

# SAFETY DATA SHEET

## M-Bond 450 Part B

www.vpgsensors.com

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

Date of Issue: 27 January 2023  
Date of First Issue: 20 March 2012  
Version: 5.0

### SECTION 1: IDENTIFICATION

**Product identifier**

Product Name M-Bond 450 Part B

**Other Means of Identification**

None known.

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

Identified Use(s) Adhesive  
Uses Advised Against Anything other than the above.

**Details of the supplier of the safety data sheet**

Supplier VISHAY MEASUREMENTS GROUP, INC.  
Post Office Box 27777  
Raleigh, NC 27611  
USA  
Telephone 919-365-3800  
Fax 919-365-3945  
E-Mail (competent person) [mm.us@vpgsensors.com](mailto:mm.us@vpgsensors.com)

**Emergency telephone number**

Emergency Phone No. +1 800-262-8200 (for spills and releases) CHEMTREC (24 hours)  
Languages spoken English

### SECTION 2: HAZARD(S) IDENTIFICATION

**Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200**

Physical hazards Flammable Liquid, Category 2  
Health hazards Serious eye damage/irritation, Category 2  
Acute toxicity, Category 4 - inhalation  
Specific target organ toxicity — single exposure, Category 3 (Narcotic effects)  
Reproductive toxicant, Category 1B  
Specific target organ toxicity — single exposure, Category 2  
Specific target organ toxicity - Repeated exposure, Category 1  
Environmental hazards Hazardous to the aquatic environment (Chronic), Category 3

**Label elements**

Hazard Pictogram(s)



Signal Word(s)

DANGER

Hazard Statement(s)

Highly flammable liquid and vapour.  
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.  
Harmful to aquatic life with long lasting effects.

Precautionary Statement(s)

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Keep container tightly closed.  
Ground and bond container and receiving equipment.  
Use explosion proof electrical equipment.  
Use non-sparking tools.  
Take action to prevent static discharges.  
Do not breathe mist/vapours/spray.  
Wash hands and exposed skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Avoid release to the environment.  
Wear protective gloves/eye protection/face protection.  
IF ON SKIN or hair: Take off immediately all contaminated clothing. Rinse skin with water.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Call a POISON CENTER/doctor.  
In case of fire: Use foam to extinguish.  
Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents in accordance with local, state or national legislation.

### Other hazards

Vapours can form explosive mixtures with air.

### Percent of the mixture consists of ingredient(s) of unknown acute toxicity:

0% of the mixture consists of ingredients of unknown acute inhaled toxicity.  
0% of the mixture consists of ingredients of unknown acute oral toxicity.  
0% of the mixture consists of ingredients of unknown acute dermal toxicity.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**  
not applicable

**Mixtures** Substances in preparations / mixtures

Classification: OSHA HCS (29 CFR 1910.1200)

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard classification
2-Ethoxyethanol	-	50 - 55	110-80-5	Flammable liquid, Category 3 Acute Toxicity, Category 4 - oral Acute Toxicity, Category 4 - inhalation Reproductive toxicant, Category 1B
Butanone	-	25 - 30	78-93-3	Flammable liquid, Category 3 Serious eye damage/irritation, Category 2 Specific Target Organ Toxicity — Single Exposure, Category 3 (Narcotic effects)
4,4'-Sulfonyldianiline	-	15 - 20	80-08-0	Acute Toxicity, Category 4 - oral Specific Target Organ Toxicity — Single Exposure, Category 2 (blood) Specific target organ toxicity - Repeated exposure, Category 1 (Testes, epididymis) Specific target organ toxicity - Repeated exposure, Category 2 (blood, spleen, liver) Hazardous to the aquatic environment, Chronic, Category 2

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Xylene	-	1 - 10	1330-20-7	Flammable liquid, Category 3 Aspiration toxicity, Category 1 Acute Toxicity, Category 4 Skin corrosion/irritation, Category 2 Serious eye damage/irritation, Category 2 Acute Toxicity, Category 4 - inhalation Specific Target Organ Toxicity — Single Exposure, Category 3 Specific target organ toxicity - Repeated exposure, Category 2 Hazardous to the aquatic environment, Chronic, Category 3
Boron trifluoride ethylamine complex	-	0.1 - 0.5	75-23-0	Acute Toxicity, Category 4 - oral Skin corrosion/irritation, Category 2 Serious eye damage/irritation, Category 2 Specific Target Organ Toxicity — Single Exposure, Category 3

### SECTION 4: FIRST AID MEASURES



#### Description of first aid measures

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

#### Most important symptoms and effects, both acute and delayed

#### Indication of any immediate medical attention and special treatment needed

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.

