

SAFETY DATA SHEET

M-Bond 43B

www.vpgsensors.com

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022




Date of First Issue: 09/08/2022

Version: 1.0

SECTION 1: IDENTIFICATION

1.1 GHS Product identifier	
Product name	M-Bond 43B
CAS No.	Not applicable - Mixture
1.2 Recommended use of the chemical and restrictions on use	
Identified Use(s)	Adhesive
Uses advised against	Anything other than the above.
1.3 Details of the supplier	
Company Identification	VISHAY MEASUREMENTS GROUP, INC. Post Office Box 27777 Raleigh, NC 27611 USA +1 919-365-3800 mm.us@vpgsensors.com
Telephone	
E-mail (competent person)	
Importer/Distributor name, address and telephone number	
Name	
Company Address	
Telephone	
1.4 Emergency Phone No.	
Emergency Phone No.	1-800-424-9300 (24 hours) 61-290372994 (for spills and releases) CHEMTREC (24 hours)
Languages spoken	English

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture	
2.1.1 In accordance with the Safe Work Australia model Work Health and Safety Regulations (2020) & GHS 7	Flammable liquid - Category 2 Aspiration hazard - Category 1 Serious eye damage/ Eye Irritation - Category 2 Skin corrosion/irritation - Category 2 Skin sensitization - Category 1 Specific target organ toxicity - Single exposure - Category 3 Specific target organ toxicity - Repeated exposure - Category 2 Reproductive toxicity - Category 2 Hazardous to the aquatic environment - Chronic - Category 3
2.2 GHS label elements, including precautionary statements	
Product name	M-Bond 43B
Hazard Pictogram(s)	  
Signal Word(s)	DANGER
Hazard Statement(s)	H225: Highly flammable liquid and vapour. H304: May be fatal if swallowed and enters airways.

SAFETY DATA SHEET

M-Bond 43B

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022

Date of First Issue: 09/08/2022

Version: 1.0

	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. H361d: Suspected of damaging the unborn child. H412: Harmful to aquatic life with long lasting effects.
Precautionary Statement(s)	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground and bond container and receiving equipment. P241: Use explosion proof electrical equipment. P242: Use non-sparking tools. P243: Take action to prevent static discharges. P261: Avoid breathing mist/vapours/spray. P264: Wash hands and exposed skin thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves and eye/face protection. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313: IF exposed or concerned: Get medical advice/attention. P331: Do NOT induce vomiting. P332+P313: If skin irritation occurs: Get medical advice/attention. P337+P313: If eye irritation persists: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse. P370+P378: In case of fire: Use carbon dioxide, dry chemical, foam or waterspray to extinguish. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P403+P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P501: Dispose of contents in accordance with local, state or national legislation.

2.3 Other hazards which do not result in classification Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances - Not applicable.

3.2 Mixtures

GHS Classification

Chemical identity of the substance	Common name(s), synonym(s) of the substance	%W/W	CAS No.	EC No.	Hazard classification
Ethyl methyl ketone	2-Butanone; MEK; Methyl ethyl ketone	35 - 40	78-93-3	201-159-0	Flammable liquid - Category 2 Serious eye damage/ Eye Irritation - Category 2 Specific target organ toxicity - Single exposure- Category 3
Xylene	Xylol	20 - 25	1330-20-7	215-535-7	Flammable liquid - Category 2

SAFETY DATA SHEET

M-Bond 43B

www.vpgsensors.com

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022
Date of First Issue: 09/08/2022
Version: 1.0

					Aspiration hazard - Category 1 Acute toxicity – Dermal – Category 4 Skin corrosion/irritation - Category 2 Serious eye damage/ Eye Irritation - Category 2 Acute toxicity – inhalation – Category 4 Specific target organ toxicity - Single exposure- Category 3 Specific target organ toxicity - Repeated exposure- Category 2 Hazardous to the aquatic environment - Chronic - Category 3
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	Bisphenol A, epichlorhydrin polymer; Epichlorhydrin, bisphenol A resin; Oxirane, (chloromethyl)-, polymer with 4,4'-(1-methylethylidene)bis[phenol]	15 - 20	25068-38-6	500-033-5	Skin corrosion/irritation - Category 2 Skin sensitization – Category 1 Serious eye damage/ Eye Irritation - Category 2 Hazardous to the aquatic environment - Chronic - Category 2
Diacetone alcohol	2-Pentanone, 4-hydroxy-4-methyl-	10 - 15	123-42-2	204-626-7	Flammable liquid - Category 2 Serious eye damage/ Eye Irritation - Category 2 Specific target organ toxicity - Single exposure- Category 3 Reproductive toxicity - Category 2
4,4'-Sulfonyldianiline	Benzenamine, 4,4'-sulfonylbis-	5 - 10	80-08-0	201-248-4	Acute toxicity – oral – Category 4 Specific target organ toxicity - Single exposure- Category 2 Specific target organ toxicity - Repeated exposure- Category 1 Specific target organ toxicity - Repeated exposure- Category 2 Hazardous to the aquatic environment - Chronic - Category 2

