

SAFETY DATA SHEET



ENVIROGRAF®

HS092- QVFR-UVR-08-2018

Product Number: 92 QVFR-UVR Clear Top Coat MATT, SATIN & GLOSS

Description:

A solvent based product to apply over QVFR Clear – no need for an undercoat. Available in Matt, Satin or Gloss finishes. It contains a UV filter for protection against blistering, cracking and peeling. For internal use.

This product comprises of the following materials and therefore is supported by Health & Safety Data Sheets:

- (Appendix 77a) QVFR-UVR Gloss
- (Appendix 77b) QVFR-UVR Matt
- (Appendix 77c) QVFR-UVR Satin

*The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risk as required by other health and safety legislation.

HEALTH & SAFETY INFORMATION SHEET

APPENDIX 77a

QVFR-UVR CLEAR GLOSS

Issue 3 7/08/2018

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

1.1 Product Identifier

PRODUCT NAME: QVFR-UVR CLEAR GLOSS

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

PRODUCT USE: Consumer applications, Professional applications

USE OF THE SUBSTANCE/MIXTURE: Coating

1.3 Details of the supplier of the safety data sheet

MANUFACTURER/SUPPLIER: Envirograf

ADDRESS: Envirograf House, Barrestone, Dover, Kent, CT15 7JG

TELEPHONE/FAX/EMAIL: 01304 842555 01304 842666 sales@envirograf.com

1.4 Emergency telephone number

SUPPLIER TELEPHONE NUMBER: 01304 842555 (Office hours only)

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

Skin Sens. 1, H317

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

2.2 Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements: Flammable liquid and vapour
May cause an allergic skin reaction

Precautionary statements

General: Keep out of reach of children. If medical advice is needed, have product container or label at hand

Prevention: Wear Protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapour

Response: IF ON SKIN: Wash with plenty of soap & water. If skin irritation or rash occurs: Get medical attention

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents & container in accordance with all local, regional, national & international regulations

Hazardous ingredients: 2-butanone oxime, 4,5-dichloro-2-octyl-2H-isothiazol-3-one

Supplemental label elements: 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

Other hazards which do not result in classification: Prolonged or repeated contact may dry skin and cause irritation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures: Mixture

Product/ingredient Name	Identifiers	% by weight	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119463258-33 EC: 919-857-5 CAS: 64742-48-9	≥10 -<20	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066	[1]
Naphtha (petroleum), hydrotreated heavy	EC: 265-150-3 CAS: 64742-48-9 Index:649-327-00-6	≥10 -<20	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1]
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119457273-39 EC: 918-481-9 CAS: 64742-48-9	≥10 -≤5.0	Asp. Tox. 1, H304 EUH066	[1]
2-ethylhexanoic acid, zirconium salt	REACH#: 01-2119979088-21 EC: 245-018-1 CAS: 22464-99-9	≤1.0	Repr. 2, H361fd (Fertility and unborn child) (oral)	[1] [2]
2-butanone oxime	REACH#: 01-2119539477-28 EC: 202-496-6 CAS: 96-29-7 Index: 616-014-00-0	<1.0	Acute Tox. 4, H312 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351	[1]
4,5-2-octyl-2H-isothiazol-3-one	EC: 264-843-8 CAS: 64359-81-5	<0.10	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

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

SUB codes represent substance without registered CAS numbers.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: Remove contact lenses. Irrigate copiously with clean, fresh water holding the eyelids apart for at least 10 minutes. Seek immediate medical advice.

INHALATION: Remove to fresh air, keep patient warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or a recognized skin cleaner. DO NOT USE SOLVENT OR THINNERS.

Ingestion: If accidentally swallowed seek medical advice immediately and show the container or label. Keep person warm and at rest. DO NOT induce vomiting.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: Defatting to the skin. May cause dryness and irritation. May cause an allergic skin reaction

Ingestion: No known significant effects or critical hazards

Over-exposure signs/symptoms

Eye contact: No specific data

Inhalation: No specific data

Skin contact: Adverse symptoms may include irritation, redness, 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.

5. FIRE-FIGHTING 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

Hazards from the substance or mixture: Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard

Hazardous combustion products: No specific data

5.3 Advice for firefighters

Special precautions for firefighters: 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 firefighters: Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents

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 area. 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)

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.

