SAFETY DATA SHEET

M-Bond 450 Part B

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

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

1.1 Product identifier

Product Name	M-Bond 450 Part B
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)	Soldering Flux. Welding and soldering 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
Eye Irrit. 2; H319
Acute Tox. 4; H332
STOT SE 3; H336
Repr. 1B; H360FD
STOT SE 2; H371
STOT RE 1; H372
Aquatic Chronic. 3; H412

2.2 Label elements

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

Product Name: M-Bond 450 Part B

Hazard Pictogram(s):

Signal Word(s): DANGER

Contains: 2-Ethoxyethanol; Methyl ethyl ketone; 4,4'-Sulfonyldianiline; Xylene; Boron trifluoride ethylamine complex

Hazard Statement(s)	H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation. H332: Harmful if inhaled. H336: May cause drowsiness or dizziness. H360FD: May damage fertility. May damage the unborn child. H371: May cause damage to organs. H372: Causes damage to organs through prolonged or repeated exposure. H412: Harmful to aquatic life with long lasting effects.
Precautionary Statement(s)	P201: Obtain special instructions before use. P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P235: Keep cool. P260: Do not breathe mist/vapours/spray. P370+P378: In case of fire: Use foam to extinguish.
Supplemental information	None assigned

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
2-Ethoxyethanol	50 - 55	110-80-5	203-804-1	Not yet assigned in the supply chain	Flam. Liq. 3; H226 Acute Tox. 3; H331 Acute Tox. 4 ; H302 Repr. 1B; H360FD
Butanone	25 – 30	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
4,4'-Sulfonyldianiline	15 – 20	80-08-0	201-248-4	Not yet assigned in the supply chain	Acute Tox. 4; H302 STOT SE 2; H371 (blood) STOT RE 1; H372(Testes, epididymis) STOT RE 2; H373 (blood, spleen, liver) Aquatic Chronic. 2; H411
Xylene	1 - 10	1330-20-7	215-535-7	Not yet assigned in the supply chain	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Acute Tox. 4; H332 STOT SE 3; H335 STOT RE 2; H373 Aquatic Chronic. 3; H412
Boron trifluoride ethylamine complex	0.1 - 0.5	75-23-0	200-852-5	Not yet assigned in the supply chain	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335

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	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.
Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
Skin Contact	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.
Eye Contact	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.
Ingestion	IF SWALLOWED: Rinse mouth. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. If symptoms occur obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. Harmful if inhaled. May cause drowsiness or dizziness. May damage fertility. May damage the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.
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. Vapours can form explosive mixtures with air. Containers may explode when involved in a fire. Keep container(s) exposed to fire cool, by spraying with water. Thermal decomposition will evolve toxic and corrosive vapours: Carbon dioxide, Carbon monoxide lammable liquid and vapour. 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

Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. 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 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.
	Large spillages:	Evacuate the area and keep personnel upwind. Notify police and fire brigade as soon as possible.
6.4	**Reference to other sections**	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Ensure adequate ventilation. Avoid breathing mist/vapours/spray. 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. Take precautionary measures against static discharge. Do not use sparking tools. Do not spray on an open flame or other ignition source. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Ground/bond container and receiving equipment.
7.2	**Conditions for safe storage, including any incompatibilities**	Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Do not reuse empty containers.
	Storage temperature	Store in a cool/low temperature.
	Storage life	Stable under normal conditions.
	Incompatible materials	Keep away from: Strong oxidising agents, Strong acids and alkali.
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
Methyl ethyl ketone (MEK)	78-93-3	200	600	300	899	Sk, BMGV
Xylene, o-,m-,p- or mixed isomers	1330-20-7	50	220	100	441	Sk, BMGV

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

Note: Sk Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

Bmgv: Biological monitoring guidance value (UK HSE EH40)

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	
Methyl ethyl ketone (MEK)	78-93-3	200	600	300	900	Sk, IOELV
Xylene, mixed isomers	1330-20-7	50	221	100	442	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

Note: Sk - substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body.
IOELV: Indicative Occupational Exposure Limit Value

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
Xylene	1330-20-7	650 mmol methyl hippuric acid/mol creatinine 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 (PPE) — 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.

