

Safety Data Sheet

M-Bond 610 Adhesive LVOC

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

www.vpgsensors.com
Date of issue: 28/06/2023
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: M-Bond 610 Adhesive LVOC
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): Adhesive
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
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
Skin Irrit. 2 ; H315
Skin Sens. 1 ; H317
Eye Irrit. 2; H319
STOT SE 3; H335
STOT SE 3; H336
Carc. 2; H351
Aquatic Chronic 2; H411

2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Product name: M-Bond 610 Adhesive LVOC

Hazard Pictogram(s):



Signal Word(s): DANGER

Contains: Acetone; Phenol, polymer with formaldehyde, glycidyl ether; Tetrahydrofuran; Butanone

Hazard Statement(s): H225: Highly flammable liquid and vapour.

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H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H351: Suspected of causing cancer.
H411: Toxic 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.
P273: Avoid release to the environment.
P280: Wear protective gloves/eye protection/face protection.
P370+P378: In case of fire: Use dry powder to extinguish.

Supplemental information

EUH019: May form explosive peroxides.

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
Acetone	50 - 80	67-64-1	200-662-2	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066: Repeated exposure may cause skin dryness or cracking.
Phenol, polymer with formaldehyde, glycidyl ether	20 - 50	28064-14-4	608-164-0	Not yet assigned in the supply chain	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411
Tetrahydrofuran	20 - 50	109-99-9	203-726-8	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335 STOT SE 3; H336 Carc. 2; H351 EUH019
Ethyl methyl ketone	5 - 10	78-93-3	201-159-0	Not yet assigned in the supply chain	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336

Specific concentration limit (SCL) & M-factor

Chemical identity of the substance	CAS No.	EC No.	Specific concentration limit (SCL)	M-factor
Tetrahydrofuran	109-99-9	203-726-8	Eye Irrit. 2; H319: C ≥ 25% STOT SE 3; H335: C ≥ 25%)	--

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

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SECTION 4: First aid measures



4.1 Description of first aid measures

Self-protection of the first aider

Avoid breathing mist/vapours/spray. Ensure adequate ventilation Wear suitable protective clothing. Wear suitable respiratory protective equipment if exposure to high levels of material are likely. Avoid contact with skin. Contaminated clothing should be laundered before reuse. Do not use mouth-to-mouth resuscitation. Eyewash facilities should be stationed close to workplace where possible.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

IF ON SKIN: Gently wash with plenty of soap and water. Remove contaminated clothing and wash clothing before reuse. If irritation (redness, rash, blistering) develops, get medical attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF SWALLOWED: Rinse mouth. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. If symptoms occur obtain medical attention.

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer.

Treat symptomatically.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

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 monoxide, Carbon dioxide, Phenolic and Explosive Peroxides. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Prevent liquid entering sewers, basements and workpits; vapour may create explosive atmosphere. May form explosive peroxides.

5.3 Advice for firefighters

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

Ensure adequate ventilation Stop leak if safe to do so. In case of leakage, eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing mist/vapours/spray. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8. The vapour is heavier than air; beware of pits and confined spaces.

6.2 Environmental precautions

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up

Ensure suitable personal protection during removal of spillages. Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do NOT absorb in saw-dust or other combustible

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Large spillages:

6.4 Reference to other sections

absorbents. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste. Allow small spillages to evaporate provided there is adequate ventilation.

Evacuate the area and keep personnel upwind. Notify police and fire brigade as soon as possible.

See Section: 8, 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure operatives are trained to minimise exposures. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all contact. Do not breathe vapour. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. May form explosive peroxides. Take precautionary measures against static discharges. 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.

