dusts. If contact is possible, ess the assessment indicates a hig | proved standard should be used when a risk ry to avoid exposure to liquid splashes, mists, the following protection should be worn, gher degree of protection: chemical splash on hazards exist, a full-face respirator may be |
| Skin protection | | | |
| Hand protection | aga Whe clas recc of 2 recc for h part The worl not pun mat Bari | inst chemicals and micro-organism en prolonged or frequently repeate s of 6 (breakthrough time greater or migher (breakthrough time great or higher (breakthrough time great or mended. The user must check handling this product is the most a icular conditions of use, as include selection of a specific glove for a kplace should also take into accou- limited to: Other chemicals which cture protection, dexterity, thermal erials, as well as the instructions/s | ed under Standard EN 374: Protective gloves ns. Recommended: Viton® or Nitrile gloves ed contact may occur, a glove with a protection than 480 minutes according to EN 374) is not is expected, a glove with a protection class atter than 30 minutes according to EN 374) is that the final choice of type of glove selected ppropriate and takes into account the ed in the user's risk assessment. NOTICE: particular application and duration of use in a unt all relevant workplace factors such as, but may be handled, physical requirements (cut/ I protection), potential body reactions to glove specifications provided by the glove supplier. e exposed areas of the skin but should not be |
| Body protection | beir | | body should be selected based on the task d and should be approved by a specialist |
| Other skin protection | sele | | nal skin protection measures should be formed and the risks involved and should be ing this product. |
| Respiratory protection | star be t | idard if a risk assessment indicate | respirator complying with an approved es this is necessary. Respirator selection must bosure levels, the hazards of the product and respirator. |

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Section 9. Physical and chemical properties

Appearance

| Physical state | | Solid. |
|--|---|--|
| Colour | - | |
| | | Grey. |
| Odour | : | Amine-like. |
| Odour threshold | : | Not available. |
| рН | : | Not applicable. |
| Melting point | : | Not available. |
| Boiling point | : | Not available. |
| Flash point | : | Closed cup: 65°C (149°F) |
| Evaporation rate | : | Not available. |
| Flammability (solid, gas) | : | Not available. |
| Lower and upper explosive (flammable) limits | : | Not available. |
| Vapour pressure | : | Not available. |
| Vapour density | : | Not available. |
| Relative density | : | 0.8 |
| Solubility | : | Not available. |
| Partition coefficient: n- octanol/water | : | Not available. |
| Auto-ignition temperature | : | Not available. |
| Decomposition temperature | : | Not available. |
| Viscosity | : | Kinematic (room temperature): 10000 mm ² /s (10000 cSt) |
| | | |

Section 10. Stability and reactivity

| Chemical stability: The product is stable.Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.Conditions to avoid: No specific data.Incompatible materials: No specific data.Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products | Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
|--|------------------------|--|
| reactions . Conditions to avoid : No specific data. Incompatible materials : No specific data. Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition products | Chemical stability | : The product is stable. |
| Incompatible materials : No specific data. Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition products | • | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition products | Conditions to avoid | : No specific data. |
| • | Incompatible materials | : No specific data. |
| | • | |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

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X.International.

