

SAFETY DATA SHEET

M-Line Rosin Solvent




ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP)
& 2020/878

www.vpgsensors.com
Date of issue: 06/01/2023
Date of First Issue: 22/03/2013
Version 4.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier		
Product Name	M-Line Rosin Solvent	
Product Code	Not applicable	
Unique Formula Identifier (UFI)	Not applicable	
Nanoform	The product does not contain nanoparticles.	
1.2 Relevant identified uses of the substance or mixture and uses advised against		
Identified Use(s)	Welding and soldering products (with flux coatings or flux cores), flux products.	
Uses Advised Against	Anything other than the above.	
1.3 Details of the supplier of the safety data sheet		
Company Identification	VISHAY MEASUREMENTS GROUP GMBH Tatschenweg 1 74078 Heilbronn Deutschland	
Telephone	+49 (0) 7131 39099-0	
Fax	+49 (0) 7131 39099-229	
E-Mail (competent person)	mm.de@vpgsensors.com	
1.4 Emergency telephone number		
National Poisons Information Service (United Kingdom)	+44 (0) 3448 920111	24 hr. emergency phone number Healthcare Professionals ONLY
NHS 24	111	Members of Public
Emergency Phone No.	(00-1) 703-527-3887	CHEMTREC (24 hours)
Languages spoken	All official European languages.	

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture		
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H336 STOT RE 2; H373 Repr. 2; H361d Aquatic Chronic 3; H412	
2.2 Label elements	According to Regulation (EC) No. 1272/2008 (CLP)	
Product Name	M-Line Rosin Solvent	
Hazard Pictogram(s)	  	
Signal Word(s)	DANGER	

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Contains:	Toluene and 2-Propanol
Hazard Statement(s)	H225: Highly flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness. H373: May cause damage to organs through prolonged or repeated exposure. H361d: Suspected of damaging the unborn child. H412: Harmful to aquatic life with long lasting effects.
Precautionary Statement(s)	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P235: Keep cool. P370+P378: In case of fire: Use dry powder to extinguish. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting.
Supplemental information	None Known
2.3 Other hazards	Vapours can form explosive mixtures with air.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances - Not applicable.

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Toluene	45 - 55	108-88-3	203-625-9	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Repr. 2; H361d STOT RE 2; H373 Aquatic Chronic 3; H412
2-Propanol	45 - 55	67-63-0	200-661-7	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336

Note: For full text of H phrases see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Avoid all contact. Avoid breathing vapours. Ensure adequate ventilation. Wear suitable respiratory protective equipment if exposure to high levels of material are likely. Do not use mouth-to-mouth resuscitation. Contaminated clothing should be laundered before reuse.

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Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. IF exposed or concerned: Get medical advice/attention.
Skin Contact	IF ON SKIN: Remove contaminated clothing and wash all affected areas with plenty of water. Contaminated clothing should be thoroughly cleaned. If skin irritation occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if eye irritation develops or persists.
Ingestion	IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Immediately call a POISON CENTER/doctor. Rinse mouth. Drink two glasses of water. Do not give milk or alcoholic beverages. Do not give anything by mouth to an unconscious person.
4.2 Most important symptoms and effects, both acute and delayed	May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure: Central nervous system.
4.3 Indication of any immediate medical attention and special treatment needed	Treat symptomatically
Notes to a physician:	IF SWALLOWED: Do NOT induce vomiting, if vomiting does occur, have victim lean forward to reduce risk of aspiration. Latency of several hours is possible. Give a slurry of activated charcoal in water to drink. (240mL Water / 30 g Activated charcoal).

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media	Suitable Extinguishing media	As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or waterspray.
	Unsuitable extinguishing media	Do not use water jet. Direct water jet may spread the fire.
5.2 Special hazards arising from the substance or mixture		Highly flammable liquid and vapour. May decompose in a fire giving off toxic fumes. Carbon dioxide and Carbon monoxide. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Sealed containers may rupture explosively if hot.
5.3 Advice for fire-fighters		Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Caution - spillages may be slippery. Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Do not breathe vapour. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
6.2 Environmental precautions	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. In confined spaces, sewers, etc., the vapours may collect to form explosive mixtures with air. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
6.3 Methods and material for containment and cleaning up	Ensure suitable personal protection (including respiratory protection) during removal of spillages. Contain spillages. Use non-sparking equipment when picking up flammable spill. Use waterspray to 'knock down' vapour. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do NOT absorb in saw-dust or other combustible absorbents. Transfer to a container for disposal.

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Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste.

See Section: 8, 13

6.4 Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Do not breathe vapour. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

7.2 Conditions for safe storage, including any incompatibilities

Ground/bond container and receiving equipment. Keep only in original container. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight.

Storage temperature

Ambient. Keep at temperature not exceeding (°C): 25

Storage life

Stable under normal conditions

Incompatible materials

Strong oxidising agents, Acids (Nitric acid and Sulphuric acid), Halogens and halogenated compounds.

7.3 Specific end use(s)

See Section: 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

United Kingdom

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Toluene	108-88-3	50	191	100	384	Sk
2-Propanol	67-63-0	400	999	500	1250	-

Source: UK WEL: Workplace Exposure Limit (UK HSE EH40)

Notations:

Sk: Can be absorbed through skin.