6.4 Reference to other Sections : See Section 1 for emergency contact information
See Section 8 for information appropriate personal protective equipment
See Section 13 for additional waste treatment information

7. HANDLING AND STORAGE

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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 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. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

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 : Storage temperature 5 to 25°C (41 to 77°F). 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. Eliminate all ignition sources. Separate from oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Not available

Industrial sector specific solutions : Not available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

8.1 Control parameters

Occupational exposure limits

Product / ingredient name	Exposure limit values
2-ethylhexanoic acid, zirconium salt	EH40/2005 WELs (United Kingdom (UK). 12/2011). STEL: 10 mg/m ³ , (as Zr) 15 minutes TWA: 5 mg/m ³ , (as Zr) 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

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hydrocarbons, C9-C11 n-alkalines, isoalkanes cyclics, <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 Dermal	125 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term inhalation	185 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	125 mg/kg bw/day	Consumers	Systemic
2-butanone oxime	DNEL	Long term Inhalation	9 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	3.33 mg/m ³	Workers	Local
	DNEL	Long term Dermal	1.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	2.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.7 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation	2 mg/m ³	Consumers	Local
	DNEL	Long term Dermal	0.78 mg/kg bw/day	Consumers	Systemic
DNEL	Short term Dermal	1.5 mg/kg bw/day	Consumers	Systemic	

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
2-butanone oxime	-	Fresh water	0.256 mg/l	Assessment Factors
	-	Sewage treatment plant	177mg/l	Assessment Factors

8.2 Exposure controls

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. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Chemical splash goggles

Skin protection

Hand Protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN374) is recommended.

Gloves

: Butyl rubber

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.

Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Filter type: organic vapour (Type A) and particulate filter P3
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid
Colour	: Clear
Odour	: Hydrocarbon [slight]
Odour threshold	: Not available
pH	: Insoluble in water
Melting/freezing point	: May start to solidify at the following temperature: -54°C (-65.2°F). This is based on data for the following ingredient: Hydrocarbons C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics. Weighted average: -71.46°C (-96.6°F)
Initial boiling point and boiling range	: 145°C
Flash point	: Closed cup: 39°C
Evaporation rate	: Highest known value: 0.14 (Hydrocarbons C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics). Weighted average: 0.13 compared with butyl acetate
Material supports combustion	: Yes
Flammability (solid, gas)	: Liquid
Upper/lower flammability or explosive limits	: Greatest known value: Lower 0.6% Upper 7% (Hydrocarbons C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics)
Vapour pressure	: Highest known value: 0.3 kPa (2.3mm Hg) (at 20°C) (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics) Weighted Average: 0.24 kPa (1.8 mm Hg) (at 20°C)
Vapour density	: Highest known value: 4.5 (Air = 1) (Distillates(petroleum) hydrotreated light). Weighted average: 4.5 (Air = 1)
Relative density	: 0.91
Solubility(ies)	: Insoluble in the following materials: cold water
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Lowest known value: >230°C (>446°F) (Hydrocarbons C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics)
Decomposition temperature	: Stable under recommended storage and handling conditions (see Section 7)
Viscosity	: Kinematic (room temperature): >4cm ² /s Kinematic (40°C): >2.1cm ² /s
Viscosity	: 60 -100 s (ISO 6mm)
Explosive properties	: Product does not present an explosion hazard
Oxidising properties	: Product does not present an explosion hazard

9.2 Other information

No additional information.

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 reaction will not occur

10.4 Conditions to avoid : When exposed to high temperature may produce hazardous decomposition products. Refer to protective measures listed in Sections 7 & 8

10.5 Incompatible materials: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics Naphtha (petroleum), Hydrotreated heavy:	LD50 Oral	Rat	>6 g/kg	-
	LC50 Inhalation Vapour	Rat	8500 mg/m ³	4 hours
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% Aromatics	LD50 Oral	Rat	>6 g/kg	4 hours
	LC50 Inhalation Vapour	Rat	8500 mg/m ³	-
2-ethylhexanoic acid, zirconium salt	LD50 Oral	Rat	>6 g/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
2-butanone oxime	LD50 Oral	Rat	>5 g/kg	-
	LD50 Oral	Rat	930 mg/kg	-
4.5-dichloro-2-octyl-2H-isothiazol-3-one	LC50 Inhalation Dusts and mists	Rat	0.22 mg/l	4 hours
	LD 50 Dermal	Rabbit	3.9g/kg	-
	LD50 Oral	Rat	2.2g/kg	-

Conclusion/Summary : Not available

Acute toxicity estimates

Route	ATE value
Not available	

Irritation/Corrosion

Conclusion/Summary : Not available

Sensitisation

Conclusion/Summary : Not available

Mutagenicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	Category 3	Not applicable	Narcotic effects
4.5-dichloro-2-octyl-2H-isothiazol-3-one	Category 3	Not applicable	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Product / ingredients name	Result
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	ASPIRATION HAZARD – Category 1
Naphtha (petroleum), Hydrotreated heavy: Nota(s) P	ASPIRATION HAZARD – Category 1
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	ASPIRATION HAZARD – Category 1

Information on the likely routes of exposure – Not available

Potential acute health effects

Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin contact : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction
Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical chemical and toxicological characteristics

Inhalation : No specific data
Ingestion : No specific data
Skin contact : Adverse symptoms may include the following:
Irritation
Dryness
Cracking
Eye contact : No specific data

Delayed and immediate effects and also 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 : Not available

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. 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 : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No. 1272/2008 and is classified for toxicological hazards accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated Occupational Exposure Limit may result in adverse health effects such as irritation of the mucous membrane and respiratory system and adverse effects on the kidneys, liver and central nervous system. 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. 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.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

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.