May be harmful if swallowed. 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. May cause damage to organs through prolonged or repeated exposure.

Treat symptomatically.

### SECTION 5: FIRE-FIGHTING MEASURES

#### Extinguishing media

Suitable Extinguishing Media

Unsuitable extinguishing Media

As appropriate for surrounding fire. Extinguish preferably with foam, carbon dioxide or dry chemical.

Do not use water jet. Direct water jet may spread the fire.

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### 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 Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Sealed containers may rupture explosively if hot.

### 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

### 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.

### 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.

## SECTION 7: HANDLING AND STORAGE

### 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.

### 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  
Incompatible materials

Store in a cool/low temperature.

Keep away from: Strong oxidising agents, Strong acids and alkali.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational Exposure Limits

SUBSTANCE	CAS No.	ppm (a) <sup>1</sup>	mg/m <sup>3</sup> (b) <sup>1</sup>	Skin designation	Source
2-Butanone (Methyl ethyl ketone)	78-93-3	200	590	-	OSHA
2-Ethoxyethanol (Cellosolve)	110-80-5	200	740	X	OSHA
Xylenes (o-, m-, p-isomers)	1330-20-7	100	435	-	OSHA

### Source:

OSHA: Occupational Health and Safety Act - Permissible Exposure Limit (PEL), 1910.1000 TABLE Z-1

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### Biological exposure indices

SUBSTANCE	CAS No.	Determinant	Biological Exposure Indices	Sampling Time	Note
2-Butanone (Methyl ethyl ketone)	78-93-3	Methyl ethyl ketone in urine	2mg/L	End of Shift	Ns
2-Ethoxyethanol (Cellosolve)	110-80-5	2-Ethoxyacetic acid in urine	2mg/L creatinine	End of shift at end of workweek	-

#### Source:

2015 ACGIH Biological Exposure Indices (BEIs)

#### Notes:

Nonspecific - The determinant is nonspecific, since it is also observed after exposure to other chemicals.

#### 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.

#### 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:

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Respiratory protection



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

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)

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Appearance	Amber coloured Liquid
Odor	Sweetish ketone odor.
Odor Threshold	Not established.
pH	Not established.
Melting Point/Freezing Point	Not established.
Initial boiling point and boiling range	Not established.
Flash Point	Not established.
Evaporation Rate	Not established.
Flammability (solid, gas)	Not established.
Upper/lower flammability or explosive limits	Not established.
Vapour pressure	Not established.
Vapour density	Not established.
Relative density	0.89 g/cm <sup>3</sup> (H <sub>2</sub> O = 1)
Solubility(ies)	Not established.
Partition coefficient: n-octanol/water	not applicable - Mixture
Auto-ignition temperature	Not established.
Decomposition Temperature	Not established.
Viscosity	Not established.

### SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions.
<b>Chemical stability</b>	Stable under normal conditions. Hazardous polymerisation will not occur.
<b>Possibility of hazardous reactions</b>	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.
<b>Conditions to avoid</b>	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.
<b>Incompatible materials</b>	Strong oxidising agents, Strong acids and alkali.
<b>Hazardous decomposition product(s)</b>	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

#### Information on toxicological effects

**Acute toxicity - Ingestion**

Mixture: Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) >2,000 mg/kg.

**Acute toxicity - Skin Contact**

Mixture: Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) >2,000 mg/kg.

**Acute toxicity - Inhalation**

Mixture: Acute toxicity, Category 4 - inhalation; Harmful if inhaled.

