SAFETY DATA SHEET

REFLECTIVE ROAD MARKING PAINT

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

1.1. Product identifier

Product name REFLECTIVE ROAD MARKING PAINT

Product number REF/ROAD/GENERAL

Product SUMI code A

Product SUMI version number 1.00

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

Identified uses An air-drying, liquid, solvent-borne paint.
For application by brush or roller. The product is used for marking-out car parks, roads, runways, sports facilities and warehouses.

1.3. Details of the supplier of the safety data sheet

Supplier

Trade Paints UK Ltd
Unit 5 Waterglade Industrial Park
Weston Avenue
West Thurrock
Essex
RM20 3FJ

Tel: 0845 838 2225

Email: sales@paints4trade.com

Contact person Chief Chemist

1.4. Emergency telephone number

Emergency telephone Trade Paints UK Ltd 01708 869396 may be contacted (Office hours only)

National emergency telephone number Members of the public should contact: 111 in UK, 01 809 2166 in Republic of Ireland

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

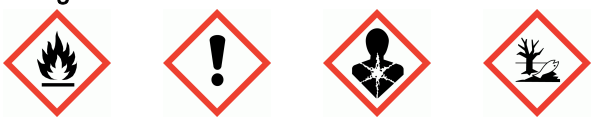
Physical hazards Flam. Liq. 3 - H226

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Lact. - H362 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H362 May cause harm to breast-fed children.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/ attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P260 Do not breathe vapours.

XYLENE, ALKANES, C14-17, CHLORO

Supplementary precautionary statements

P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P261 Avoid breathing vapour/ spray.
P263 Avoid contact during pregnancy and while nursing.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P314 Get medical advice/ attention if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.

REFLECTIVE ROAD MARKING PAINT

Labelling notes For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

XYLENE **10-25%**

CAS number: 1330-20-7 EC number: 215-535-7 REACH registration number: 01-2119488216-32-0000

Classification
Flam. Liq. 3 - H226
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
STOT SE 3 - H335
STOT RE 2 - H373
Asp. Tox. 1 - H304

ETHYLBENZENE **1-5%**

CAS number: 100-41-4 EC number: 202-849-4 REACH registration number: 01-2119489370-35-0000

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H332
STOT RE 2 - H373
Asp. Tox. 1 - H304

ALKANES, C14-17, CHLORO **1-2.5%**

CAS number: 85535-85-9 EC number: 287-477-0 REACH registration number: 01-2119519269-33-0000

M factor (Acute) = 100 M factor (Chronic) = 10

Classification
Lact. - H362
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

Ingredient notes Substances presenting a health or environmental hazard within the meaning of Regulation (EC) No. 1272/2008, assigned a Community workplace exposure limit, classified as PBT/vPvB or included in the Candidate List.

SECTION 4: First aid measures

4.1. Description of first aid measures

REFLECTIVE ROAD MARKING PAINT

General information In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.
If unconscious place in recovery position and seek medical advice.

Inhalation Remove to fresh air, keep patient warm and at rest.
If breathing is irregular or stopped, administer artificial respiration.

Ingestion If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Keep at rest. Do NOT induce vomiting.

Skin contact Remove contaminated clothing.
Wash skin thoroughly with soap and water or use recognised skin cleanser.
Do NOT use solvents or thinners.

Eye contact Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation May cause irritation of the respiratory system. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.

Ingestion Ingestion may cause nausea, diarrhoea and vomiting.

Skin contact Xylene is harmful and irritating to skin. Prolonged or repeated contact with skin may cause soreness, irritation or dry skin due to a defatting action.

Eye contact The liquid splashed in the eyes may cause irritation and reversible damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Causes irritation to the skin. This irritation can result in redness and swelling of the skin.
Repeated contact with the skin may cause it to become dry and cracked.
Causes eye irritation. This irritation can result in redness and swelling of the eyes.
May cause respiratory irritation. If inhalation occurs, signs and symptoms may include sore throat, headache, nausea, coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and may cause transient central nervous system (CNS) depression.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media recommended: alcohol resistant foam, CO2, powders, water spray/mist

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapour is denser than air – flashback may be possible over considerable distances. Fire will produce dense black smoke.
Exposure to decomposition products may cause a health hazard.
Appropriate breathing apparatus may be required.

