

watco® SAFETY DATA SHEET

Roofite Solar Reflective

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

1.1 Product identifier

Product name : Roofite Solar Reflective
Product description : Coating.
Product type : Liquid.
UFI : 2S31-V06H-200M-9V7P

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

| Identified uses | |
|----------------------------|---|
| Industrial Professional | |
| Uses advised against | Reason |
| Consumer use | Product is not intended for consumer use. |

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

Telephone number Ireland : 809 2166
Available 8am to 10pm 7 days per week

Supplier

Telephone number Ireland : +353 19014670
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]

Flam. Liq. 3, H226
STOT SE 3, H336
STOT RE 1, H372
Aquatic Chronic 2, H411

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

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.

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H226 - Flammable liquid and vapour.
H336 - May cause drowsiness or dizziness.
H372 - Causes damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

General :

Not applicable.

Prevention :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P260 - Do not breathe vapour.

Response :

P391 - Collect spillage.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage :

P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal :

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

Hazardous ingredients :

hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%)

Supplemental label elements :

EUH066 - Repeated exposure may cause skin dryness or cracking.

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

Containers to be fitted with child-resistant fastenings :

Not applicable.

Tactile warning of danger :

Not 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.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Ireland

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|--|--|-----------|--|---|---------|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | REACH #: 01-2119458049-33 EC: 919-446-0 | ≥25 - ≤50 | Flam. Liq. 3, H226 STOT SE 3, H336 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066 | - | [1] [2] |
| naphtha (petroleum), hydrotreated heavy | REACH #: 01-2119486659-16 EC: 265-150-3 CAS: 64742-48-9 Index: 649-327-00-6 | ≤10 | Asp. Tox. 1, H304 | - | [1] |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | REACH #: 01-2119463258-33 EC: 919-857-5 | ≤5 | Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066 | - | [1] [2] |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | EC: 202-414-9 CAS: 95-38-5 | ≤1 | Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 STOT RE 2, H373 (digestive system, thymus) (oral) Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above. | ATE [Oral] = 1265 mg/kg STOT RE 2, H373: C ≥ 10% M [Acute] = 10 M [Chronic] = 1 | [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

[2] Substance with a workplace exposure limit

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

: 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. Get medical attention.

SECTION 4: First aid measures

- Inhalation** : 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. Get medical attention. If necessary, call a poison center or physician. 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.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : 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. Get medical attention. If necessary, call a poison center or 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.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

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SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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
sulfur oxides
metal oxide/oxides
- 5.3 Advice for firefighters**
- 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing 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. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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.

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SECTION 6: Accidental release measures

- 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). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidising materials. 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 |
|-----------|---------------------------------|--------------------------|
| P5c E2 | 5000 tonne 200 tonne | 50000 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 Ireland

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SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|--|--|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | NAOSH (Ireland, 8/2007). OELV-8hr: 575 mg/m ³ , (as Stoddard solvent, low boiling naphtha (100 ppm)) 8 hours. |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | NAOSH (Ireland, 8/2007). OELV-8hr: 575 mg/m ³ , (as Stoddard solvent, low boiling naphtha (100 ppm)) 8 hours. |

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 |
|--|------|-----------------------|------------------------|--------------------------------|----------|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | DNEL | Short term Inhalation | 1300 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 1200 mg/m ³ | General population [Consumers] | Systemic |
| | DNEL | Long term Inhalation | 330 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 44 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 71 mg/m ³ | General population [Consumers] | Systemic |
| | DNEL | Long term Oral | 26 mg/kg bw/day | General population [Consumers] | Systemic |
| | DNEL | Long term Dermal | 26 mg/kg bw/day | General population [Consumers] | Systemic |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | DNEL | Long term Dermal | 208 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 871 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Oral | 125 mg/kg bw/day | General population [Consumers] | Systemic |
| | DNEL | Long term Inhalation | 185 mg/m ³ | General population [Consumers] | Systemic |
| | DNEL | Long term Dermal | 125 mg/kg bw/day | General population [Consumers] | Systemic |

PNECs

No PNECs available

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. 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: safety glasses with side-shields. Recommended: 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 (0.5mm)

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.

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. Recommended: (EN 467) Overalls buttoned to the neck and wrist.