Contains 2-butanone oxime, 4,5-dichloro-2-octyl-2H-isothiazol-3-one. May produce an allergic reaction.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Conclusion/Summary: Not available.

12.2 Persistence and degradability:

Conclusion/Summary : Not available

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics		10 to 2500	High
2-butanone oxime	0.63	5.01	Low

12.4 Mobility in soil

Soil/water partition : Not available

Coefficient (Koc)

Mobility : Not available

12.5 Results of PBT and vPvB assessment

PBT : Not applicable

vPvB : Not applicable

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

13. DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

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 protections 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 dangerous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Container	15 01 04 metallic packaging

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.

14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	III	III	III
14.5 environmental hazards	No	No	No	No

Marine pollutant substances	Not applicable	Not applicable	Not applicable	Not applicable
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Additional information

ADR/RID : This class 3 material can be considered non-hazardous in packagings up to 450L. Exempted according to 2.2.3.1.5 (Viscous substance exemption)

Tunnel code :(D/E)

ADN : This class 3 material can be considered non-hazardous in packagings up to 450L. Exempted according to 2.2.3.1.5 (Viscous substance exemption)

IMDG : This class 3 material can be considered non-hazardous in packagings up to 30L. Exempted according to 2.2.3.1.5 (Viscous substance exemption)

IATA : None identified

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 Annex II of Marpol and the IBC Code: Not applicable

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 : Not applicable

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Other EU regulations

VOC for Ready-for-Use Mixture : IIA/e. Interior/exterior trim varnishes and woodstains, including opaque woodstains. EU Limit values: 400g/l (2010)
This product contains a maximum of 400g/l VOC

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
2-butanone oxime	Carc. 2, H351	-	-	-
2-ethylhexanoic acid, Zirconium salt	-	-	Repr.2, H361d (Unborn child) (Oral)	Repr 2, H361f (Fertility) (Oral)

Seveso Directive

This product is controlled under the Seveso Directive

Danger criteria

Category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b
6: Flammable (R10)

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

16. OTHER INFORMATION

Abbreviations and acronyms

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

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

Classification	Justification
Flam. Liq. 3 H226	On basis of test data
Skin Sens. 1, H317	Calculation method

Full text of abbreviated H.

Statements

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H330	Fatal if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361 fd (Oral)	Suspected of damaging fertility if swallowed. Suspected of damaging the unborn child if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications

[CLP/GHS]

Acute Tox. 2, H330	ACUTE TOXICITY (inhalation) – Category 2
Acute Tox 4, H302	ACUTE TOXICITY (oral) – Category 4
Acute Tox. 4, H312	ACUTE TOXICITY (dermal) – Category 4
Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD – Category 1
Aquatic Chronic 1, H410	LONG TERM AQUATIC HAZARD – Category 1
Asp. Tox. 1, H304	ASPIRATION HAZARD – Category 1
Carc. 2 H351	CARCINOGENICITY – Category 2
EUH066	Repeated exposure may cause skin dryness and cracking
Eye Dam. 1 H318	SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS – Category 3
Repr. 2, H361fd (oral)	TOXIC TO REPRODUCTION (Fertility and Unborn child) (Oral) – Category 2
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION – Category 1B
Skin Sens. 1, H317	SKIN SENSITIZATION – Category 1
Skin Sens. 1A, H317	SKIN SENSITIZATION – Category 1A
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE (Respiratory tract irritation) – Category 3
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic Effects) – Category 3

History

Date of Issue/date of revision 7/8/18

Date of previous issue January 2015

Prepared by – Intumescent Systems Ltd

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

HEALTH & SAFETY INFORMATION SHEET
APPENDIX 77b
QVFR-UVR CLEAR MATT

Issue 3 8/08/2018

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

1.1 Product Identifier

PRODUCT NAME: QVFR-UVR Clear Matt

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

PRODUCT USE: Consumer applications, Professional applications

USE OF THE SUBSTANCE/MIXTURE: Coating

1.3 Details of the supplier of the safety data sheet

MANUFACTURER/SUPPLIER: Envirograf

ADDRESS: Envirograf House, Barfrestone, Dover, Kent, CT15 7JG

TELEPHONE/FAX/EMAIL: 01304 842555 01304 842666 sales@envirograf.com

1.4 Emergency telephone number

SUPPLIER TELEPHONE NUMBER: 01304 842555 (Office hours only)

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

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

2.2 Label elements

Hazard pictograms:



Signal Word: Warning

Hazard Statements: Flammable liquid and vapour
May cause drowsiness or dizziness

Precautionary Statements

General: Keep out of reach of children. If medical advice is needed, have product container or label at hand

Prevention: Wear Protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapour

Response: If Inhaled: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin with water.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents & container in accordance with all local, regional, national & international regulations.