5.3. Advice for firefighters

Protective actions during firefighting Cool closed containers exposed to fire with water.
Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

REFLECTIVE ROAD MARKING PAINT

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Exclude non-essential personnel. Exclude sources of ignition and ventilate the area.
Avoid breathing vapours.
Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

Environmental precautions Vapours are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Do not allow to enter drains or watercourses.
If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).
Clean preferably with a detergent - avoid use of solvents.

6.4. Reference to other sections

Reference to other sections See Section 12 for additional ecological information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

REFLECTIVE ROAD MARKING PAINT

Usage precautions

The Manual Handling Operations Regulations may apply to the handling of containers of this product. To assist employers, the following method of calculating the weight for any pack size is given. Take the pack size volume in litres and multiply this figure by the specific gravity value given in Section 9. This will give the net weight of the coating in kilograms. Allowance will then have to be made for the immediate packaging to give an approximate gross weight.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded.
Electrical equipment should be protected to the appropriate standard.
Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear anti-static footwear and clothing and floors should be of the conducting type.
Isolate from sources of heat, sparks and open flame.
Non-sparking tools should be used.
Avoid skin and eye contact.
Avoid the inhalation of dust, particulates and spray mist arising from the application of this mixture.
Avoid inhalation of dust from sanding.
Smoking, eating and drinking should be prohibited in application area.
For personal protection see Section 8.
Never use pressure to empty: container is not a pressure vessel.
Always keep in containers of same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or water courses. Wash hands before eating and before leaving the site.
Remove contaminated clothing and protective equipment before entering eating areas.
Information on fire and explosion protection.
Vapours are heavier than air and may spread along floors.
Vapours may form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in accordance with the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). The requirements are given in the HSE Approved Code of Practice and Guidance, Storage of Dangerous Substances: DSEAR.
The principles contained in the HSE guidance note Chemical Warehousing: The Storage of Packaged Dangerous Substances, should be observed when storing this product. Notes on joint storage.
Store away from oxidising agents, from strongly alkaline and strongly acid materials.
Additional information on storage conditions
Observe label precautions.
Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat and direct sunlight.
Keep container tightly closed.
Keep away from sources of ignition.
No smoking.
Prevent unauthorised access.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

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Occupational exposure limits

XYLENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m³
Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³
Sk

ETHYLBENZENE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³
Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³
Sk

WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

Ingredient comments According to EH40 - List of approved workplace exposure limits.

XYLENE (CAS: 1330-20-7)

Biological limit values 650 mmol methyl hippuric acid/mol creatinine in urine. Post shift sampling

DNEL
Industry - Inhalation; Short term systemic effects: 289 mg/m³
Industry - Inhalation; Long term systemic effects: 77 mg/m³
Industry - Inhalation; Short term local effects: 289 mg/m³
Industry - Inhalation; Long term local effects: 77 mg/m³
Industry - Dermal; Short term systemic effects: 174 mg/m³
Consumer - Inhalation; Long term systemic effects: 14.8 mg/m³
Consumer - Inhalation; Short term local effects: 174 mg/m³
Consumer - Inhalation; Short term systemic effects: 174 mg/m³
Consumer - Dermal; Long term systemic effects: 108 mg/kg/day
Consumer - Oral; Long term systemic effects: 1.6 mg/kg/day

PNEC
- Fresh water; 0.327 mg/l
- Marine water; 0.327 mg/l
- Intermittent release; 0.327 mg/l
- Sediment (Freshwater); 12.46 mg/kg
- Sediment (Marinewater); 12.46 mg/kg
- Soil; 2.31 mg/kg
- STP; 6.58 mg/l