Section 11. Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|------------------------|---------|------------|----------|
| benzyl alcohol | LC50 Inhalation Vapour | Rat | >4178 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 2000 mg/kg | - |
| | LD50 Oral | Rat | 1620 mg/kg | - |
| m-phenylenebis (methylamine) | LD50 Dermal | Rabbit | 2 g/kg | - |
| | LD50 Oral | Rat | 930 mg/kg | - |
| bisphenol A | LD50 Oral | Rat | 1200 mg/kg | - |
| 4-nonylphenol, branched | LD50 Oral | Rat | 1300 mg/kg | - |
| 3,6, 9-triazaundecamethylenediamine | LD50 Dermal | Rabbit | 660 uL/kg | - |
| | LD50 Oral | Rat | 3990 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--------------------------------|--------------------------|---------|-------|--------------|-------------|
| benzyl alcohol | Skin - Mild irritant | Man | - | 48 hours 16 | - |
| - | | | | milligrams | |
| | Skin - Moderate irritant | Pig | - | 100 Percent | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 100 | - |
| | | | | milligrams | |
| 2-piperazin-1-ylethylamine | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 | - |
| | | | | milligrams | |
| | Skin - Severe irritant | Rabbit | - | 24 hours 5 | - |
| | | | | milligrams | |
| m-phenylenebis | Eyes - Severe irritant | Rabbit | - | 24 hours 50 | - |
| (methylamine) | | | | Micrograms | |
| | Skin - Severe irritant | Rabbit | - | 24 hours 750 | - |
| | | | | Micrograms | |
| bisphenol A | Eyes - Severe irritant | Rabbit | - | 24 hours 250 | - |
| | | | | Micrograms | |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 | - |
| | | | | milligrams | |
| | Skin - Mild irritant | Rabbit | - | 250 | - |
| | | | | milligrams | |
| 4-nonylphenol, branched | Eyes - Severe irritant | Rabbit | - | 100 | - |
| | | | | milligrams | |
| | Skin - Severe irritant | Rabbit | - | 24 hours 500 | - |
| | | | | milligrams | |
| 3,6, | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 | - |
| 9-triazaundecamethylenediamine | | | | milligrams | |
| | Eyes - Moderate irritant | Rabbit | - | 5 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 5 | - |
| | | | | milligrams | |
| | Skin - Severe irritant | Rabbit | - | 495 | - |
| | | | | milligrams | |

Sensitisation

Not available.

Mutagenicity

Not available.

:

Carcinogenicity

Section 11. Toxicological information

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | 0, | Route of exposure | Target organs |
|-------------|------------|----------------------|------------------------------|
| bisphenol A | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes : Not available. of exposure

Potential acute health effects

| Eye contact | : Causes serious eye damage. |
|--------------|---|
| Inhalation | : May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| Skin contact | : Causes severe burns. May cause an allergic skin reaction. |
| Ingestion | : Harmful if swallowed. May cause burns to mouth, throat and stomach. |

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 |

<u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u> <u>Short term exposure</u>

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Section 11. Toxicological information

| Potential immediate effects | : Not available. |
|-------------------------------|---|
| Potential delayed effects | : Not available. |
| <u>Long term exposure</u> | |
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| Potential chronic health effe | <u>ects</u> |
| Not available. | |
| General | : 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. |
| Teratogenicity | : Suspected of damaging 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 | 1630.2 mg/kg |
| Dermal | 18580.3 mg/kg |
| Inhalation (vapours) | 51.8 mg/l |
| Inhalation (dusts and mists) | 33.84 mg/l |

Section 12. Ecological information

<u>Toxicity</u>

| Product/ingredient name | Result | Species | Exposure |
|----------------------------|--|--|----------------------|
| 2-piperazin-1-ylethylamine | Acute LC50 2190000 to 2460000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| bisphenol A | Acute EC50 1.506 mg/l | Algae - Prorocentrum minimum - Exponential growth phase | 72 hours |
| | Acute EC50 9940 µg/l Fresh water | Daphnia - Daphnia magna - Young | 48 hours |
| | Acute LC50 4.32 mg/l Marine water | Crustaceans - Tigriopus japonicus - Adult | 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 - Exponential growth phase | 4 days |
| | Chronic NOEC 10 µg/I Marine water | Crustaceans - Tigriopus japonicus - Nauplii | 21 days |
| | Chronic NOEC 0.86 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 21 days |
| 4-nonylphenol, branched | Chronic NOEC 0.2 µg/l Fresh water Acute EC50 0.03 mg/l Marine water | Fish - Carassius auratus - Adult Algae - Skeletonema costatum | 90 days 72 hours |
| | Acute EC50 0.027 mg/l Marine water Acute LC50 0.047 mg/l Marine water | Algae - Skeletonema costatum Crustaceans - Americamysis bahia - Juvenile (Fledgling, | 96 hours 48 hours |
| | Acute LC50 17 µg/l Marine water | Hatchling, Weanling) Fish - Pleuronectes americanus | 96 hours |