P102, P101, P280, P210, P261, P304 + P340, P303 + P361 + P353. P403, P235, P501

HAZARDOUS INGREDIENTS: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Supplemental Label Elements: Contains octhlinone (ISO) and 2-butanone oxime. May produce an allergic reaction. Repeated exposure may cause skin dryness or cracking.

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

Other hazards which do not result in classification: Prolonged or repeated contact may dry skin and cause irritation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures: Mixture

Product/ingredient Name	Identifiers	% by weight	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Naphtha (petroleum), hydrotreated heavy	EC: 265-150-3 CAS: 64742-48-9 Index:649-327-00-6	≥1.0 -<5.0	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1]
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119463258-33 EC: 919-857-5 CAS: 64742-48-9	≥25 -<50	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066	[1]
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119457273-39 EC: 918-481-9 CAS: 64742-48-9	≥5.0 -≤10	Asp. Tox. 1, H304 EUH066	[1]
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119457736-27 EC: 927-632-8 CAS: 64742-47-8	≥1.0 -≤5.0	Asp. Tox. 1, H304 EUH066	[1]
2-butanone oxime	REACH#: 01-2119539477-28 EC: 202-496-6 CAS: 96-29-7 Index: 616-014-00-0	<1.0	Acute Tox. 4, H312 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351	[1]
2-ethylhexanoic acid, zirconium salt	REACH#: 01-2119979088-21 EC: 245-018-1 CAS: 22464-99-9	≤1.0	Repr. 2, H361fd (Fertility and unborn child) (oral) See Section 16 for the full text of the H statements declared above.	[1] [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, are PBTs or vPvBs or have been assigned workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

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

SUB codes represent substance without registered CAS numbers.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Remove contact lenses. Irrigate copiously with clean, fresh water holding the eyelids apart for at least 10 minutes. Seek immediate medical advice.

Inhalation: Remove to fresh air, keep patient warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel

Skin Contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or a recognized skin cleaner. DO NOT USE SOLVENT OR THINNERS.

Ingestion: If accidentally swallowed seek medical advice immediately and show the container or label. Keep person warm and at rest. DO NOT induce vomiting.

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

Potential Acute Health Effects

Eye Contact: No known significant effects or critical hazards

Inhalation: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin Contact: Defatting to the skin. May cause dryness and irritation.

Ingestion: Can cause central nervous system (CNS) depression.

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 irritation, redness, 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.

5. FIRE-FIGHTING 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

Hazards From The Substance Or Mixture: Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard

Hazardous Combustion Products: Decomposition products may include the following materials: metal oxide/oxides.

5.3 Advice for firefighters

Special Precautions For Firefighters: 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 Firefighters: Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents

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 area. 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)

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.

6.4 Reference to other Sections

: See Section 1 for emergency contact information
See Section 8 for information appropriate personal protective equipment
See Section 13 for additional waste treatment information

7. HANDLING AND STORAGE

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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 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. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

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 : Storage temperature 5 to 25°C (41 to 77°F). 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. Eliminate all ignition sources. Separate from oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s) See Section 1.2 for identified uses.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

8.1 Control parameters

Occupational exposure limits

Product / ingredient name	Exposure limit values
2-ethylhexanoic acid, zirconium salt	EH40/2005 WELs (United Kingdom (UK). 12/2011). STEL: 10 mg/m ³ , (as Zr) 15 minutes TWA: 5 mg/m ³ , (as Zr) 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

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hydrocarbons, C9-C11 n-alkalines, isoalkanes cyclics, <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 Dermal	125 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term inhalation	185 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	125 mg/kg bw/day	Consumers	Systemic
2-butanone oxime	DNEL	Long term Inhalation	9 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	3.33 mg/m ³	Workers	Local
	DNEL	Long term Dermal	1.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	2.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.7 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation	2 mg/m ³	Consumers	Local
	DNEL	Long term Dermal	0.78 mg/kg bw/day	Consumers	Systemic
DNEL	Short term Dermal	1.5 mg/kg bw/day	Consumers	Systemic	

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
2-butanone oxime	-	Fresh water	0.256 mg/l	Assessment Factors
	-	Sewage treatment plant	177mg/l	Assessment Factors

8.2 Exposure controls

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. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Chemical splash goggles. Use eye protection according to EN166

Skin protection

Hand Protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN374) is recommended.