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	Amber coloured
Odour	Sweetish ketone odor.
Melting point and freezing point	Not established.
Boiling point or initial boiling point and boiling range	Not established.
Flammability	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	0.89 g/cm^3 (H2O = 1)
Relative vapour density	Not established.
Particle characteristics	Not applicable - Liquid

9.2 Other information

Explosive properties	Not explosive. Vapours can form explosive mixtures with air.
Oxidising properties	Not established.
VOC value	84%

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under normal conditions.
10.2	**Chemical stability**	Stable under normal conditions. Hazardous polymerisation will not occur.
10.3	**Possibility of hazardous reactions**	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.
10.4	**Conditions to avoid**	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep from direct sunlight. Do not spray on an open flame or other ignition source. Take precautionary measures against static discharge.
10.5	**Incompatible materials**	Strong oxidising agents, Strong acids and alkali.
10.6	**Hazardous decomposition product(s)**	Highly flammable liquid and vapour. May decompose in a fire giving off toxic fumes. Vapours are heavier than air and may travel considerable distances to a

source of ignition and flashback. In confined spaces, sewers, etc., the vapours may collect to form explosive mixtures with air. When heated to soldering temperatures, the solvents are evaporated and rosin may be thermally degraded. Decomposition products: Carbon monoxide, Carbon dioxide, aliphatic aldehydes, aromatic aldehydes, acids and terpenes.

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		Acute Tox. 4; H332: Harmful if inhaled. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 10 - 20 mg/l (Vapour)
	2-Ethoxyethanol	Acute Tox. 3;H331: Toxic if inhaled. LC50 :7.3 mg/kg Harmonised Classification/ ECHA registration dossier
	Xylene	Acute Tox. 4; H332: Harmful if inhaled. LC50 :29 mg/kg Harmonised Classification/ ECHA registration dossier
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		Based upon the available data, the classification criteria are not met.
Serious eye damage/irritation		Mixture: Eye Irrit. 2; H319: Causes serious eye irritation.
	Butanone	Eye Irrit. 2; H319: Causes serious eye irritation. Test Result: Irritating to eyes. (rabbit) Harmonised Classification/ ECHA registration dossier
	Xylene	Eye Irrit. 2; H319: Causes serious eye irritation. Test Result: Irritating to eyes.(rabbit) (EU Method B.4) Harmonised Classification/ ECHA registration dossier
	Boron trifluoride ethylamine complex	Eye Irrit. 2; H319: Causes serious eye irritation. Test Result: Irritating to eyes. (rabbit) (Unnamed publication, 1979) ECHA registration dossier
Respiratory or skin sensitization		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. 1B; H360FD: May damage fertility. May damage the unborn child.
	2-Ethoxyethanol	Repr. 1B; H360FD: May damage fertility. May damage the unborn child. Developmental toxicity NOAEL: 23 mg/kg/day (oral) Developmental toxicity LOAEC: 37.4 mg/kg/day (inhalation) Harmonised Classification/ ECHA registration dossier
STOT - single exposure		Mixture: STOT SE 3; H336: May cause drowsiness or dizziness. STOT SE 2; H371: May cause damage to organs.
	Butanone	STOT SE 3; H336: May cause drowsiness or dizziness. Harmonised Classification/ ECHA registration dossier
	4,4'-Sulfonyldianiline	STOT SE 2; H371: May cause damage to organs: blood Harmonised Classification/ ECHA registration dossier
	Xylene	STOT SE 3; H335: May cause respiratory irritation. Harmonised Classification/ ECHA registration dossier
	Boron trifluoride ethylamine complex	STOT SE 3; H335: May cause respiratory irritation. ECHA registration dossier
STOT - repeated exposure		Mixture: STOT RE 1; H372: Causes damage to organs through prolonged or repeated exposure.
4,4'-Sulfonyldianiline		STOT RE 1; H372: Causes damage to organs through prolonged or repeated exposure. (Testes, epididymis)