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		Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 10 - <20 mg/l. (Vapour)
	2-Ethoxyethanol	Acute toxicity, Category 4 - inhalation; Harmful if inhaled. LC50 :7.3 mg/kg EU Data: Harmonised Classification/ ECHA registration dossier
	Xylene	Acute toxicity, Category 4 - inhalation; Harmful if inhaled. LC50 :29 mg/kg EU Data: Harmonised Classification/ ECHA registration dossier
<b>Skin corrosion/irritation</b>		Mixture: Based upon the available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>		Mixture: Serious eye damage/irritation, Category 2: Causes serious eye irritation
	Butanone	Eye Irrit. 2; Causes serious eye irritation. Test Result: Irritating to eyes. (OECD 405) EU Data: Harmonised Classification/ ECHA registration dossier
	Xylene	Serious eye damage/irritation, Category 2; Causes serious eye irritation. Test Result: Irritating to eyes.(rabbit) (EU Method B.4) EU Data: Harmonised Classification/ ECHA registration dossier
	Boron trifluoride ethylamine complex	Serious eye damage/irritation, Category 2; Causes serious eye irritation. Test Result: Irritating to eyes. (rabbit) (Unnamed publication, 1979) EU Data: ECHA registration dossier
<b>Respiratory or skin sensitization</b>		Mixture: Based upon the available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>		Mixture: Based upon the available data, the classification criteria are not met.
<b>Carcinogenicity</b>		Mixture: Based upon the available data, the classification criteria are not met.
<b>Reproductive toxicity</b>		Mixture: Reproductive toxicant, Category 1B; May damage fertility. May damage the unborn child.
	2-Ethoxyethanol	Reproductive toxicant, Category 1B; 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) EU Data: Harmonised Classification/ ECHA registration dossier
<b>STOT - single exposure</b>		Mixture: Based upon the available data, the classification criteria are not met.
	Butanone	Specific target organ toxicity — single exposure, Category 3 (Narcotic effects); May cause drowsiness or dizziness. EU Data: Harmonised Classification/ ECHA registration dossier
	4'-Sulfonyldianiline	Specific target organ toxicity — single exposure, Category 2; May cause damage to organs: blood EU Data: Harmonised Classification/ ECHA registration dossier
	Xylene	Specific target organ toxicity — single exposure, Category 3; May cause respiratory irritation. EU Data: ECHA registration dossier
	Boron trifluoride ethylamine complex	Specific target organ toxicity — single exposure, Category 3; May cause respiratory irritation. ECHA registration dossier
<b>STOT - repeated exposure</b>		Mixture: Specific target organ toxicity - Repeated exposure, Category 1; Causes damage to organs through prolonged or repeated exposure.
	4,4'-Sulfonyldianiline 4,4'-磺酰基双苯胺	Specific target organ toxicity - Repeated exposure, Category 1; Causes damage to organs through prolonged or repeated exposure.(Testes, epididymis) Specific target organ toxicity - Repeated exposure, Category 2; May cause damage to organs through prolonged or repeated exposure. (blood, spleen, liver) EU Data: Harmonised Classification/ ECHA registration dossier
<b>Aspiration hazard</b>		Mixture: Based upon the available data, the classification criteria are not met.
<b>Information on likely routes of exposure</b>		
Inhalation		Possible – accidental exposure
Ingestion		Possible – accidental exposure
Skin Contact		Possible – accidental exposure
Eye Contact		Unlikely – accidental exposure

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<b>Early onset symptoms related to exposure</b>	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. May cause damage to organs through prolonged or repeated exposure.
<b>Delayed health effects from exposure</b>	None Known
<b>Exposure levels and health effects</b>	See Section: 8
<b>Interactive effects</b>	
<b>Other information</b>	
OSHA Designated Carcinogen	No components of the mixture are listed
NIOSH Occupational Carcinogen List	No components of the mixture are listed
NTP Report on Carcinogens	No components of the mixture are listed
IARC Monographs	No components of the mixture are listed