Gloves

: Nitrile rubber

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.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Filter type: organic vapour (Type A) and particulate filter P3

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid
Colour	: Clear
Odour	: Hydrocarbon [slight]
Odour threshold	: Not available
pH	: Insoluble in water
Melting/freezing point	: May start to solidify at the following temperature: -15°C (5°F). This is based on data for the following ingredient: Hydrocarbons C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics. Weighted average: -60.52°C (-76.9°F)
Initial boiling point and boiling range	: 145°C
Flash point	: Closed cup: 43°C
Evaporation rate	: Highest known value: 0.04 (Hydrocarbons C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics). Weighted average: 0.03 compared with butyl acetate
Material supports combustion	: Yes
Flammability (solid, gas)	: Liquid
Upper/lower flammability or explosive limits	: Greatest known range: Lower 0.6% Upper 7% (Hydrocarbons C10-C13 n-alkanes, isoalkanes, cyclics, <2% aromatics)
Vapour pressure	: Highest known value: 0.1 to 0.3 kPa (0.8 to 2.3mm Hg) (at 20°C) (Naptha (petroleum), hydrotreated heavy). Weighted Average: 0.16kPa (1.2mm Hg) (at 20°C)
Vapour density	: Highest known value: 4.5 (Air = 1) 0.04 (Hydrocarbons C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics).
Relative density	: 0.93
Solubility(ies)	: Insoluble in the following materials: cold water
Partition coefficient: n-octanol/ water	: Not applicable
Auto-ignition temperature	: Lowest known value: >230°C (>446°F) (Hydrocarbons C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics)
Decomposition temperature	: Stable under recommended storage and handling conditions (see Section 7)
Viscosity	: Kinematic (40°C): >2.1cm ² /s
Viscosity	: 30 -40 s (ISO 6mm)
Explosive properties	: Product does not present an explosion hazard
Oxidising properties	: Product does not present an explosion hazard

9.2 Other information

No additional information.

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 reaction will not occur
10.4 Conditions to avoid	: When exposed to high temperature may produce hazardous decomposition products. Refer to protective measures listed in Sections 7 & 8
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: metal oxide/oxides

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), Hydrotreated heavy: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% Aromatics 2-butanone oxime 2-ethylhexanoic acid, zirconium salt	LD50 Oral	Rat	>6 g/kg	-
	LC50 Dermal	Rat	>5000mg/kg	-
	LD50 Oral	Rat	>5000mg/kg	-
	LC50 Oral	Rat	>6g/kg	-
	LD50 Oral	Rat	>930mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-

Conclusion/Summary : There are no data available on the mixture itself

Acute toxicity estimates

Route	ATE value
Not available	

Irritation/Corrosion

Conclusion/Summary

Skin : There are no data available on the mixture itself

Eyes : There are no data available on the mixture itself

Respiratory : There are no data available on the mixture itself

Sensitisation

Conclusion/Summary

Skin : There are no data available on the mixture itself

Respiratory : There are no data available on the mixture itself

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	Category 3	Not applicable	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Product / ingredients name	Result
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	ASPIRATION HAZARD – Category 1
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% Aromatics	ASPIRATION HAZARD – Category 1
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	ASPIRATION HAZARD – Category 1
Naphtha (petroleum), Hydrotreated heavy	ASPIRATION HAZARD – Category 1

Information on the likely routes of exposure – Not available

Potential acute health effects

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness
- Ingestion** : Can cause central nervous system (CNS) depression.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Eye contact** : No known significant effects or critical hazards.

Symptoms related to the physical chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
Nausea or vomiting
Headache
Drowsiness/fatigue
Dizziness/vertigo
Unconsciousness
- Ingestion** : No specific data
- Skin contact** : Adverse symptoms may include the following:
Irritation
Dryness
Cracking
- Eye contact** : No specific data

Delayed and immediate effects and also 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 : Not available

General : 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.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No. 1272/2008 and is classified for toxicological hazards accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated Occupational Exposure Limit may result in adverse health effects such as irritation of the mucous membrane and respiratory system and adverse effects on the kidneys, liver and central nervous system. 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. 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.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

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.

Contains 2-butanone oxime, octhlinone (ISO). May produce an allergic reaction.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	LC50>1000mg/l	Algae	72 hours

Conclusion/Summary : There are no data available on the mixture itself

12.2 Persistence and degradability:

Product/ingredient name	Test	Result	Dose	Inoculum
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	-	80% - Readily – 28 days	-	-

Conclusion/Summary : Not available

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	-	-	Readily
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics <2% aromatics	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	-	10 to 2500	High
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics <2% aromatics	-	159	Low
2-butanone oxime	0.63	5.01	Low

12.4 Mobility in soil

Soil/water partition : Not available

Coefficient (Koc)

Mobility : Not available

12.5 Results of PBT and vPvB assessment

PBT : Not applicable

vPvB : Not applicable

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

13. DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

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 protections 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 dangerous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Container	15 01 04 metallic packaging

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.