		STOT RE 2; H373: May cause damage to organs through prolonged or repeated exposure. (blood, spleen, liver) Harmonised Classification/ ECHA registration dossier
	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 3; H412: Harmful to aquatic life with long lasting effects. Estimated Mixture LC50(96 hour) >10 - <100 mg/l (Fish)
		4,4'-Sulfonyldianiline	Aquatic Chronic 2; H411: Toxic to aquatic life with long lasting effects. Harmonised Classification/ ECHA registration dossier
		Xylene	Aquatic Chronic 3; H412: Harmful to aquatic life with long lasting effects. NOEC: 0.714 mg/l LOEC: 1.29 mg/l (OECD 210) Harmonised Classification/ ECHA registration dossier
12.2	**Persistence and degradability**		No data for the mixture as a whole.
		2-Ethoxyethanol	Readily biodegradable (according to OECD criteria).
		Butanone	Readily biodegradable (according to OECD criteria). Water degradation rate (%): 98 (28 days) OECD 301D
		4,4'-Sulfonyldianiline	Not biodegradable
		Xylene	Readily biodegradable (according to OECD criteria).
		Boron trifluoride ethylamine complex	Degrades by hydrolysis. Degradation products: flourborn-complexes and ethylamine (Readily biodegradable.)
12.3	**Bioaccumulative potential**		No data for the mixture as a whole. Log Pow: -0.32 - -0.43
		2-Ethoxyethanol	Bioconcentration factor (BCF): 0.28 -0.34 Low bioaccumulative potential
		Butanone	Low bioaccumulative potential
		4,4'-Sulfonyldianiline	Log KOW : <3 Low bioaccumulative potential
		Xylene	Log KOW : 3.1 – 3.2 Low bioaccumulative potential
		Boron trifluoride ethylamine complex	No data available
12.4	**Mobility in soil**		No data for the mixture as a whole.
		2-Ethoxyethanol	Adsorption to solid soil phase is not expected.
		Butanone	Adsorption to solid soil phase is not expected.
		4,4'-Sulfonyldianiline	Adsorption to solid soil phase is not expected.
		Xylene	Log Koc: 2.73 (OECD 121) Adsorption to solid soil phase is not expected.
		Boron trifluoride ethylamine complex	No data available
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 HP6 - Acute toxicity HP10 - Reproductive toxicity HP- 14 - Aquatic toxicity

SECTION 14: TRANSPORT INFORMATION

		ADR/RID	ADN	IMDG	IATA/ICAO
14.1	**UN number or ID number**	UN 1133	UN 1133	UN 1133	UN 1133
14.2	**UN proper shipping name**	ADHESIVES containing flammable liquid	ADHESIVES containing flammable liquid	ADHESIVES containing flammable liquid	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**	Not applicable	Not applicable	Not classified as a Marine Pollutant.	Not applicable
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	
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.:	Not restricted
Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]	P5c
Substance(s) of Very High Concern (SVHCs)	2-Ethoxyethanol: Reproductive toxicity
Restrictions of occupation:	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.
To follow:	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

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)	5.2.5 Organische Stoffe
Water hazard class (WGK)	Water hazard class: 2 (Self classification)

15.2 Chemical Safety Assessment A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: V4.0 - New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References:

Harmonised Classification(s) for Butanone (CAS No. 78-93-3), 2-Ethoxyethanol (CAS No. 110-80-5), 4,4'-Sulfonyldianiline (CAS No. 80-08-0), Xylene (CAS No. 1330-20-7)

Existing ECHA registration(s) for Butanone (CAS No. 78-93-3), 2-Ethoxyethanol (CAS No. 110-80-5), 4,4'-Sulfonyldianiline (CAS No. 80-08-0), Xylene (CAS No. 1330-20-7), Boron trifluoride ethylamine complex (CAS No. 75-23-0)

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
Eye Irrit. 2; H319	Threshold Calculation
Acute Tox. 4; H332	Acute Toxicity Estimate (ATE) Calculation.
STOT SE 3; H336	Threshold Calculation
Repr. 1B; H360FD	Threshold Calculation
STOT SE 2; H371	Threshold Calculation
STOT RE 1; H372	Threshold Calculation
Aquatic Chronic. 3; H412	Threshold 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
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:	**Hazard Statement(s)**
Flam. Liq. 2; Flammable liquid, Category 2	H225: Highly flammable liquid and vapour.
Flam. Liq. 3; Flammable liquid, Category 3	H226: Flammable liquid and vapour.
Acute Tox. 4; Acute Toxicity, Category 4	H302: Harmful if swallowed.
Asp. Tox. 1; Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Skin Irrit. 2; Skin corrosion/irritation, Category 2	H315: Causes skin irritation.
Eye Irrit. 2; Eye Irritation, Category 2	H319: Causes serious eye irritation.
Acute Tox. 3; Acute Toxicity, Category 3	H331: Toxic if inhaled.
Acute Tox. 4; Acute Toxicity, Category 4	H332: Harmful if inhaled.
STOT SE 3; Specific Target Organ Toxicity — Single Exposure, Category 3	H335: May cause respiratory irritation.
STOT SE 3; Specific Target Organ Toxicity — Single Exposure, Category 3	H336: May cause drowsiness or dizziness.

Repr. 1B; Reproductive toxicity, Category 1B	H360FD: May damage fertility. May damage the unborn child.
STOT SE 2; Specific target organ toxicity — single exposure, Category 2	H371: May cause damage to organs.
STOT RE 1; Specific target organ toxicity — repeated exposure, Category 1	H372: Causes damage to organs through prolonged or repeated exposure.
STOT RE 2; Specific target organ toxicity — repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic , Category 2	H411: Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic , Category 3	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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