: 19/03/2018 10/14

AkzoNobel

Date of issue/Date of revision

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Section 12. Ecological information

| Chronic EC10 0.012 mg/l Marine water Chronic NOEC 7.4 µg/l Fresh water | - Larvae Algae - Skeletonema costatum Fish - Pimephales promelas - Embryo | 96 hours 33 days |
|---|--|---------------------|
|---|--|---------------------|

Persistence/degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|---------------------------------|--------|--------------|-----------|
| benzyl alcohol | 0.87 | - | low |
| 2-piperazin-1-ylethylamine | -1.48 | - | low |
| m-phenylenebis (methylamine) | 0.18 | 2.691534803 | low |
| bisphenol A | 3.4 | 43.651583224 | low |
| 4-nonylphenol, branched | 5.4 | 251.18864315 | low |

Mobility in soil

| Soil/water partition | : Not available. |
|----------------------|------------------|
| coefficient (Koc) | |

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

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

Section 14. Transport information

| | China | UN | IMDG | ΙΑΤΑ |
|----------------------------|--|--|---|--|
| UN number | UN1759 | UN1759 | UN1759 | UN1759 |
| UN proper shipping name | CORROSIVE SOLID, N.O.S. (2-piperazin- 1-ylethylamine, m- phenylenebis (methylamine)) | CORROSIVE SOLID, N.O.S. (2-piperazin- 1-ylethylamine, m- phenylenebis (methylamine)) | CORROSIVE SOLID, N.O.S. (2-piperazin- 1-ylethylamine, m- phenylenebis (methylamine)). Marine pollutant (4-nonylphenol, branched) | Corrosive solid, n.o.s. (2-piperazin- 1-ylethylamine, m- phenylenebis (methylamine)) |
| | | | | |

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| Transport hazard | 8 | 8 | 8 | 8 |
|---------------------------|--------------------------------|--------------------------------|--|---|
| class(es) | 8 | | | |
| Packing group | 111 | Ш | Ш | ш |
| Environmental hazards | No. | No. | Yes. | No. |
| Additional information | Special provisions 223, 274 | Special provisions 223, 274 | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A, S-B Special provisions 223, 274 | The environmentally hazardous substance mark may appear if required by other transportation regulations. Passenger and Cargo Aircraft Quantity limitation: 25 kg Packaging instructions: 860 Cargo Aircraft Only Quantity limitation: 100 kg Packaging instructions: 864 Limited Quantities - Passenger Aircraft Quantity limitation: 5 kg Packaging instructions: Y845 Special provisions A3, A803 |

IMDG Code Segregation : Not applicable. group

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.

Section 15. Regulatory information

| Safety, health and environmental regulations specific for the product | : | No known specific national and/or regional regulations applicable to this product (including its ingredients). |
|---|---|--|
| China inventory (IECSC) | : | Not determined. |

List of Goods banned for Importing

None of the components are listed.

List of Goods banned for Exporting

None of the components are listed.

:

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

Section 15. Regulatory information

Ingredient name

Branched 4-nonylphenol

Status Listed

X.International

Section 16. Other information

| <u>History</u> | |
|--------------------------------|--|
| Date of printing | : 19/03/2018 |
| Date of issue/Date of revision | : 19/03/2018 |
| Date of previous issue | : 17/08/2017 |
| Version | : 4 |
| 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 = Internediate 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 |
| Deferences | |

References

: Not available.

Procedure used to derive the classification

| Classification | Justification |
|------------------------------|--------------------|
| Acute Tox. 4, H302 | Calculation method |
| Skin Corr. 1B, H314 | Calculation method |
| Eye Dam. 1, H318 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| Repr. 1B, H360 (Fertility) | Calculation method |
| Repr. 2, H361 (Unborn child) | Calculation method |
| Aquatic Acute 1, H400 | Calculation method |
| Aquatic Chronic 1, H410 | Calculation method |

Indicates information that has changed from previously issued version.

Notice to reader

IMPORTANT NOTE: 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.

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Section 16. Other information

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