14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	III	III	III
14.5 environmental hazards	No	No	No	No
Marine pollutant substances	Not applicable	Not applicable	Not applicable	Not applicable

Additional information

ADR/RID : None identified
Tunnel code : (D/E)
ADN : None identified
IMDG : None identified
IATA : None identified

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 Annex II of Marpol and the IBC Code: Not applicable

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

Ozone depleting substances (1005/2009/EU)

Not listed

VOC for Ready-for-Use Mixture : IIA/e. Interior/exterior trim varnishes and woodstains, including opaque woodstains. EU Limit values: 400g/l (2010)
This product contains a maximum of 400g/l VOC

Seveso Directive

This product is controlled under the Seveso Directive

Danger criteria

Category

P5c: Flammable liquids 2 and 3 not falling under P5a or P5b 6: Flammable (R10)

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

16. OTHER INFORMATION

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

ADR = The European Agreement concerning the international Carriage of Dangerous Goods by Road

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

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

Classification	Justification
Flam. Liq. 3 H226	On basis of test data
STOT SE 3, H336	Calculation method

Full text of abbreviated H.

Statements

H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361 fd (Oral)	Suspected of damaging fertility if swallowed. Suspected of damaging the unborn child if swallowed

Full text of classifications

[CLP/GHS]

Acute Tox. 4, H312	ACUTE TOXICITY (dermal) – Category 4
Asp. Tox. 1, H304	ASPIRATION HAZARD – Category 1
Carc. 2 H351	CARCINOGENICITY – Category 2
EUH066	Repeated exposure may cause skin dryness and cracking
Eye Dam. 1 H318	SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS – Category 3
Repr. 2, H361fd (oral)	TOXIC TO REPRODUCTION (Fertility and Unborn child) (Oral) Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION – Category 1
Skin Sens. 1A, H317	SKIN SENSITIZATION – Category 1A
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE (Narcotic effects) – Category 3

History

Date of Issue/date of revision 8/8/18

Date of previous issue January 2015

Prepared by – Intumescent Systems Ltd

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

HEALTH & SAFETY INFORMATION SHEET

APPENDIX 77c

QVFR-UVR CLEAR SATIN

Issue 3 9/08/2018

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

1.1 Product Identifier

PRODUCT NAME: QVFR-UVR Clear Satin

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

PRODUCT USE: Consumer applications, Professional applications

USE OF THE SUBSTANCE/MIXTURE: Coating

1.3 Details of the supplier of the safety data sheet

MANUFACTURER/SUPPLIER: Envirograf

ADDRESS: Envirograf House, Barfrestone, Dover, Kent, CT15 7JG

TELEPHONE/FAX/EMAIL: 01304 842555 01304 842666 sales@envirograf.com

1.4 Emergency telephone number

SUPPLIER TELEPHONE NUMBER: 01304 842555 (Office hours only)

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

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

2.2 Label elements

Hazard pictograms:



Signal Word: Warning

Hazard Statements: Flammable liquid and vapour

PRECAUTIONARY STATEMENTS

General: Keep out of reach of children. If medical advice is needed, have product container or label at hand

Prevention: Wear Protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response: If On Skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water or shower.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents & container in accordance with all local, regional, national & international regulations.

P102, P101, P280, P210, P303 + P361 + P353. P403, P235, P501

Hazardous Ingredients: Not applicable

Supplemental Label Elements: Contains octhilonone (ISO) and 2-butanone oxime. May produce an allergic reaction.

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

Other hazards which do not result in classification: Prolonged or repeated contact may dry skin and cause irritation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures: Mixture

Product/ingredient Name	Identifiers	% by weight	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Distillates (petroleum) hydrotreated light	EC: 265-149-8 CAS: 64742-47-8 Index: 649-422-00-2	≥10 -≤25	Asp.Tox. 1, H304	[1]
Naphtha (petroleum), hydrotreated heavy	EC: 265-150-3 CAS: 64742-48-9 Index: 649-327-00-6	≥10 -<20	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1]
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119463258-33 EC: 919-857-5 CAS: 64742-48-9	≥10 -<20	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066	[1]
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH#: 01-2119457273-39 EC: 918-481-9 CAS: 64742-48-9	≥5.0 -≤10	Asp. Tox. 1, H304 EUH066	[1]
2-butanone oxime	REACH#: 01-2119539477-28 EC: 202-496-6 CAS: 96-29-7 Index: 616-014-00-0	<1.0	Acute Tox. 4, H312 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351	[1]
2-ethylhexanoic acid, zirconium salt	REACH#: 01-2119979088-21 EC: 245-018-1 CAS: 22464-99-9	≤1.0	Repr. 2, H361fd (Fertility and unborn child) (oral) See Section 16 for the full text of the H statements declared above.	[1] [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, are PBTs or vPvBs or have been assigned workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

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

SUB codes represent substance without registered CAS numbers.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Remove contact lenses. Irrigate copiously with clean, fresh water holding the eyelids apart for at least 10 minutes. Seek immediate medical advice.

Inhalation: Remove to fresh air, keep patient warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel

Skin Contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or a recognized skin cleaner. DO NOT USE SOLVENT OR THINNERS.

