1. IDENTIFICATION OF THE MIXTURE AND OF THE SUPPLIER

Product Identifier

Product	- [21-85]
Recommended use of chemical	Use as hardener
Restriction on use	No open flames, No sparks, and No smoking

Supplier's details

Company	Big-Ben Chemical Company Limited
Address	168 Mu 2 Donkhaidee Krathumban Samutsakorn 74110 Thailand
Telephone number	+66 2 811 1442 or +66 2 811 1443
Fax number	+66 2 811 0632
E-mail	bbp@bbp.co.th
Emergency phone number	+66 2 811 1442 or + 66 2 811 1443

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

This product has been classified in accordance with the hazard communication standard 29 CSR 1910.1200; the SDS and labels contain all the information as required by the standard.

Flammable liquids	Category 2
Acute toxicity - dermal	Category 1
Skin corrosion/irritation	Category 3
Specific target organ toxicity (single exposure)	Category 3
Hazardous to the aquatic environment - acute hazard	Category 3

Remark:

Percentage of mixture consisting of ingredient(s) of unknown oral toxicity: 58.20%
Percentage of mixture consisting of ingredient(s) of unknown dermal toxicity: 58.20%
Percentage of mixture consisting of ingredient(s) of unknown inhalation toxicity: 10.20%

GHS label elements

Pictogram or symbol

Signal word **Danger**

Hazard statement:

H225 Highly Flammable liquid and vapour
H310 Fatal in contact with skin
H316 Causes mild skin irritation
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H402 Harmful to aquatic life

Precautionary statement

[PREVENTION]

P210 Keep away from heat / sparks / open flames / hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground / bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilating / lighting / equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P262 Do not get in eyes, on skin, or on clothing.

P264 Wash thoroughly after handling.
P270 Do no eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
[RESPONSE]
P302+P350 IF ON SKIN Gently wash with plenty of soap and water.
P303+P361+P353 IF ON SKIN (or hair) Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+P340 IF INHALED Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor / physician.
P312 Call a POISON CENTER or doctor / physician if you feel unwell.
P322 Specific measures (see on this label).
P332+P313 IF skin irritation occursGet medical advice / attention.
P361 Remove / Take off immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire Use dry sand, dry chemical or alcohol-resistant foam for extinction.
[STORAGE]
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.
[DISPOSAL]
P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Content % (w/w)
1-METHOXY-2-PROPANOL ACETATE	108-65-6	1.71 - 1.98
Butyl Acetate	123-86-4	38.00 - 44.00
Homopolymer	28182-81-2	45.60 - 52.80
Homopolymer	53880-05-0	7.98 - 9.24
Xylene	1330-20-7	1.71 - 1.98

4. FIRST AID MEASURES

Inhalation	Remove to fresh air. If unconscious, place in recovery position and seek medical attention immediately.
Skin contact	Immediately flush with water for at least 15 minutes. Remove contaiminated clothing. Seek medical attention immediately. Wash thoroughly after handling.
Eye contact	Hold eyelids apart and immediately flush with plenty of water for 15 minutes. Seek medical advice. Remove contact lenses.
Ingestion	Rinse mouth with water. Never give anything by mouth to an unconscious person. Obtain medical attention. If swallowed, DO NOT induce vomitting unless directed to do so by medical personnel.
Most important symptoms/effects, acute and delayed	Dizziness. Drowsiness. Headache. Nausea. Vomitting. Weakness. Unconsciousness. Skin and eye redness. Pain. Nausea. Vomitting.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Dry chemical. Carbon Dioxide (CO_2). Alcohol-resistant foam. Water spray.
Unsuitable extinguishing media	High volume water jet.
Specific hazards arising from the chemical	Flammable liquid. Vapors can form an ignitable misture with air. Vapors can flow along surfaces to a distant ignition source and flash back. Container may rupture on heating.
Specific protective equipment and precautions for firefighters	Wear self-contained breathing apparatus and full protective clothing for firefighting.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Prevent further leakage or spillage if safe to do so. Use personal protective equipment. Use only non-sparkling tools.
Environmental precautions	Prevent the material from entering drains or water courses.