7.2 Conditions for safe storage, including any incompatibilities

Ground and bond container and receiving equipment. Keep only in original packaging. 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. May form explosive peroxides. Keep away from direct sunlight.

storage temperature
Storage life
Incompatible materials

Ambient

Stable under normal conditions

Keep away from: Oxidizing agents, corrosive Substances, Reducing agent, Strong Acids and Alkalies

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/m³)	STEL (ppm)	STEL (mg/m³)	Note
Acetone	67-64-1	500	1210	1500	3620	-
Tetrahydrofuran	109-99-9	50	150	100	300	Sk
Methyl ethyl ketone (MEK)	78-93-3	200	600	300	899	Sk, BMGV

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

Notations:

Sk: Can be absorbed through skin.

BMGV: Biological monitoring guidance value

Ireland

SUBSTANCE	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
		ppm	mg/m³	ppm	mg/m³	
Acetone	67-64-1	500	1210	-	-	IOELV
Tetrahydrofuran	109-99-9	50	150	100	300	Sk, IOELV
Methyl ethyl ketone (MEK)	78-93-3	200	600	300	900	Sk, IOELV

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

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Sk: Can be absorbed through skin.

8.1.2 Biological Limit Value

SUBSTANCE	CAS No.	Biological monitoring guidance value	Sampling Time
Ethyl methyl ketone	78-93-3	70 µmol butan-2-one/L in urine	Post shift

Source: Bmgv: Biological monitoring guidance value (UK HSE EH40)

8.1.3 PNECs and DNELs

Not established

8.2 Exposure controls

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. Local exhaust recommended.

Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems.

Eyewash facilities should be stationed close to workplace where possible.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable. Avoid contact with skin, eyes or clothing. Avoid breathing mist/vapours/spray. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place.

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). 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: PVC / Nitrile rubber

During full contact:

Protective index 6, corresponding > 480 minutes of permeation time according to EN 374.

Nitrile rubber (Minimum thickness: 0.33 mm)

Butyl rubber (Minimum thickness: 0.5 mm)

During splash contact:

At least protective index 5, corresponding > 240 minutes of permeation time according to EN 374

Polychloroprene - CR (Minimum thickness: 0.5 mm)

Unsuitable gloves materials:

Natural rubber/natural latex, Polyvinyl chloride - PVC.

Body protection:

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

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Respiratory protection



Use only in well-ventilated areas. In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

high concentrations: Wear suitable respiratory equipment. Recommended: Self-contained breathing apparatus (DIN EN 137)

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	Not established
Odour	Not established
Melting point and freezing point	Not established
Boiling point or initial boiling point and boiling range	Not established
Flammability	Highly flammable liquid and vapour.
Lower and upper explosion limit or lower and upper flammability limit	Not established
Flash point	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
pH	Not established
Kinematic viscosity	Not established
Solubility	Not established
Partition coefficient: n-octanol/water (log value)	not applicable - Mixture
Vapour pressure	Not established
Density and/or relative density	Not established
Relative vapour density	Not established
Particle characteristics	Not applicable - Liquid

9.2 Other information

Explosive properties	Vapours can form explosive mixtures with air. May form explosive peroxides.
Oxidising properties	Not established

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions May form peroxides on prolonged storage if air is present.

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

Highly flammable liquid and vapour. The vapour may be invisible, heavier than air and spread along ground. May form explosive peroxides. Contact with aliphatic amines will cause irreversible polymerization with considerable heat build-up. May polymerise on prolonged heating.

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 a temperature not exceeding (°C): 32. Avoid contact with air. Avoid contact with heat and ignition sources and oxidizers. Avoid distillation to dryness, which can form explosive peroxides.

10.5 Incompatible materials

Oxidizing agents, corrosive Substances, Reducing agent, Strong Acids and Alkalies Mild steel. Reacts violently with - Oxidizing agents and Acids

10.6 Hazardous decomposition products

May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, Phenolic and Explosive Peroxides.

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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 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: LC50 > 5 mg/l (Dust/Mist)

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

Tetrahydrofuran Skin corrosion/irritation - Category 2; H315: Causes skin irritation.

EU Harmonised Classification.

Skin Irrit. 2; H315: Causes skin irritation.