### SECTION 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Mixture: Hazardous to the aquatic environment (Chronic), Category 3; 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 Aquatic Chronic 3; H412: Harmful to aquatic life with long lasting effects. NOEC: 0.714 mg/l Xylene LOEC: 1.29 mg/l (OECD 210) Harmonised Classification/ ECHA registration dossier
<b>Persistence and degradability</b>	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.)
<b>Bioaccumulative potential</b>	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 Log KOW : <3 4,4'-Sulfonyldianiline Low bioaccumulative potential Log KOW : 3.1 – 3.2 Xylene Low bioaccumulative potential Boron trifluoride ethylamine complex No data available
<b>Mobility in soil</b>	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. Log Koc: 2.73 (OECD 121) Xylene Adsorption to solid soil phase is not expected. Boron trifluoride ethylamine complex No data available
<b>Other adverse effects</b>	None known



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### SECTION 13: DISPOSAL CONSIDERATIONS

#### 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.

### SECTION 14: TRANSPORT INFORMATION

	Road/Rail (ADR/RID)	Sea transport (IMDG)	Air (ICAO/IATA)
UN number	UN 1133	UN 1133	UN 1133
UN proper shipping name	ADHESIVES containing flammable liquid	ADHESIVES containing flammable liquid	ADHESIVES containing flammable liquid
Transport hazard class(es)	3	3	3
Packing group	II	II	II
Environmental hazards	Not applicable	Not classified as a Marine Pollutant.	Not applicable
Special precautions for user	See Section: 2		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable		
Additional Information	None		

### SECTION 15: REGULATORY INFORMATION

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

##### US Federal Regulations

TSCA Chemical Data Reporting (CDR) Rule

Listed: 2-Ethoxyethanol; 4,4'-Sulfonyldianiline; Xylene

NIOSH Occupational Carcinogen List

All chemicals are not listed

EPCRA Section 313

All chemicals are not listed

CWA 307- Toxic

All chemicals are not listed

CERCLA - Hazardous Substances

All chemicals are not listed

CWA Section 311 List of Hazardous Substances

All chemicals are not listed

##### US State Regulations

Proposition 65 (California)

Listed: 2-Ethoxyethanol

Massachusetts, New Jersey, Pennsylvania, Rhode

Listed: Butanone; 2-Ethoxyethanol; 4,4'-Sulfonyldianiline; Xylene

Island- State Right to Know Lists

New York -State Right to Know Lists

Listed: Butanone; 2-Ethoxyethanol; Xylene

Minnesota - State Right to Know Lists

Listed: Butanone; 2-Ethoxyethanol; Xylene

Massachusetts – Toxic Use reduction act

Listed: Butanone; 2-Ethoxyethanol; Xylene

##### Non-Regional

IARC Monographs

Listed:

Xylene IARC Classification: Group 3

### SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Not applicable – V1.0

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Revision Date 27 January 2023  
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This Safety Data Sheet was prepared in accordance with US Regulation OSHA HCS (29 CFR 1910.1200)

#### References:

EU Data:

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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)

Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200	Classification Procedure
Flammable Liquid, Category 2	Expert judgement - Flash point
Serious eye damage/irritation, Category 2	Threshold Calculation
Acute toxicity, Category 4 - inhalation	Acute Toxicity Estimate (ATE) Calculation.
Specific target organ toxicity — single exposure, Category 3 (Narcotic effects)	Threshold Calculation
Reproductive toxicant, Category 1B	Threshold Calculation
Specific target organ toxicity — single exposure, Category 2	Threshold Calculation
Specific target organ toxicity - Repeated exposure, Category 1	Threshold Calculation
Hazardous to the aquatic environment (Chronic), Category 3	Threshold Calculation

### LEGEND

ADR/RID	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road / RID: Regulations concerning the international railway transport of dangerous goods
BCF	Bioconcentration factor (BCF)
CAS	CAS: Chemical Abstracts Service
DNEL	Derived No Effect Level
EU	European Union
EC	EC: European Community
EU	European Union
IATA	IATA: International Air Transport Association
ICAO/IATA	ICAO: International Civil Aviation Organization / IATA: International Air Transport Association
IMDG	IMDG: International Maritime Dangerous Goods
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
UN	United Nations
vPvB	very Persistent and very Bioaccumulative

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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