For full text of H phrases see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of necessary first-aid measures

Self-protection of the first aider

Do not breathe vapour. Wear suitable protective clothing. Wear suitable respiratory protective equipment if exposure to high levels of material are likely. Do not use mouth-to-mouth resuscitation.

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

SAFETY DATA SHEET

M-Bond 43B

www.vpgsensors.com

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022

Date of First Issue: 09/08/2022

Version: 1.0

Skin contact	waistband. Apply artificial respiration only if patient is not breathing or under medical supervision. Call a POISON CENTER/doctor if you feel unwell. IF ON SKIN: Remove contaminated clothing and wash all affected areas with plenty of water. Contaminated clothing should be thoroughly cleaned. If skin irritation or rash occurs: 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. 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 vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Immediately call a POISON CENTER/doctor.
4.2 Most important symptoms/effects, acute and delayed	May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure. Suspected of damaging the unborn child.
4.3 Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically. IF SWALLOWED: Do NOT induce vomiting.

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 Specific hazards arising from the chemical	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 Special protective actions 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.
5.4 Hazchem Code	Not applicable

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

SAFETY DATA SHEET

M-Bond 43B

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022

Date of First Issue: 09/08/2022

Version: 1.0

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature
Storage measures
Incompatible materials

ignition sources. No smoking. Take precautionary measures against static discharge.

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.

Ambient.

Stable under normal conditions.

Keep away from: Oxidizing agents, Reducing agents, Amines, Ammonia, strong bases, Acids and Isocyanates.

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

Chemical name	Synonym(s)	CAS No.	TWA (ppm)	TWA (mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Advisory carcinogen category	Other advisory information	Notes
Methyl ethyl ketone (MEK)	MEK 2-Butanone	78-93-3	150	445	300	890	-	-	-
Diacetone alcohol	4-Hydroxy-4-methyl-2-pentanone	123-42-2	50	238	-	-	-	-	-

Source: Safe Work Australia Workplace Exposure Standards for Airborne Contaminants (2019)

8.1.2 Biological limit value

SUBSTANCE	CAS No.	Determinant	Biological Exposure Indices	Sampling Time	Note
Ethyl methyl ketone	78-93-3	Ethyl methyl ketone in urine	2 mg/L	End of shift	Ns
Xylene, o-,m-,p- or mixed isomers	1330-20-7	Methylhippuric acids in urine.	1.5 g/g Creatinine	End of shift	-

Source: 2021 ACGIH Biological Exposure Indices (BEIs)

Ns – Nonspecific

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 bottles should be available.

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. Do not breathe vapour. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be laundered before reuse. Do not eat, drink or smoke at the work place.

Eye/ face protection



Wear eye protection with side protection (EN166). Wear protective eye glasses for protection against liquid splashes. Recommended: Safety spectacles/goggles/full face shield

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: Neoprene.

M-Bond 43B

www.vpgsensors.com

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022
Date of First Issue: 09/08/2022
Version: 1.0

Respiratory protection



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

In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment. Select a filter suitable for organic gases and vapours. Recommended: EN143, Filter type A.

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 AND SAFETY CHARACTERISTICS

9.1 Basic physical and chemical properties

Physical state	Liquid
Colour	amber
Odour	Acetone Odour
Melting point/freezing point	-86°C
Boiling point or initial boiling point and boiling range	80°C
Flammability	No data available
Lower and upper explosion limit/flammability limit	Flammable Limits (Lower) (%v/v): 1 Flammable Limits (Upper) (%v/v): 11.4
Flash point	-9 °C [Open cup]
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Kinematic viscosity	No data available
Solubility	Slightly soluble (Water): < 20%
Partition coefficient n-octanol/water (log value)	No data available
Vapour pressure	78 @ 20°C (mmHg)
Density and/or relative density	0.92 (H ₂ O = 1)
Relative vapour density	3.5 (Air = 1)
Particle characteristics	not applicable

9.2 Other information

Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Volatile Organic Compound Content	738 g/L

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. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Avoid contact with: Strong oxidising agents (May cause fire). 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.
10.5 Incompatible materials	Keep away from: Oxidizing agents, Reducing agents, Amines, Ammonia, strong bases, Acids and Isocyanates.
10.6 Hazardous decomposition products	May decompose in a fire giving off toxic fumes. Carbon dioxide and Carbon monoxide.