Phenol, polymer with formaldehyde, glycidyl ether No data available

EU classification and labelling inventory >1200 Notifiers

Ethyl methyl ketone EUH066: Repeated exposure may cause skin dryness or cracking.

Prolonged skin contact will result in defatting of the skin, leading to irritation, and in some cases, dermatitis. (Smith R & Mayers MR, 1944)

Harmonised Classification/ ECHA registration dossier

Mixture: Eye Irrit. 2; H319: Causes serious eye irritation.

Serious eye damage/irritation

Acetone Eye Irrit. 2; H319: Causes serious eye irritation.

Test Result: Irritating to eyes. (OECD 405)

Harmonised Classification/ ECHA registration dossier

Eye Irrit. 2: Causes serious eye irritation.

Phenol, polymer with formaldehyde, glycidyl ether No data available

EU classification and labelling inventory >1200 Notifiers

Tetrahydrofuran Eye Irrit. 2; H319: Causes serious eye irritation. (SCL ≥ 25%).

Test Result: Corrosive to eyes. (rabbit) (Unnamed publication, 1971).

Harmonised Classification/ ECHA registration dossier

Eye Irrit. 2; H319: Causes serious eye irritation.

Ethyl methyl ketone Test Result: Irritating to eyes. (rabbit)

Harmonised Classification/ ECHA registration dossier

Mixture: Skin Sens. 1; H317: May cause an allergic skin reaction.

Skin Sens. 1; H317: May cause an allergic skin reaction. No data available

EU classification and labelling inventory >1200 Notifiers

Respiratory or skin sensitisation

Phenol, polymer with formaldehyde, glycidyl ether

Mixture: Based upon the available data, the classification criteria are not met.

Germ cell mutagenicity

Carcinogenicity

Tetrahydrofuran

Mixture: Carc. 2; H351: Suspected of causing cancer.

Carc. 2; H351: Suspected of causing cancer.

Result: positive - Adverse effects observed carcinogenic effect (Mouse)

Harmonised Classification/ ECHA registration dossier

Mixture: Based upon the available data, the classification criteria are not met.

Reproductive toxicity

STOT - single exposure

Acetone

Mixture: STOT SE 3; H335: May cause respiratory irritation.

STOT SE 3; H336: May cause drowsiness or dizziness.

Tetrahydrofuran

STOT SE 3; H335: May cause respiratory irritation. (SCL ≥ 25%). EU Harmonised Classification.

STOT SE 3; H336: May cause drowsiness or dizziness.

Test Result: Irritation to respiratory tract (Rat), LC50: 375mg/L air (Unnamed publication, 1979).

Test Result: Central nervous depression, NOEC (rats): 500ppm (Malley et al, 2001)

Harmonised Classification/ ECHA registration dossier

Ethyl methyl ketone

STOT SE 3; H336: May cause drowsiness or dizziness.

Harmonised Classification/ ECHA registration dossier

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STOT - repeated exposure	Mixture: Based upon the available data, the classification criteria are not met.
Aspiration hazard	Mixture: Based upon the available data, the classification criteria are not met.
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: Aquatic Chronic 2; H411: Toxic to aquatic life with long lasting effects. Estimated Mixture LC50 >1 - 10 mg/L (Fish) Aquatic Chronic 2; H411: Toxic to aquatic life with long lasting effects.
Phenol, polymer with formaldehyde, glycidyl ether	EU classification and labelling inventory – 1246 Notifiers
12.2 Persistence and degradability	No data for the mixture as a whole.
Acetone	Readily biodegradable (according to OECD criteria). Degradation rate (%): 90.9±2.2 (28 days) OECD 301B
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Tetrahydrofuran	Inherently Biodegradable
Ethyl methyl ketone	Readily biodegradable (according to OECD criteria). Water degradation rate (%): 98 (28 days) OECD 301D
12.3 Bioaccumulative potential	No data for the mixture as a whole.
Acetone	Bioconcentration factor (BCF): 3 calculated Log KOW= -0.24 Bioaccumulation will not occur
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Tetrahydrofuran	The substance has low potential for bioaccumulation. Log KOW < 3
Ethyl methyl ketone	Low bioaccumulative potential
12.4 Mobility in soil	No data for the mixture as a whole.
Acetone	The substance is predicted to have high mobility in soil. Kd= 1.5 L/kg@ 20 °C
Phenol, polymer with formaldehyde, glycidyl ether	No data available
Tetrahydrofuran	Adsorption to solid soil phase is not expected.
Ethyl methyl ketone	Adsorption to solid soil phase is not expected.
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. Dispose of contents in accordance with local, state or national legislation.
Waste classification according to Directive 2008/98/EC (Waste Framework Directive)	HP3 - Flammable HP4 – Irritant HP5 - Specific Target Organ Toxicity HP7 – Carcinogenic HP13 – Sensitising HP14 - Ecotoxic