ETHYLBENZENE (CAS: 100-41-4)

DNEL
Industry - Inhalation; Long term : 77 mg/m³
Industry - Inhalation; Short term : 293 mg/m³
Industry - Dermal; Long term : 180 mg/kg/day
Consumer - Inhalation; Long term : 15 mg/m³
Consumer - Oral; Long term : 1.6 mg/kg/day

PNEC
- Fresh water; 0.327 mg/l
- Marine water; 0.327 mg/l
- STP; 6.58 mg/l
- Sediment; 12.46 mg/kg
- Soil; 2.31 mg/kg

ALKANES, C14-17, CHLORO (CAS: 85535-85-9)

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DNEL	Industry - Inhalation; Long term systemic effects: 1.6 mg/m³ Industry - Dermal; Long term systemic effects: 11.5 mg/kg bw/day Consumer - Oral; Long term systemic effects: 0.115 mg/kg bw/day Consumer - Inhalation; Long term systemic effects: 0.4 mg/m³ Consumer - Dermal; Long term systemic effects: 5.75 mg/kg bw/day
PNEC	- Fresh water; 1 µg/L - Marine water; 0.2 µg/L - STP; 80 mg/l - Sediment (Freshwater); 13 mg/kg - Sediment (Marinewater); 2.6 mg/kg - Soil; 20 mg/kg - (Oral); 10 mg/kg

8.2. Exposure controls

Protective equipment

Safe use of mixture	This Safety Data Sheet should be read in conjunction with the Safe Use of Mixture (SUMI) report referred to in Section 1. The SUMI provides information collated from exposure scenarios of substances relevant to this product and is provided as part of our obligations under REACH Regulations.
Two-pack product protection	Not applicable
Appropriate engineering controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of solvent vapour below the OEL, suitable respiratory protection must be worn. Dry sanding of the dry paint film may give rise to dust. Wet sanding should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used. See Respiratory Equipment below.
Personal protection	Requirements for personal protection can only be determined by performing a risk assessment on a case-by-case basis prior to use. This risk assessment should be reviewed regularly.
Eye/face protection	Use safety eyewear, manufactured/tested to EN 166, and designed to protect against splash of liquids.
Hand protection	Use chemical resistant gloves classified under "Standard EN374: Protective gloves against chemicals and micro-organisms" made from Viton or PVA barrier material. 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 and 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, they should however not be applied once exposure has occurred.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact. Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre.

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Hygiene measures Provide eyewash station. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection Selection of any respiratory protective equipment should ensure that it is adequate to reduce exposure to protect the worker's health and is suitable for the wearer, task and environment, including consideration of the facial features of the wearer.
* Spraying should be undertaken outdoor or in a vented booth. As a minimum, workers should wear a full face respirator to EN140, fitted with a filter suitable for both particulates and vapours, to EN14387, with an assigned protection factor 20 (e.g. A2/P3). A powered full face respirator with combined filter A2/P3 (APF 40) or compressed air breathing apparatus should be worn if used continuously more than 1 hour. Respirators must be worn by anyone in the booth or room during spraying, gun cleaning (spray-to-dry) and throughout the clearance time, until such time as the particulates and solvent vapour concentration have fallen below the appropriate occupational exposure limits.
* Brush or roller applications should be carried out outdoor or in good ventilation areas with 10 to 15 air changes per hour or more. As a minimum, a half face mask respirator with combined filter A2/P3 (APF 20) should be worn. A powered full face respirator with combined filter A2/P3 (APF 40) should be used, if used for more than 1 hour continuously as half face powered respirator are not recommended.
* For other operations: If workers could be exposed to concentration above the exposure limit or where ventilation is poor, they must use a respirator to EN 140, fitted with a filter suitable for both particulates and vapours, to EN 14387, with an assigned protection factor of at least 10 (e.g. A2/P3).
* Enclosed spaces with little or no ventilation: compressed air breathing apparatus should always be worn.
. Respiratory protection should not be removed until the particulate and solvent vapour concentrations have fallen below the occupational exposure limits or the operator has entered a clean air area.
Fit testing and regular servicing is recommended for all respiratory protective equipment.
The use of HSE website is strongly recommended in selecting the most appropriate RPE
http://www.healthyworkinglives.com/rpe-selector

Environmental exposure controls Refer to the Environmental Protection Act and the Control of Pollution Act. Do not allow to enter drains or water courses.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Viscous liquid.