Ingestion: If accidentally swallowed seek medical advice immediately and show the container or label. Keep person warm and at rest. DO NOT induce vomiting.

Protection of First-Aiders: No action shall be taken involving any personal risk or without suitable training. 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

POTENTIAL ACUTE HEALTH EFFECTS

Eye Contact: No known significant effects or critical hazards.

Inhalation: No known significant effects or critical hazards.

Skin Contact: Defatting to the skin. May cause dryness and irritation.

Ingestion: No known significant effects or critical hazards.

OVER-EXPOSURE SIGNS/SYMPTOMS

Eye Contact: No specific data

Inhalation: No specific data

Skin Contact: Adverse symptoms may include irritation, redness, 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.

5. FIRE-FIGHTING 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

Hazards From The Substance Or Mixture: Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard

Hazardous Combustion Products: Decomposition products may include the following materials: metal oxide/oxides.

5.3 Advice for firefighters

Special Precautions for Firefighters: 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 Firefighters: Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents

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 area. 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)

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.

6.4 Reference to other Sections : See Section 1 for emergency contact information
See Section 8 for information appropriate personal protective equipment
See Section 13 for additional waste treatment information

7. HANDLING AND STORAGE

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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 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. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

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 : Storage temperature 5 to 25°C (41 to 77°F). 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. Eliminate all ignition sources. Separate from oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s) See Section 1.2 for identified uses.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

8.1 Control parameters

Occupational exposure limits

Product / ingredient name	Exposure limit values
2-ethylhexanoic acid, zirconium salt	EH40/2005 WELs (United Kingdom (UK). 12/2011). STEL: 10 mg/m ³ , (as Zr) 15 minutes TWA: 5 mg/m ³ , (as Zr) 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

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hydrocarbons, C9-C11 n-alkanes, isoalkanes cyclics, <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 Dermal	125 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term inhalation	185 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	125 mg/kg bw/day	Consumers	Systemic
2-butanone oxime	DNEL	Long term Inhalation	9 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	3.33 mg/m ³	Workers	Local
	DNEL	Long term Dermal	1.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	2.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.7 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation	2 mg/m ³	Consumers	Local
	DNEL	Long term Dermal	0.78 mg/kg bw/day	Consumers	Systemic
DNEL	Short term Dermal	1.5 mg/kg bw/day	Consumers	Systemic	

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
2-butanone oxime	-	Fresh water	0.256 mg/l	Assessment Factors
	-	Sewage treatment plant	177mg/l	Assessment Factors

8.2 Exposure controls

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. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Chemical splash goggles.

Skin protection

Hand Protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN374) is recommended.

Gloves

: Nitrile rubber

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.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Filter type: organic vapour (Type A) and particulate filter P3

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid
Colour	: Clear
Odour	: Hydrocarbon [slight]
Odour threshold	: Not available
pH	: Insoluble in water
Melting/freezing point	: May start to solidify at the following temperature: -49°C (-56.2°F). This is based on data for the following ingredient: Distillates (petroleum), hydrotreated light. Weighted average -62.84°C (-81.1°F)
Initial boiling point and boiling range	: 145°C
Flash point	: Closed cup: 45°C
Evaporation rate	: Highest known value: 0.04 (Hydrocarbons C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics). Weighted average: 0.11 compared with butyl acetate
Material supports combustion	: Yes
Flammability (solid, gas)	: Liquid
Upper/lower flammability or explosive limits	: Greatest known range: Lower 0.6% Upper 7% (Hydrocarbons C9-C11 n-alkanes, isoalkanes, cyclics, <2% aromatics)
Vapour pressure	: Highest known value: 0.3 kPa (2.3mm Hg) (at 20°C) (Hydrocarbons C9-C11, n-alkanes, cyclics, <2% aromatics). Weighted Average: 0.16kPa (1.2mm Hg) (at 20°C)
Vapour density	: Highest known value: 4.5 (Air = 1) 0.04 (Distillates (petroleum), hydrotreated light).
Relative density	: 0.95
Solubility(ies)	: Insoluble in the following materials: cold water
Partition coefficient: n-octanol/ water	: Not applicable
Auto-ignition temperature	: Lowest known value: >220°C (>428°F) (Distillates (petroleum), hydrotreated light).
Decomposition temperature	: Stable under recommended storage and handling conditions (see Section 7)
Viscosity	: Kinematic (room temperature): >4cm ² /s Kinematic (40°C): >2.1cm ² /s
Viscosity	: 60 -100 s (ISO 6mm)
Explosive properties	: Product does not present an explosion hazard
Oxidising properties	: Product does not present an explosion hazard

9.2 Other information

No additional information.