SAFETY DATA SHEET

M-Bond 43B

www.vpgsensors.com

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022

Date of First Issue: 09/08/2022

Version: 1.0

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity - Ingestion	Acute Tox. 4; H302: Harmful if swallowed. Acute Toxicity Estimate Mixture Calculation: Estimated LD50: >300 - ≤2000 mg/kg bw/day.
Acute toxicity - Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20 mg/l.
Acute toxicity - Dermal	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.
Ethyl methyl ketone	Prolonged skin contact will result in defatting of the skin, leading to irritation, and in some cases, dermatitis. (Smith R & Mayers MR, 1944)
Xylene	Skin Irrit. 2; H315 EU Harmonised Classification EU ECHA Registration Endpoint summary: Irritating to eyes, respiratory system and skin.
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	Skin Irrit. 2; H315 EU Harmonised Classification No data.
Serious eye damage/irritation	Mixture: Eye Irrit. 2; H319: Causes serious eye irritation.
Ethyl methyl ketone	Eye Irrit. 2; H319: Causes serious eye irritation. Test Result: Irritating to eyes. (OECD 405) ECHA Registration Endpoint summary
Xylene	Eye Irrit. 2; H319: Causes serious eye irritation. EU ECHA Registration Endpoint summary: Irritating to eyes, respiratory system and skin.
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	Eye Irrit. 2; H319: Causes serious eye irritation. EU Harmonised Classification No data.
Diacetone Alcohol	Eye Irrit. 2; H319: Causes serious eye irritation. EU ECHA Registration Endpoint summary : Irritating to eyes. (rabbit) (OCED 405)
Respiratory or skin sensitisation	Mixture: Skin Sens. 1: May cause an allergic skin reaction.
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	Skin Sens. 1: May cause an allergic skin reaction. EU Harmonised Classification No data.
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
Carcinogenicity	Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Repr. 2; H361d: Suspected of damaging the unborn child.
Diacetone alcohol	Mixture: Repr. 2; H361d: Suspected of damaging the unborn child. Maternal NOAEL: 1000 mg/kg/day, embryo-fetal development NOAEL 1000 mg/kg/day. EU ECHA registration dossier
STOT - single exposure	STOT SE 3: May cause respiratory irritation. STOT SE 3: May cause drowsiness or dizziness.
Ethyl methyl ketone	Rats at all dose levels: gait and/or posture abnormalities. Higher dose groups some rats were comatose or prostrate within a few hours of dosing, with some animals being unconscious for 24 hours. (OECD 423)
Xylene	STOT SE 3; H335 EU ECHA Registration Endpoint summary: Irritating to eyes, respiratory system and skin.
STOT - repeated exposure	STOT RE 2: May cause damage to organs through prolonged or repeated exposure. STOT RE. 2; H373 Oral: Adverse effects observed – NOAEL (rat) 250 mg/kg bw/day Inhalation: Adverse effects observed – NOAEC (rat) 3515 mg/m ³
Aspiration hazard	Asp. Tox. 1: May be fatal if swallowed and enters airways.
Xylene	Asp. Tox. 1; H304 EU ECHA registration dossier
Information on likely routes of exposure	

SAFETY DATA SHEET

M-Bond 43B

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022

Date of First Issue: 09/08/2022

Version: 1.0

Inhalation	Unlikely – accidental exposure
Ingestion	Unlikely – accidental exposure
Skin contact	Possible – accidental exposure
Eye contact	Unlikely – accidental exposure

Symptoms related to the physical, chemical and toxicological characteristics not applicable

Delayed and immediate effects and also chronic affects from short and long term exposure Harmful if swallowed. May cause an allergic skin reaction. Causes damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity (such as acute toxicity estimates) None Known