Colour White and yellow

Odour aromatic hydrocarbons

Odour threshold Not determined.

pH Not applicable. The product is a non-aqueous mixture.

Melting point -35°C

Initial boiling point and range 137 - 143°C @ 760 mm Hg

Flash point 26°C Setaflash closed cup.

Evaporation rate Not determined.

Flammability (solid, gas) Material is not a solid or gas

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Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1 % Upper flammable/explosive limit: 9 %
Vapour pressure	0.67 kPa @ 20°C
Vapour density	Heavier than air
Relative density	1.43 - 1.53 @ 20°C
Solubility(ies)	Immiscible with water. Soluble in the following materials: Aromatic solvents.
Partition coefficient	Not determined. See Section 12 for partition coefficient data on individual components.
Auto-ignition temperature	465 - 525°C
Decomposition Temperature	Not determined.
Viscosity	650 - 750 mPa•s, Rotothinner @ 20°C
Explosive properties	The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.
Oxidising properties	- The product is not expected to be oxidising.

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 400 g/litre. This product contains a maximum VOC content of 26 - 27 g/100 g.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under recommended storage and handling conditions (see section 7).
When exposed to high temperatures may produce hazardous decomposition products.

10.2. Chemical stability

Stability Stable under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Keep away from oxidising agents, strongly alkaline and strongly acid materials

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames, static electricity and other sources of ignition. When exposed to high temperatures may produce hazardous decomposition products.

10.5. Incompatible materials

Materials to avoid Keep away from oxidising agents, strongly alkaline and strongly acid materials

10.6. Hazardous decomposition products

Hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - dermal

ATE dermal (mg/kg) 4,754.7

Acute toxicity - inhalation

ATE inhalation (gases ppm) 24,306.02

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ATE inhalation (vapours mg/l)	90.19
ATE inhalation (dusts/mists mg/l)	23.27

Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation	Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Contains a substance which can cause harm to breastfed children. Avoid contact while nursing.

Specific target organ toxicity - single exposure

STOT - single exposure	May cause respiratory irritation. Vapours may cause drowsiness and dizziness.
Target organs	Central nervous system Liver Kidneys

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organs	Liver Kidneys

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	There are no data available on the mixture itself. The mixture has been assessed following the method according to the "Classification, labelling and packaging of substances and mixtures" EC 1272/2008 and ensuing amendments and classified for toxicological hazards accordingly. See sections 2 and 3 for details.
Inhalation	Exposure to component solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.
Ingestion	Ingestion may cause nausea, diarrhoea and vomiting.
Skin contact	Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.
Eye contact	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain. The liquid splashed in the eyes may cause irritation and reversible damage.

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Acute and chronic health hazards	Contains a substance/a group of substances which may cause harm to breast-fed children. Avoid contact while nursing.
Route of exposure	This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.
Medical symptoms	Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

Toxicological information on ingredients.

XYLENE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,523.0
Species	Rat
ATE oral (mg/kg)	3,523.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	4,200.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} gases ppmV)	6,700.0
Species	Rat
Acute toxicity inhalation (LC_{50} vapours mg/l)	27.6
Species	Rat
Acute toxicity inhalation (LC_{50} dust/mist mg/l)	10.0
Species	Rat
ATE inhalation (gases ppm)	6,700.0
ATE inhalation (vapours mg/l)	27.6
ATE inhalation (dusts/mists mg/l)	10.0

Skin corrosion/irritation

Animal data	Dose: 24 and, 72 hours, Rabbit Irritating to skin.