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 reaction will not occur
10.4 Conditions to avoid	: When exposed to high temperature may produce hazardous decomposition products. Refer to protective measures listed in Sections 7 & 8
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: metal oxide/oxides

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), Hydrotreated heavy	LC50 Inhalation Vapour	Rat	8500mg/m ³	4 hours
	LD50 Oral	Rat	>6g/kg	-
Hydrocarbons, C9-C11, n- alkanes, isoalkanes, cyclics, <2% aromatics	LD50 Oral	Rat	>6g/kg	-
	LC50 inhalation Vapour	Rat	8500mg/m ³	4 hours
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% Aromatics	LD50 Oral	Rat	>6g/kg	-
	LD50 Oral	Rat	930mg/kg	-
2-butanone oxime	LD50 Dermal	Rabbit	>5 g/kg	-
2-ethylhexanoic acid, zirconium salt	LD50 Oral	Rat	>5 g/kg	-

Conclusion/Summary : Not available

Acute toxicity estimates

Route	ATE value
Not available	

Irritation/Corrosion

Conclusion/Summary : Not available

Sensitisation

Conclusion/Summary : Not available

Mutagenicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	Category 3	Not applicable	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Product / ingredients name	Result
Distillates (petroleum), hydrotreated light	ASPIRATION HAZARD – Category 1
Naphtha (petroleum), hydrotreated heavy	ASPIRATION HAZARD – Category 1
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	ASPIRATION HAZARD – Category 1
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% Aromatics	ASPIRATION HAZARD – Category 1

Information on the likely routes of exposure – Not available

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical chemical and toxicological characteristics

Inhalation : No specific data

Ingestion : No specific data

Skin contact : Adverse symptoms may include the following:

Irritation

Dryness

Cracking

Eye contact : No specific data

Delayed and immediate effects and also 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 : Not available

General :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.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No. 1272/2008 and is classified for toxicological hazards accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated Occupational Exposure Limit may result in adverse health effects such as irritation of the mucous membrane and respiratory system and adverse effects on the kidneys, liver and central nervous system. 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. 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.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

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.

Contains 2-butanone oxime, octhiline (ISO). May produce an allergic reaction.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Conclusion/Summary : No data available

12.2 Persistence and degradability:

Conclusion/Summary : Not available

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated light	-	-	Readily
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Distillates (petroleum) hydrotreated light	-	159	Low
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics <2% aromatics	-	10 to 2500	High
2-butanone oxime	0.63	5.01	Low

12.4 Mobility in soil

Soil/water partition Coefficient (Koc) : Not available

Mobility : Not available

Mobility : Not available

12.5 Results of PBT and vPvB assessment

PBT : Not applicable

vPvB : Not applicable

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

13. DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s)

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 protections 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 dangerous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Container	15 01 04 metallic packaging

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.

14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	III	III	III
14.5 environmental hazards	No	No	No	No
Marine pollutant substances	Not applicable	Not applicable	Not applicable	Not applicable

Additional information

ADR/RID : This class 3 material is not subject to regulation in packagings up to 450L. Exempted according to 2.2.3.1.5 (Viscous substance exemption)

Tunnel code : (D/E)

ADN : This class 3 material is not subject to regulation in packagings up to 450L. Exempted according to 2.2.3.1.5 (Viscous substance exemption)

IMDG : None identified

IATA : None identified

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 Annex II of Marpol and the IBC Code: Not applicable

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

VOC for Ready-for-Use Mixture : IIA/e. Interior/exterior trim varnishes and woodstains, including opaque woodstains. EU Limit values: 400g/l (2010)
This product contains a maximum of 400g/l VOC

Product/ingredient name	Carcinogenic Effects	Mutagenic effects	Developmental Effects	Fertility effects
2-butanone oxime	Carc. 2, H351	-	-	-
2-ethylhexanoic acid, zirconium salt	-	-	Repr. 2, H361d (Unborn child) (oral)	Repr. 2, H361f (fertility) (oral)

Seveso Directive

This product is controlled under the Seveso Directive

Danger criteria

Category

P5c: Flammable liquids 2 and 3 not falling under P5a or P5b
6: Flammable (R10)

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

16. OTHER INFORMATION

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

ADR = The European Agreement concerning the international Carriage of Dangerous Goods by Road

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

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

Classification	Justification
Flam. Liq. 3 H226	On basis of test data

Full text of abbreviated H.

Statements

H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361 fd (Oral)	Suspected of damaging fertility if swallowed. Suspected of damaging the unborn child if swallowed

Full text of classifications

[CLP/GHS]

Acute Tox. 4, H312	ACUTE TOXICITY (dermal) – Category 4
Asp. Tox. 1, H304	ASPIRATION HAZARD – Category 1
Carc. 2 H351	CARCINOGENICITY – Category 2
EUH066	Repeated exposure may cause skin dryness and cracking
Eye Dam. 1 H318	SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS – Category 3
Repr. 2, H361fd (oral)	TOXIC TO REPRODUCTION (Fertility and Unborn child) (Oral) Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION – Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE (Narcotic effects) – Category 3

History

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Prepared by – Intumescent Systems Ltd

Disclaimer

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