SECTION 14: Transport information

14.1 UN number or ID number	ADR/RID UN 1133	ADN UN 1133	IMDG UN 1133	IATA/ICAO UN 1133
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14.2	UN proper shipping name	ADHESIVES containing flammable liquid			
14.3	Transport hazard class(es)	3	3	3	3
14.4	Packing group	II	II	II	II
14.5	Environmental hazards	Environmentally hazardous substance	Environmentally hazardous substance	Classified as a Marine Pollutant.	Environmentally hazardous substance
14.6	Special precautions for user	See Section: 2			
14.7	Maritime transport in bulk according to IMO instruments	Not applicable	Not applicable	Not applicable	Not applicable
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]	Not restricted P5c
	Restrictions of occupation:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
	To follow:	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
15.1.2	National regulations	
	Germany	Water hazard class: 2 (Self classification)
	Water hazard class (WGK)	A REACH chemical safety assessment has not been carried out.
15.2	Chemical Safety Assessment	

SECTION 16: Other information

The following sections contain revisions or new statements: V1.0- not applicable

References:

EU Harmonised Classification(s) for Acetone (CAS No. 67-64-1), Tetrahydrofuran (CAS No. 109-99-9), Methyl ethyl ketone (CAS No. 78-93-3).
Existing ECHA registration(s) for Acetone (CAS No. 67-64-1), Tetrahydrofuran (CAS No. 109-99-9), Methyl ethyl ketone (CAS No. 78-93-3).
The classification and labelling inventory for Phenol, polymer with formaldehyde, glycidyl ether (CAS No. 28064-14-4)

Literature References:

Smith R & Mayers MR, 1944, Study of poisoning and fire hazards of butanone and acetone, Industrial Hygiene: 23, 174-176

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	Expert judgement - Flash point
Skin Irrit. 2; H315	Threshold Calculation
Skin Sens. 1; H317	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation
STOT SE 3; H335	Threshold Calculation
STOT SE 3; H336	Threshold Calculation

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Carc. 2; H351	Threshold Calculation
Aquatic Chronic 2; H411	Summation Calculation
EUH019	Expert judgement / Harmonised Classification

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
BCF	Bioconcentration factor (BCF)
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
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

Hazard classification / Classification code:

Flam. Liq. 2; Flammable liquid, Category 2	Hazard Statement(s)
Acute Tox. 4; Acute toxicity, Category 4	H225: Highly flammable liquid and vapour. H302: Harmful if swallowed.
Skin Irrit. 2; Skin corrosion/irritation, Category 2	H315: Causes skin irritation.
Skin Sens. 1; Skin Sensitisation, Category 1	H317: May cause an allergic skin reaction.
Eye Irrit. 2; eye Irritation, Category 2	H319: Causes serious eye irritation.
STOT SE 3; Specific target organ toxicity — single exposure, Category 3	H335: May cause respiratory irritation. H336: May cause drowsiness or dizziness.
Carc. 2; Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic , Category 2	H411: Toxic to aquatic life with long lasting effects.
	EUH019: May form explosive peroxides.

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.

Disclaimers

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