Serious eye damage/irritation

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Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation	Not sensitising

Skin sensitisation

Skin sensitisation	- Mouse: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Chromosome aberration: Negative. Ames test: Negative. Gene mutation: Negative.
Genotoxicity - in vivo	Dominant lethal assay, intraperitoneal: Negative.

Carcinogenicity

Carcinogenicity	NOAEL 500 mg/kg, Oral, Rat, male/female Did not show carcinogenic effects in animal experiments.
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility	One-generation study - NOAEL >=500 ppm, Inhalation, Rat, male/female P Two-generation study - NOAEL 500 ppm, Inhalation, Rat, male/female P Two-generation study - NOAEL >500 ppm, Inhalation, male/female F1 Two-generation study - NOAEL >500 ppm, Inhalation, Rat, male/female F2 This substance has no evidence of toxicity to reproduction.
Reproductive toxicity - development	Maternal toxicity: - NOAEL: 500 ppm, Inhalation, Rat, female

Specific target organ toxicity - single exposure

STOT - single exposure	May cause respiratory irritation.
Target organs	Central nervous system Liver Kidneys

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 150 mg/kg, (3 months), Oral, Rat NOAEL >3.5 mg/l, (3 months), Inhalation, Rat, Dog
Target organs	Kidneys Liver

Aspiration hazard

Aspiration hazard	Aspiration hazard - Category 1 If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours)

ETHYLBENZENE

Skin corrosion/irritation

Animal data	Dose: 15 mg, 24 hours , Rabbit Slightly irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Severe eye irritant (500 mg dose)

Aspiration hazard

Aspiration hazard	Aspiration hazard - Category 1 If swallowed the product may aspirate into the lungs

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ALKANES, C14-17, CHLORO

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	4,000.1
Species	Rat
ATE oral (mg/kg)	4,000.1
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	4,000.1
Species	Rat
Notes (dermal LD_{50})	No data available for C14 -C17 chlorinated paraffin. Data applies to C12 chlorinated paraffin
ATE dermal (mg/kg)	4,000.1
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	48.172
Species	Rat
Notes (inhalation LC_{50})	No data available for C14 -C17 chlorinated paraffin. Data applies to C12 chlorinated paraffin No deaths reported in study.
ATE inhalation (vapours mg/l)	48.172
Skin corrosion/irritation	
Animal data	Slightly irritating. OECD Test Guideline 404
Serious eye damage/irritation	
Serious eye damage/irritation	Slightly irritating. OECD Test Guideline 405
Skin sensitisation	
Skin sensitisation	Not sensitising.
Germ cell mutagenicity	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.
Genotoxicity - in vivo	Micronucleus test: Negative.
Carcinogenicity	
Carcinogenicity	Not determined.
Reproductive toxicity	
Reproductive toxicity - fertility	Fertility: - 400 mg/kg/day, , This substance has no evidence of toxicity to reproduction. up to the above dose.
Reproductive toxicity - development	Developmental toxicity: - : 5000 mg/kg/day, , Rat Developmental toxicity: - : 100 mg/kg, , Rabbit This substance has no evidence of toxicity to reproduction. up to the above dose. Mortality due to internal haemorrhaging has been seen in newborn rats, reared by dams fed on high doses of a similar chlorinated paraffin.

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Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard No aspiration hazard expected.

SECTION 12: Ecological Information

Ecotoxicity The mixture has been assessed following the method according to the "Classification, labelling and packaging of substances and mixtures" EC1272/2008 and ensuing amendments and is classified for ecotoxicological properties accordingly. See sections 2 and 3 for details. Do not allow to enter drains or water courses.

12.1. Toxicity

Toxicity There is no toxicity data for the mixture itself.

Ecological information on ingredients.