Environmental precautions	Prevent the material from entering drains or water courses.
Methods and materials for containment and cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid breathing vapor and contact with eyes, skin, and clothing. Do no leave containers open. Avoid repeated or prolonged contact with skin.
Conditions for safe storage, including any incompatibilites	Keep away from heat or flames. Keep in cool, dry, ventilated storage and in closed containers. Store away from oxidizing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

1-METHOXY-2-PROPANOL ACETATE
OSHA
PEL-TWA 50[13]
Skin notification Y[13]
NIOSH
REL-TWA 5[13]
Skin notification Y[13]
ACGIH
TLV-TWA 20[13]
Skin notification N[13]
CAL/OSHA
PEL-TWA 20[13]
Safe Work Australia (Australia, 4/2024)
TWA : 50 ppm 8 hours. [17]
TWA : 274 mg/m^3 8 hours. [17]
STEL : 100 ppm 15 minutes. [17]
STEL : 548 mg/m^3 15 minutes. [17]

Butyl Acetate
OSHA
PEL-TWA 150[14]
Skin notification N[14]
NIOSH
REL-TWA 150[14]
REL-STEL 200[14]
Skin notification N[14]
ACGIH
TLV-TWA 50[14]
TLV-STEL 150[14]
Skin notification N
CAL/OSHA
PEL-TWA 150[14]
PEL-STEL 200[14]
Skin notification N[14]
Safe Work Australia (Australia, 4/2024)
TWA : 50 ppm 8 hours. [18]
TWA : 270 mg/m^3 8 hours. [18]
STEL : 100 ppm 15 minutes. [18]
STEL : 541 mg/m^3 15 minutes. [18]

Homopolymer
OSHA
Skin notification NA[16]
NIOSH
Skin notification NA[16]
ACGIH

	Skin notification NA[16]
	CAL/OSHA
	Skin notification NA[16]
	Xylene
	OSHA
	PEL-TWA 100[15]
	Skin notification N[15]
	NIOSH
	REL-TWA 100[15]
	Skin notification N[15]
	ACGIH
	TLV-TWA 100[15]
	TLV-STEL 150[15]
	Skin notification N[15]
	CAL/OSHA
	PEL-TWA 100[15]
	PEL-STEL 150[15]
	PEL-C 300[15]
	Skin notification N[15]
	Safe Work Australia (Australia, 4/2024)
	TWA : 80 ppm 8 hours. [19]
	TWA : 350 mg/m^3 8 hours. [19]
	STEL : 150 ppm 15 minutes. [19]
	STEL : 655 mg/m^3 15 minutes. [19]
Appropriate engineering controls	Provide adequate ventilation. Install local exhaust.
Personal protective equipment	
Respiratory protection	Organic vapor respirator
Hand protection	Rubber gloves. Neoprene.
Eye protection	Safety goggle.
Skin and body protection	Wear suitable clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Colour	Transparent
Odour	Organic solvent
pH	Not available
Melting point/freezing point	Not available
Boiling point or initial boiling point and boiling range	139.5 °C (283.1 °F) (Xylene)
Flash point	18.0 °C (64.4 °F) (Xylene)
Flammability	Flammable
Lower and upper explosion limit/flammability limit	Not available
Vapour pressure	16 hPa at 20 °C (Butyl Acetate)
Density and/or relative density	0.95 - 1.05 g/cm^3
Relative vapour density	Not available
Solubility	Soluble in Organic solvent
Partition coefficient n-octanol/water (log value)	Not applicable
Auto-ignition temperature	187.5 °C (369.5 °F) (Xylene)
Decomposition temperature	Not applicable
Viscosity	11 - 13 second at 30 °C

Particle characteristics	Not applicable

10. STABILITY AND REACTIVITY

Reactivity	Reacts violently with strong acids and strong oxidants
Chemical stability	Stable under normal storage and handling conditions
Possibility of hazardous reaction	Will not occur
Condition to avoid	High temperatures, sparks, open flame, and all other sources of ignition
Incompatible materials	Strong oxidizing agents, strong acids
Hazardous decomposition products	Not available

11. TOXICOLOGICAL INFORMATION

Acute toxicity (oral)	ATEmix = 10257.77 mg/kg (Not classified) 1-METHOXY-2-PROPANOL ACETATE LD50 (rat) oral = 5155.00 mg/kg[1] Butyl Acetate LD50 (rat) oral = 10736.00 mg/kg[2]
Acute toxicity (dermal)	ATEmix = 16.71 mg/kg (Category 1) 1-METHOXY-2-PROPANOL ACETATE LD50 (rabbit) dermal = 2000.00 mg/kg[1] Butyl Acetate LD50 (rabbit) dermal = 16.00 mg/kg[2]
Acute toxicity (inhalation)	Not available
Skin corrosion and skin irritation	Causes mild skin irritation (Xylene)
Serious eye damage or eye irritation	Not classified
Respirator and skin sensitzation	Not classified
Skin sentization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity following single exposure	May cause respiratory irritation (Butyl Acetate)
Specific target organ toxicity following repeated exposure	Not classified
Aspiration hazard	Not classified