Interactive effects None Known

11.2 Other information	None Known
NTP Report on Carcinogens	No components listed.
IARC Monographs	No components listed.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Hazardous to the aquatic environment - Chronic - Category 3 H412: Harmful to aquatic life with long lasting effects.
Xylene	Hazardous to the aquatic environment - Chronic - Category 3 H412: Harmful to aquatic life with long lasting effects.
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	Acute Toxicity: Not classified - LC50 (fish) mg/l 2.6 (OECD 203) Chronic Toxicity: NOEC (Fish) mg/l >1.3 (Walsh et al, 1977) Hazardous to the aquatic environment - Chronic - Category 2 H411: Toxic to aquatic life with long lasting effects. EU Harmonised Classification
4,4'-Sulfonyldianiline	Hazardous to the aquatic environment - Chronic - Category 2 H411: Toxic to aquatic life with long lasting effects. EU Harmonised Classification
12.2 Persistence and degradability	No data for the mixture as a whole.
Ethyl methyl ketone	Readily biodegradable. (28 Days) (OECD 301 F)
Xylene	Readily biodegradable. (10 Days) (OECD 301 F)
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700):	Little or no biodegradation has been observed (OECD 301F)
Diacetone Alcohol	Readily biodegradable. (10 Days) (OECD 301 F)
4,4'-Sulfonyldianiline	Not readily biodegradable.
12.3 Bioaccumulative potential	No data for the mixture as a whole.
Ethyl methyl ketone	No data
Xylene	The substance has low potential for bioaccumulation. EU ECHA registration dossier
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700):	No data.
Diacetone Alcohol	The substance has low potential for bioaccumulation. EU ECHA registration dossier
4,4'-Sulfonyldianiline	The substance has low potential for bioaccumulation. EU ECHA registration dossier
12.4 Mobility in soil	No data for the mixture as a whole.
Ethyl methyl ketone	No data
Xylene	The substance is predicted to have moderate mobility in soil. EU ECHA registration dossier
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700):	The substance is predicted to have low mobility in soil. Slightly soluble in: Water
Diacetone Alcohol	The substance is predicted to have low mobility in soil. EU ECHA registration dossier

SAFETY DATA SHEET

M-Bond 43B

www.vpgsensors.com

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022
Date of First Issue: 09/08/2022
Version: 1.0

4,4'-Sulfonyldianiline The substance is predicted to have low mobility in soil.
EU ECHA registration dossier
None known.

12.5 Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Safe handling and disposal methods

Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. Containers of this material may be hazardous when empty since they retain product residue. Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1	UN number	ADR/RID/ADG UN 1133	IMDG/ADN UN 1133	IATA/ICAO UN 1133
14.2	UN proper shipping name	ADHESIVES (Contains: Flammable liquid)	ADHESIVES (Contains: Flammable liquid)	ADHESIVES (Contains: Flammable liquid)
14.3	Transport hazard class(es)	3	3	3
14.4	Packing group	II	II	II
14.5	Environmental hazards	ENVIRONMENTALLY HAZARDOUS	CLASSIFIED AS A MARINE POLLUTANT.	ENVIRONMENTALLY HAZARDOUS
14.6	Special precautions for user	See Section: 2		
14.7	Transport in bulk according to IMO instruments	Not applicable		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

15.2 International regulations

Montreal Protocol / Stockholm Convention / Rotterdam Convention / Basel Convention / MARPOL
IARC Monographs

Not listed
Not applicable

15.3 National regulations

Australian Inventory of Chemical Substances
NICNAS - Priority Existing Chemicals
NICNAS - IMAP Framework

All chemicals listed
Not listed
Listed:
Ethyl methyl ketone (Tier I: Environment Assessment, Tier II: Human Health Assessment)
Xylene (Tier II: Human Health Assessment)
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700) (Tier II: Human Health Assessment)
Diacetone Alcohol (Tier I: Environment Assessment, Tier II: Human Health Assessment)

NICNAS - High Volume Industrial Chemical List

Listed:
Ethyl methyl ketone (Threshold Range: Between 1,000 and 9,999 tonnes)
Xylene (Threshold Range: Between 10,000 and 99,999 tonnes)
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700) (Threshold Range: Between 1,000 and 9,999 tonnes)
Diacetone Alcohol Threshold Range: Between 1,000 and 9,999 tonnes

National Pollutant Inventory

Listed:
Ethyl methyl ketone (Threshold Category = 1, Threshold = 10 tpa)
Xylene (Threshold Category = 1, Threshold = 10 tpa)
Diacetone Alcohol (VOC - Threshold Category = 1a, Threshold = 25 tpa/a design capacity of 25 kilotonnes for bulk storage facilities; Threshold Category = 2a, Threshold = 400 tpa/1 tph; Threshold Category = 2b, Threshold = 2,000 tpa/60,000 MWh/rated at 20 MW)