XYLENE

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 2.6 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 3.82 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC_{50}, 72 hours: 2.2 mg/l, Freshwater algae

Acute toxicity - microorganisms EC_{50}, 24 hours: 96 mg/l, Bacteria

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 48 hours: 6.8 mg/l, Daphnia magna

ETHYLBENZENE

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 4.2 mg/l,

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 1.8 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 96 hours: 3.6 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 7 days: 1 mg/l, Daphnia magna

ALKANES, C14-17, CHLORO

Acute aquatic toxicity

$LE(C)_{50}$ $0.001 < L(E)C50 \leq 0.01$

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M factor (Acute)	100
Acute toxicity - fish	LC_{50}, 96 hours: > 5000 mg/l, Alburnus alburnus (brackish water) NOEC, 14 days: 125 µg/L, Alburnus alburnus (brackish water)
Acute toxicity - aquatic invertebrates	EC_{50}, : 5.9 µg/L, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 96 hours: > 3.2 mg/l, Algae
Acute toxicity - terrestrial	NOEC, : 50 mg/l, Eisenia Fetida (Earthworm)
Chronic aquatic toxicity	
M factor (Chronic)	10
Chronic toxicity - aquatic invertebrates	NOEC, 14 days: 0.01 mg/l, Daphnia magna LOEC, 21 days: 0.018 mg/l, Daphnia magna NOEC, 60 days: 0.22 mg/l, Crustacean (Myrtilus edulis)

12.2. Persistence and degradability

Persistence and degradability There is no data for the mixture itself.

Ecological information on ingredients.

XYLENE

Persistence and degradability	Readily biodegradable
Biodegradation	- Degradation % >60: 28 days Readily biodegradable

ETHYLBENZENE

Persistence and degradability	The product is readily biodegradable
Biodegradation	- Degradation % 66: 10 days

ALKANES, C14-17, CHLORO

Biodegradation	Water - Degradation (%) 51%: 36 hours for C14.5 and c15.4 (average C chain length) with 50% chlorination Water - DT_{50} : 58 days For C16 chlorinated paraffins containing 58% C12 chlorparaffin

12.3. Bioaccumulative potential

Bioaccumulative potential There is no data for the mixture itself.

Partition coefficient Not determined. See Section 12 for partition coefficient data on individual components.

Ecological information on ingredients.

XYLENE

Bioaccumulative potential	Not expected to bioaccumulate. BCF: 25.9,
Partition coefficient	log Pow: 3.15

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ETHYLBENZENE

Bioaccumulative potential Potential for bioaccumulation is low.

Partition coefficient log Pow: 3.1 @ 20°C

ALKANES, C14-17, CHLORO

Bioaccumulative potential Potential for bioaccumulation is low. BCF: < 2000, BMF: < 1,

12.4. Mobility in soil

Mobility There is no data on the mobility of the mixture itself.

Ecological information on ingredients.

XYLENE

Mobility The product contains volatile solvents which are immiscible with water and will evaporate into the atmosphere. In soil the product has only slight mobility and will partially evaporate

ETHYLBENZENE

Mobility The product contains volatile solvents which are immiscible with water and will evaporate into the atmosphere. In soil the product has only slight mobility and will partially evaporate

ALKANES, C14-17, CHLORO

Mobility Product has low mobility in soil. (predicted)

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not allow to enter drains or water courses.

Disposal methods Waste and emptied containers are controlled wastes and should be disposed of in accordance with The Environment Protection (Duty of Care) Regulations" (in England, Scotland, Wales) or The Controlled Waste (Duty of Care) Regulations (in Northern Ireland).

Waste class The European List of Wastes classification of this product, when disposed of as waste is:
Waste Code: Name of Waste (according to Decision 2000/532/EC):
08 01 11 Waste paint and varnish containing organic solvents or other dangerous substances
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information contact your local waste authority. Using information provided in this safety data sheet, advice should be obtained from the local waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of empty containers contaminated by the product in accordance with local or national legal provisions.

Additional information

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SECTION 14: Transport information

General This section contains basic classification information; specific information is not provided for all transport modes if not relevant for the product as supplied. Relevant modal regulations should be consulted if the product is transported onwards.