Ireland

SUBSTANCE	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
		ppm	mg/m ³	ppm	mg/m ³	
Toluene	108-88-3	50	192	100	384	Sk, IOELV
2-Propanol	67-63-0	200	-	400	-	Sk

Source: 2021 Code of Practice for Safety, Health and Welfare at Work (Chemical Agents) Regulation (2001 – 2021) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001 – 2019); Health and Safety Authority

Notations:

IOELV: Indicative Occupational Exposure Limit Value

Sk: Can be absorbed through skin.

8.1.2 Biological limit value

Not established

8.1.3 PNECs and DNELs

Not established.

8.2 Exposure controls

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- 8.2.1 Appropriate engineering controls** Ensure adequate ventilation Or Use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit.
- 8.2.2 Individual protection measures, such as personal protective equipment (PPE)** General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid all contact. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place. IF exposed: Flush with fresh water if contact with skin or eyes.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection



Hand protection:

Wear impervious gloves (EN374). At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374) Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Recommended: Nitrile rubber (Minimum thickness 0.38mm, breakthrough time >240 min), PVC (Minimum thickness 1.3mm, breakthrough time >60 min)

Body protection:

Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection



In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

Thermal hazards

Not applicable

- 8.2.3 Environmental exposure controls** Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Clear Colourless
Odour	Benzene-like Odour
Melting point and freezing point	No data available
Boiling point or initial boiling point and boiling range	82°C
Flammability	Highly flammable liquid and vapour.
Lower and upper explosion limit or lower and upper flammability limit	Flammable Limits (Lower) (%v/v): 1.2 Flammable Limits (Upper) (%v/v): 7.1
Flash point	4°C [Closed cup]
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Kinematic viscosity	< 20,5 mm ² /s (Worst case assumption)
Solubility	No data available
Partition coefficient: n-octanol/water (log value)	Not applicable - Mixture

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Vapour pressure	36 mmHg @ 30°C
Density and/or relative density	0.8 (H ₂ O = 1)
Relative vapour density	3 (Air = 1)
Particle characteristics	not applicable

9.2 Other information

Explosive properties	Vapours can form explosive mixtures with air.
Oxidising properties	Not oxidising.
Volatile Organic Compound Content	825 g/L
Evaporation rate	2.8 (BuAC = 1)

SECTION 10: STABILITY AND REACTIVITY

10.1	Reactivity	Stable under normal conditions.
10.2	Chemical stability	Stable under normal conditions.
10.3	Possibility of hazardous reactions	Highly flammable liquid and vapour. Vapour is explosive in air at temperatures higher than the flash point. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Hazardous polymerisation will not occur.
10.4	Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Keep at temperature not exceeding (°C): 25
10.5	Incompatible materials	Strong oxidising agents, Acids (Nitric acid and Sulphuric acid), Halogens and halogenated compounds.
10.6	Hazardous decomposition product(s)	May decompose in a fire giving off toxic fumes. Carbon dioxide and Carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	
	Ingestion	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LD50 > 2000 mg/kg bw/day
	Inhalation	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20 mg/l. (Vapour)
	Skin Contact	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LD50 > 2000 mg/kg bw/day
	Skin corrosion/irritation	Mixture: Skin Irrit. 2: H315: Causes skin irritation.
	Toluene	Skin Irrit. 2: H315: Causes skin irritation. Irritating to skin. (rabbit) (EU Method B.4) ECHA registration dossier
	Propan-2-ol	Skin Irrit. 2: H315: Causes skin irritation. EU ECHA Registration Endpoint summary: Irritating to skin. (rabbit)
	Serious eye damage/irritation	Mixture: Eye Irrit. 2: Causes serious eye irritation.
	Propan-2-ol	Eye Irrit. 2; H319: Causes serious eye irritation. Test Result: Irritating to eyes. (rabbit) (OECD 405) ECHA Registration Endpoint summary
	Respiratory or skin sensitization	Mixture: Based upon the available data, the classification criteria are not met.
	Germ cell mutagenicity	Mixture: Based upon the available data, the classification criteria are not met.
	Carcinogenicity	Mixture: Based upon the available data, the classification criteria are not met.
	Reproductive toxicity	Mixture: Repr. 2; H361d: Suspected of damaging the unborn child.
	Toluene	NOAEC: 600 ppm (Ono A et al,1996)
	STOT - single exposure	Mixture: STOT SE 3; H336: May cause drowsiness or dizziness.
	Toluene	Narcotic effects – (rat) (OECD 403)
	Propan-2-ol	Narcotic effects – (rat) (OECD 403)

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STOT - repeated exposure	STOT RE 2: May cause damage to organs through prolonged or repeated exposure.
	Toluene NOAEL 625 mg/kg bw/day (EU Method B.26) ECHA registration dossier
	Propan-2-ol NOAEL 5000 ppm (OECD 451) ECHA registration dossier
Aspiration hazard	Asp. Tox. 1; H304: May be fatal if swallowed and enters airways.
	Toluene Hydrocarbon. Kinematic Viscosity 0.56 mPa s @20°C ECHA registration dossier
11.2 Information on other hazards	
11.2.1 Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
11.2.2 Other information	None