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 (Type A) and particulate filter (EN 140)

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SECTION 8: Exposure controls/personal protection

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. [Viscous liquid.]
Colour : Silver. Metallic.
Odour : Solvent-like
Odour threshold : Not available.

Melting point/freezing point : Not available.
Initial boiling point and boiling range : Not available.

| Ingredient name | °C | °F | Method |
|---|------------|--------------|--------|
| naphtha (petroleum), hydrotreated heavy | 155 to 217 | 311 to 422,6 | |

Flammability (solid, gas) : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.
Lower and upper explosion limit : Not available.
Flash point : Closed cup: 40°C (104°F) [Literature]
Auto-ignition temperature : Not relevant due to nature of the product.
Decomposition temperature : Not available.
pH : Not applicable. [Literature]
pH : Justification : Product is non-polar/aprotic.
Viscosity : Dynamic: 1000 mPa·s [ICI Rotothinner]
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 :

| Ingredient name | Vapour Pressure at 20°C | | | Vapour pressure at 50°C | | |
|--|-------------------------|------|--------|-------------------------|-----|--------|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | 2,8 | 0,37 | | 13,5 | 1,8 | |

Evaporation rate : Not available.
Relative density : Not available.
Density : 1,14 to 1,174 g/cm³ [20°C (68°F)] [DIN 53217]
Vapour density : Not available.
Explosive properties : Slightly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.

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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 : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
oxidising materials

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 |
|--|------------------------|---------|------------------------|----------|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | LC50 Inhalation Vapour | Rat | >14 mg/l | 4 hours |
| | LD50 Dermal | Rat | >5000 mg/kg | - |
| | LD50 Oral | Rat | >6500 mg/kg | - |
| naphtha (petroleum), hydrotreated heavy | LC50 Inhalation Vapour | Rat | 8500 mg/m ³ | 4 hours |
| | LD50 Oral | Rat | >6 g/kg | - |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | 1265 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) |
|---|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | 10000 | N/A | N/A | N/A | N/A |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | 1265 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|-------------------------|---------|-------|----------|-------------|
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | Skin - Visible necrosis | Rabbit | - | <4 hours | <14 days |

Conclusion/Summary

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SECTION 11: Toxicological information

- Skin** : Based on available data, the classification criteria are not met.
Eyes : Based on available data, the classification criteria are not met.
Respiratory : May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure.

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|------------|-----------------|
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | skin | Rabbit | Not sensitizing |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | skin | Guinea pig | Not sensitizing |

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met.
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

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

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|------------|-------------------|------------------|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | Category 3 | - | Narcotic effects |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | Category 3 | - | Narcotic effects |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|------------|-------------------|--------------------------|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | Category 1 | - | - |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | Category 2 | oral | digestive system, thymus |

Aspiration hazard

| Product/ingredient name | Result |
|---|--|
| hydrocarbons, C9-C12, n-/ iso-/ cyclo-alkanes, aromatics (2-25%) | ASPIRATION HAZARD - Category 1 |
| naphtha (petroleum), hydrotreated heavy hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |

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

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

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SECTION 11: Toxicological information

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

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

Not available.

- Conclusion/Summary** : Based on available data, the classification criteria are not met.
- General** : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

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

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SECTION 12: Ecological information

| Product/ingredient name | Result | Species | Exposure |
|---|---------------------------|--|----------|
| hydrocarbons, C9-C12, n-/iso-/ cyclo-alkanes, aromatics (2-25%) | Acute EC50 4 to 10 mg/l | Daphnia spec. | 48 hours |
| | Acute IC50 1 to 10 mg/l | Algae | 72 hours |
| | Acute LC50 10 to 30 mg/l | Fish | 96 hours |
| | Acute LC50 10 to 100 mg/l | Micro-organism | 96 hours |
| | Chronic NOEC 0,097 mg/l | Daphnia spec. | 21 days |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | Chronic NOEC 1 to 10 mg/l | Fish | - |
| | Acute NOEC 100 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Chronic NOEC 0,23 mg/l | Daphnia spec. | - |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | Chronic NOEC 0,131 mg/l | Fish | - |
| | Acute EC50 0,2989 mg/l | Aquatic plants - desmodesmus subspicatus | 72 hours |
| | Acute EC50 0,136 mg/l | Daphnia spec. | 48 hours |
| | Acute LC50 0,3 mg/l | Fish | 96 hours |