14.1. UN number

UN 1263

14.2. UN proper shipping name

PAINT (C14 - C17 Chloroalkanes)

14.3. Transport hazard class(es)

3

ADR/RID classification code 3

ADR/RID label 3

Transport labels

14.4. Packing group

PG III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

Transport within the 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 accident or spillage.

EmS F - E, S - E

ADR transport category 3

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

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National regulations

The information in this Safety Data Sheet is required pursuant to the provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations which apply to the use of this product at work.
The Control of Substances Hazardous to Health Regulations 2002(SI 2002:1689) and amendments.
Control of Pollution Act 1974.
The Environmental Protection (Duty of Care) Regulations 1992 and amendments
The Dangerous Substances & Explosive Atmospheres Regulations 2002(SI 2002:2776).
The Manual Handling Operations Regulations 1992, (SI 1992:2793)and amendment, The Stationery Office.
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Waste Framework Directive (Directive 2008/98/EC on waste) and amendments
Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

Guidance

COSHH Essentials: easy steps to control chemicals, on-line guidance at http://www.hse.gov.uk/coshh/essentials/index.htm
Chemical Warehousing: Storage of Flammable Liquids in Containers, HSG51, HSE
Storage: Packaged Dangerous Substances HSG71, HSE.
Working with solvents: A guide to safe working practices, INDG273(rev1), HSE
Workplace Exposure Limits EH40.
Best Practice Guideline 5 "Safe Use of Gloves (June 2010) published by the European Solvents Industry Group (ESIG) available at www.esig.org/en/library/publications/best-practice-guides
Control of Substances Hazardous to Health (Fifth Edition) (HSE Books L5)
Dangerous Substances and Explosive Atmospheres Regulations 2002, (HSE Books L138)
Safe use and handling of flammable liquids HSG140 (Second edition), HSE
A step by step guide to COSHH assessment HSG97, HSE
BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents

Paints Directive 2004/42/EC

VOC Content: EU limit for this product (Cat A/i) is: 500 g/litre.This product contains maximum 400 g/litre VOC.

15.2. Chemical safety assessment

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate.
BCF: Bioconcentration Factor.
CAS: Chemical Abstracts Service.
CLP: Classification, Labelling, Packaging Regulation; Regulation (EC) No. 1272/2008
CMR: Carcinogen, Mutagen or Reproductive Toxicant
COSHH: Control of Substances Hazardous to Health Regulations
DNEL: Derived No Effect Level.
ECHA: European Chemicals Agency
EC No.: EINECS (European Inventory of Existing Commercial Substances) and ELINCS (European List of Notified Substances) Number
EC_{50}: 50% of maximal Effective Concentration.
EmS: Emergency Schedule (IMDG)
GHS: Globally Harmonized System.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
LOEC: Lowest Observed Effect Concentration.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
(STOT) RE: Repeated Exposure
(STOT) SE: Single Exposure
STP: Sewage Treatment Plant
SVHC: Substances of Very High Concern.
VOC: Volatile Organic Compound
vPvB: Very Persistent and Very Bioaccumulative.

General information

The product should not be used for purposes other than those shown in Section 1.

Key literature references and sources for data

Raw material supplier's Safety Data Sheets. Reference to ECHA Registered Substance dossiers.

Classification procedures according to Regulation (EC) 1272/2008

Unless indicated elsewhere in this safety data sheet, the classification of this mixture has been determined using a combination of test data, bridging principles and calculation.

Legal obligations

Revision comments

CLP 1.02 Safe use of mixture information added. Amended information in Section 8.

Issued by

Chief Chemist

Revision date

08/06/2017

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Revision	CLP 1.02
Supersedes date	31/03/2016
SDS number	10542
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H362 May cause harm to breast-fed children. H373 May cause damage to organs (Hearing 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.

The information of this SDS is based on the present state of our knowledge and on 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 product should not to be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instructions.
As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.
The information in this safety data sheet does not constitute the user's own assessment of workplace risks as required by other health and safety legislation.