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Mixture: Based upon the available data, the classification criteria are not met.
12.2 Persistence and degradability	The product is biodegradable.
	Toluene Readily biodegradable.
	Propan-2-ol Readily biodegradable.
12.3 Bioaccumulative potential	The product has low potential for bioaccumulation.
	Toluene The substance has low potential for bioaccumulation.
	Propan-2-ol The substance has low potential for bioaccumulation.
12.4 Mobility in soil	The product is predicted to have high mobility in soil. May evaporate quickly.
	Toluene The substance has high mobility in soil. Partially soluble.
	Propan-2-ol The substance has high mobility in soil. Miscible with water.
12.5 Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
12.6 Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.
12.7 Other adverse effects	None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	This material and its container must be disposed of as hazardous waste. Dispose of wastes in an approved waste disposal facility. Waste classification according to Directive 2008/98/EC (Waste Framework Directive): HP 3 Flammable HP 4 Irritant — skin irritation and eye damage HP 5 Specific Target Organ Toxicity/Aspiration Toxicity HP 10 Toxic to reproduction HP 14 Ecotoxic
13.2 Additional Information	Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA/ICAO
14.1 UN number or ID number	UN 1993	UN 1993	UN 1993	UN 1993
14.2 UN proper shipping name	FLAMMABLE LIQUID N.O.S (Toluene / 2- Propanol)	FLAMMABLE LIQUID N.O.S (Toluene / 2- Propanol)	FLAMMABLE LIQUID N.O.S (Toluene / 2- Propanol)	FLAMMABLE LIQUID N.O.S (Toluene / 2- Propanol)
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	II	II	II	II

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14.5	Environmental hazards	Not classified as a Marine Pollutant.	Not classified as a Marine Pollutant.	Not classified as a Marine Pollutant.	Not classified as a Marine Pollutant.
14.6	Special precautions for user	See Section: 2			
14.7	Maritime transport in bulk according to IMO instruments	No information available.			
14.8	Additional Information	No information available.			

SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU regulations

Use restriction according to REACH annex XVII, no.:

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

Directive 2010/75/EU on industrial emissions

Restrictions of occupation:

To follow:

15.1.2 National regulations

Germany

Water hazard class (WGK)

15.2 Chemical Safety Assessment

Product: Entry number:: 3

Toluene: Entry number:: 3 40, 48, 75

Propan-2-ol: Entry number:: 3 40, 75

P5c

Solvent VOC-value:

VOC-value %W/W	Temperature	Method
100	20 °C	calculated

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

strongly hazardous to water (WGK 3)

A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

Existing Safety Data Sheet (SDS), Harmonised Classification(s) for 2-Propanol (CAS No. 67-63-0) and Toluene (CAS No. 108-88-3). Existing ECHA registration(s) for 2-Propanol (CAS No. 67-63-0) and Toluene (CAS No. 108-88-3).

Literature References:

1. Ono A, Sekita K, Ogawa Y, Hirose A, Suzuki S, Saito M, Naito K, Kaneko T, Furuya T, Kawashima K, Yasuhara K, Matsumoto K, Tanaka S, Inoue T and Kurokawa Y, 1996, Reproductive and developmental toxicity studies of toluene II. Effects of inhalation exposure on fertility in rats, Journal of Environmental Pathology Toxicology and Oncology 15, 9-20

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Flam. Liq. 2; H225	Flash Point [Open cup] Test Result/ Boiling Point (°C)
Asp. Tox. 1; H304	Threshold Calculation, Expert judgement, Worst case assumption
Skin Irrit. 2; H315	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation

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STOT SE 3; H336	Threshold Calculation
STOT RE 2; H373	Threshold Calculation
Repr. 2; H361d	Threshold Calculation
Aquatic Chronic 3; H412	Summation Calculation

LEGEND

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
EU	European Union
EC	European Community
ECHA	European Chemicals Agency
EN	European Standard
EC50	Effect concentration; 50 %
EL50	Effective loading rate; 50 %
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC50	Lethal concentration at which 50% of the population is killed
LD50	Lethal dose at which 50% of the population is killed
LTEL	Long term exposure limit
NOAEC	No observed adverse effect concentration
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time Weighted Average
STEL	Short term exposure limit
vPvB	very Persistent and very Bioaccumulative
UN	United Nations
VOC	Volatile organic compounds

Hazard classification / Classification code:

Flam. Liq. 2; Flammable Liquid, Category 2
Asp. Tox. 1; Aspiration hazard, Category 1
Skin Irrit. 2; Skin corrosion/irritation, Category 2
Eye Irrit. 2; Eye Irritation, Category 2
STOT SE 3; Specific target organ toxicity — single exposure, Category 3
Repr. 2; Reproductive toxicity, Category 2
STOT RE 2; Specific target organ toxicity — repeated exposure, Category 2
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic, Category 3

Hazard Statement(s)

H225: Highly flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H361d: Suspected of damaging the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.
H412: Harmful to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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