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

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|-----------|-----------------------------|------|----------|
| hydrocarbons, C9-C12, n-/iso-/ cyclo-alkanes, aromatics (2-25%) | - | 74,7 % - 28 days | - | - |
| | OECD 301B | >80 % - Readily - 28 days | - | - |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | OECD 301F | >80 % - Readily - 28 days | - | - |
| | OECD 301B | 0 % - Not readily - 28 days | - | - |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | | | | |

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 |
|---|-------------------|-------------------|------------------|
| hydrocarbons, C9-C12, n-/iso-/ cyclo-alkanes, aromatics (2-25%) | - | 75%; 28 day(s) | Readily |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | - | 100%; < 28 day(s) | Readily |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | - | - | Not readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|------------|-----------|
| hydrocarbons, C9-C12, n-/iso-/ cyclo-alkanes, aromatics (2-25%) | 3.7 to 6.7 | 10 to 2500 | high |
| naphtha (petroleum), hydrotreated heavy | - | 10 to 2500 | high |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | 5 to 6.5 | - | high |
| 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol | >6 | - | high |

Roofite Solar Reflective

SECTION 12: Ecological information

12.4 Mobility in soil

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

Mobility : Volatile.

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 |
|------------|---|
| 08 01 11* | waste paint and varnish containing organic solvents or other hazardous substances |





Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of 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 | UN1263 | UN1263 | UN1263 | UN1263 |
| 14.2 UN proper shipping name | Paint | Paint | Paint. Marine pollutant | Paint |
| | | | | |

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SECTION 14: Transport information

| | | | | |
|--|---|---|---|---|
| 14.3 Transport hazard class(es) | 3  | 3  | 3  | 3  |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |
| Additional information | Limited quantity : ≤ 5L Viscous liquid exception This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.2.3.1.5.2. Tunnel code (D/E) | Viscous liquid exception This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.2.3.1.5.2. | Emergency schedules : F-E, S-E Viscous liquid exception This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.3.2.5. Remarks : ≤ 5L: Limited Quantity - IMDG 3.4 | The environmentally hazardous substance mark may appear if required by other transportation regulations. Quantity limitation Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344. |

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

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

Other EU regulations

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SECTION 15: Regulatory information

VOC :
VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/i: 500g/l (2010). <= 450g/l VOC.

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Industrial emissions (integrated pollution prevention and control) - Water : Listed

Ozone depleting substances (1005/2009/EC)

Not listed.

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

Not listed.

Persistent Organic Pollutants (850/2004/EC)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

| Category |
|-----------|
| P5c E2 |

Ireland

Biocidal products regulation : Not applicable.

References : Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001)
Safety, Health and Welfare at Work (Carcinogens) Regulations 2001 (S.I. No. 78 of 2001)
Safety, Health and Welfare at Work (General Application) Regulations 2007
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

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

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

CN code : 2715 00 00 00

Inventory list

Roofite Solar Reflective

SECTION 15: Regulatory information

| | |
|--------------------------------|--|
| Australia | : Not determined. |
| Canada | : Not determined. |
| China | : Not determined. |
| Eurasian Economic Union | : Russian Federation inventory: Not determined. |
| Japan | : Japan inventory (CSCL): At least one component is not listed. Japan inventory (ISHL): At least one component is not listed. |
| New Zealand | : Not determined. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : At least one component is not listed. |
| 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 |
|-------------------------|-----------------|
| Flam. Liq. 3, H226 | Expert judgment |
| STOT SE 3, H336 | Expert judgment |
| STOT RE 1, H372 | Expert judgment |
| Aquatic Chronic 2, H411 | Expert judgment |

Full text of abbreviated H statements

Ireland

| | |
|--|--|
| Full text of abbreviated H statements | : H226 Flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H336 May cause drowsiness or dizziness. 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. EUH066 Repeated exposure may cause skin dryness or cracking. |
|--|--|

Roofite Solar Reflective

SECTION 16: Other information

| | | | |
|--|---|-------------------|---|
| Full text of classifications [CLP/GHS] | : | 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 |
| | | Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| | | Eye Dam. 1 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 |
| | | Flam. Liq. 3 | FLAMMABLE LIQUIDS - Category 3 |
| | | Skin Corr. 1C | SKIN CORROSION/IRRITATION - Category 1C |
| | | 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, 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.