12. ECOLOGICAL INFORMATION

Acute aquatic hazard	Harmful to aquatic life 1-METHOXY-2-PROPANOL ACETATE LC50 (fish) 96 hr = 100 mg/L[1] EC48 (shrimp) 48 hr = 50 mg/L[1] Butyl Acetate LC50 (fish) 96 hr = 18 mg/L[2] EC48 (shrimp) 48 hr = 32 mg/L[2] Homopolymer ErC-EC72 (Fungi) 96 hr = 1000 mg/L[undefined] Xylene LC50 (fish) 96 hr = 3.30 mg/L[4]
Long term aquatic hazard	No information
Persistance and degradability	Rapidly degradable (1-METHOXY-2-PROPANOL ACETATE,Butyl Acetate,Xylene)
Bioaccumulative potential	Bioaccumulative potential 1-METHOXY-2-PROPANOL ACETATE log KOW = 0.56[10] BCF = 3[10] Butyl Acetate log KOW = 1.78[11] BCF = 7.00[11] Xylene log KOW = 3.20[12] BCF = 14.80[12]
Mobility in soil	The product is insoluable in water. If released to water, some of the components will have tendency

Mobility in soil	The product is insoluble in water. If released to water, some of the components will have tendency to evaporate while other components are expected to be highly mobile in soil and have the potential to reach underground water supplies.
Other adverse effects	Not available

13. DISPOSAL CONSIDERATIONS

Disposal methods	Disposing of this material/container should be done under all the regulations or handled by authorized waste collector in your country
Container disposal	Do not re-use empty containers

14. TRANSPORT INFORMATION

Labels required	
UN number	1263
UN proper shipping name	Paint
Transport hazard class(es)	3
Packing group	III
Environmental hazards	Not applicable
Special precautions	Not applicable
Transport in bulk	Not applicable

15. REGULATORY INFORMATION

Inventory of existing chemical substance produced or imported in USA (TSCA)	All component in this product are listed
Toxic substance control act (TSCA)	All component in this product are listed

16. OTHER INFORMATION

Issue date: 24 June 2025

References

1. https://echa.europa.eu/brief-profile/-/briefprofile/100.003.277#ScientificProperties (17-12-19)
2. https://echa.europa.eu/brief-profile/-/briefprofile/100.004.236#ScientificProperties (17-12-19)
3. https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/view/6025 (9-5-19)
4. https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/view/682 (04-05-19)
5. https://echa.europa.eu/brief-profile/-/briefprofile/100.014.124 (24-12-19)
6. https://echa.europa.eu/brief-profile/-/briefprofile/100.004.236 (04-05-19)
7. https://echa.europa.eu/brief-profile/-/briefprofile/100.155.514 (9-5-19)
8. https://echa.europa.eu/brief-profile/-/briefprofile/100.003.277 (14/8/19)
9. https://echa.europa.eu/brief-profile/-/briefprofile/100.014.124 (04-05-19)
10. https://pubchem.ncbi.nlm.nih.gov/compound/7946#section=Environmental-Fate (03-05-19)
11. https://pubchem.ncbi.nlm.nih.gov/compound/31272#section=Environmental-Abiotic-Degradation (04-05-19)
12. https://pubchem.ncbi.nlm.nih.gov/compound/7929#section=Environmental-Fate (04-05-19)
13. https://www.osha.gov/chemicaldata/chemResult.html?recNo=130 (17-12-19)
14. https://www.osha.gov/chemicaldata/chemResult.html?recNo=178 (17-12-19)
15. https://www.osha.gov/chemicaldata/chemResult.html?recNo=228 (04-05-19)
16. https://www.osha.gov/chemicaldata/chemResult.html?recNo=808 (9-5-19)
17. Safe Work Australia Workplace exposure limits for airborne contaminants April 2024 (20-8-24)
18. Safe Work Australia Workplace exposure limits for airborne contaminants April 2024 (20-8-2024)
19. Safe Work Australia Workplace exposure limits for airborne contaminants April 2024 (21-8-2024)