SAFETY DATA SHEET

M-Bond 43B

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022
Date of First Issue: 09/08/2022
Version: 1.0

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) Not listed

SECTION 16: OTHER INFORMATION

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

Version 1.0
Revision date 05/08/2022
Date of First Issue 05/08/2022

References:

References: Existing Safety Data Sheet (SDS), EU Harmonised Classification(s) for Ethyl methyl ketone (CAS No. 78-93-3), Xylene (CAS No. 1330-20-7), Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight < 700) (CAS No. 25068-38-6), Diacetone alcohol (CAS No. 123-42-2) and 4,4'-Sulfonyldianiline (CAS No. 80-80-0).

EU Existing ECHA registration(s) for Ethyl methyl ketone (CAS No. 78-93-3), Xylene (CAS No. 1330-20-7), Diacetone alcohol (CAS No. 123-42-2) and 4,4'-Sulfonyldianiline (CAS No. 80-80-0).

Literature reference

1. Smith R & Mayers MR, 1944, Study of poisoning and fire hazards of butanone and acetone, Industrial Hygiene: 23, 174-176
2. Walsh, Armstrong, Bartley, Salman and Frank, 1977, Residues of emulsified xylene in aquatic weed control and their impact on rainbow trout, Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.

GHS Classification	Classification Procedure
Flammable liquid - Category 2	Flash Point [Open cup] Test Result/ Boiling Point (°C)
Aspiration hazard - Category 1	Estimated Viscosity
Serious eye damage/ Eye Irritation - Category 2	Threshold Calculation
Skin corrosion/irritation - Category 2	Threshold Calculation
Skin sensitization - Category 1	Threshold Calculation
Specific target organ toxicity - Single exposure- Category 3	Threshold Calculation
Specific target organ toxicity - Repeated exposure- Category 2	Threshold Calculation
Reproductive toxicity - Category 2	Threshold Calculation
Hazardous to the aquatic environment - Chronic - Category 3	Summation Calculation

This Safety Data Sheet was prepared in accordance with Code Of Practice For The Preparation Of Safety Data Sheets For Hazardous Chemicals (Safe Work Australia, 2020) & GHS 7

Legend

ADG	Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
ADR	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration Factor
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
IATA	IATA: International Air Transport Association
ICAO	ICAO: International Civil Aviation Organization
IMDG	IMDG: International Maritime Dangerous Goods
LTEL	Long term exposure limit
PBT	PBT: Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	RID: Regulations concerning the international railway transport of dangerous goods
STEL	Short term exposure limit
vPvB	vPvB: very Persistent and very Bioaccumulative

SAFETY DATA SHEET

M-Bond 43B

ACCORDING TO: CODE OF PRACTICE FOR THE PREPARATION OF SAFETY DATA SHEETS FOR HAZARDOUS CHEMICALS (SAFE WORK AUSTRALIA, 2020) & GHS 7

Date of issue: 09/08/2022

Date of First Issue: 09/08/2022

Version: 1.0

Hazard Class / Classification code:

Asp. Tox. 1; Aspiration Toxicity , Category 1
Acute Tox. 4; Acute toxicity, Category 4
Acute Tox. 4; Acute toxicity, Category 4
Acute Tox. 4; Acute toxicity, Category 4
Skin Irrit. 2 ; Skin corrosion/irritation, Category 2
Skin Sens. 1 ; Skin sensitisation, category 1
Eye Irrit. 2; Serious eye damage/irritation, Category 2
STOT SE 2; Specific target organ toxicity — single exposure, Category 2
STOT SE 3; Specific target organ toxicity — single exposure, Category 3
STOT SE 3; Specific target organ toxicity — single exposure, Category 3
STOT RE 2; Specific target organ toxicity — repeated exposure, Category 2
Repr. 2; Reproductive toxicity, Category 2
Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic , Category 2
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic , Category 3

Hazard Statement(s)

H304: May be fatal if swallowed and enters airways.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H332: Harmful if inhaled.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H371: May cause damage to organs.
H335: May cause respiratory 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.
H411: Toxic to aquatic life with long lasting effects.
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.

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Vishay Precision Group gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Vishay Precision Group accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at vpgsensors.com.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.