

1. IDENTIFICATION OF THE MIXTURE AND OF THE SUPPLIER
Product Identifier

Product	Inter-Adhesion Promoter [82-8222]
Recommended use of chemical	Use as paint additive
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 - oral	Category 5
Skin corrosion/irritation	Category 2
Sensitization - respiratory	Category 1
Toxic to reproduction	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration hazard	Category 1
Hazardous to the aquatic environment - acute hazard	Category 2
Hazardous to the aquatic environment - long-term hazard	Category 3

Remark:

Percentage of mixture consisting of ingredient(s) of unknown oral toxicity: 33.25%

Percentage of mixture consisting of ingredient(s) of unknown dermal toxicity: 33.25%

Percentage of mixture consisting of ingredient(s) of unknown inhalation toxicity: 70.53%

GHS label elements

Pictogram or symbol



Signal word

Danger

Hazard statement:

H225 Highly Flammable liquid and vapour

H303 May be harmful if swallowed

H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H361 Suspected of damaging fertility or the unborn child

H373 May cause damage to organs through prolonged or repeated exposure

H401 Toxic to aquatic life

H412 Harmful to aquatic life with long lasting effects

Precautionary statement
[PREVENTION]

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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.

P260 Do not breathe dust / fume / gas / mist / vapors / spray.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

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.

P285 In case of inadequate ventilation wear respiratory protection.

[RESPONSE]

P301+P310 IF SWALLOWED Immediately call a POISON CENTER or doctor / physician.

P302+P352 IF ON SKIN 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.

P304+P341 IF INHALED If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308+P313 IF exposed or concerned Get medical advice / attention.

P312 Call a POISON CENTER or doctor / physician if you feel unwell.

P314 Get medical advice / attention if you feel unwell.

P321 Specific treatment (see on this label).

P331 Do NOT induce vomiting.

P332+P313 IF skin irritation occurs Get medical advice / attention.

P342+P311 IF experiencing respiratory symptoms Call a POISON CENTER or doctor / physician.

P362 Take off contaminated clothing and wash 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-ACETOXY-2-ETHOXYETHANE	111-15-9	28.64 - 33.16
1-Butanol	71-36-3	2.37 - 2.74
Acrylic resin	-	6.44 - 7.46
Homopolymer	28182-81-2	1.43 - 1.66
Toluene	108-88-3	32.25 - 37.34
Xylene	1330-20-7	23.87 - 27.64

4. FIRST AID MEASURES

Inhalation Remove to fresh air. If unconscious, place in recovery position and seek medical attention immediately.

Eye contact Immediately flush with water for at least 15 minutes. Remove contaminated clothing. Seek medical attention.

Skin contact	Immediately flush with water for at least 15 minutes. Remove contaminated 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 vomiting unless directed to do so by medical personnel.
Most important symptoms/effects, acute and delayed	Dizziness. Drowsiness. Headache. Nausea. Vomiting. Weakness. Unconsciousness. Skin and eye redness. Pain. Nausea. Vomiting.

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 mixture 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-sparking tools.
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 not leave containers open. Avoid repeated or prolonged contact with skin.
Conditions for safe storage, including any incompatibilities	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	<u>1-ACETOXY-2-ETHOXYETHANE</u> OSHA PEL-TWA 100 ¹⁸ Skin notification Y ¹⁸ NIOSH REL-TWA 0.5 ¹⁸ Skin notification Y ¹⁸ ACGIH TLV-TWA 5 ¹⁸ Skin notification Y ¹⁸ CAL/OSHA PEL-TWA 5 ¹⁸ Skin notification Y ¹⁸ Safe Work Australia (Australia, 4/2024) TWA : 2 ppm 8 hours. ²³ TWA : 10.9 mg/m ³ 8 hours. ²³ <u>1-Butanol</u> OSHA PEL-TWA 100 ppm (300 mg/m ³) ¹⁹ Skin notification N ¹⁹ NIOSH REL-C 50 ppm (150 mg/m ³) ¹⁹ Skin notification Y ¹⁹ ACGIH
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TLV-TWA 20 ppm [1998]¹⁹
 Skin notification N¹⁹
 CAL/OSHA
 PEL-C 50 ppm (150 mg/m³)¹⁹
 Skin notification Y¹⁹
 Safe Work Australia (Australia, 4/2024)
 TWA : 20 ppm 8 hours. ²³
 TWA : 61 mg/m³ 8 hours. ²³

Homopolymer

OSHA
 Skin notification NA²²
 NIOSH
 Skin notification NA²²
 ACGIH
 Skin notification NA²²
 CAL/OSHA
 Skin notification NA²²

Toluene

OSHA
 PEL-TWA 200 ppm²⁰
 PEL-C 300 ppm; 500 ppm (Peak) [10 min maximum in an 8 hr shift]²⁰
 Skin notification N²⁰
 NIOSH
 REL-TWA 100 ppm (375 mg/m³)²⁰
 REL-STEL 150 ppm (560 mg/m³)²⁰
 Skin notification N²⁰
 ACGIH
 TLV-TWA 20 ppm [2006]²⁰
 Skin notification N²⁰
 CAL/OSHA
 PEL-TWA 10 ppm (37 mg/m³)²⁰
 PEL-STEL 150 ppm (560 mg/m³)²⁰
 PEL-C 500 ppm²⁰
 Skin notification Y²⁰
 Safe Work Australia (Australia, 4/2024)
 TWA : 20 ppm 8 hours. ²⁴
 TWA : 75 mg/m³ 8 hours. ²⁴

Xylene

OSHA
 PEL-TWA 100²¹
 Skin notification N²¹
 NIOSH
 REL-TWA 100²¹
 Skin notification N²¹
 ACGIH
 TLV-TWA 100²¹
 TLV-STEL 150²¹
 Skin notification N²¹
 CAL/OSHA
 PEL-TWA 100²¹
 PEL-STEL 150²¹
 PEL-C 300²¹
 Skin notification N²¹
 Safe Work Australia (Australia, 4/2024)

IWA : 80 ppm 8 hours. ²⁴
 TWA : 350 mg/m³ 8 hours. ²⁴
 STEL : 150 ppm 15 minutes. ²⁴
 STEL : 655 mg/m³ 15 minutes. ²⁴

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	110.6 °C (231.1 °F) (Toluene)
Flash point	4.4 °C (39.9 °F) (Toluene)
Flammability	Flammable
Lower and upper explosion limit/flammability limit	Not available
Vapour pressure	10 hPa at 20 °C (1-Butanol)
Density and/or relative density	0.84 - 0.94 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	480.0 °C (896.0 °F) (Toluene)
Decomposition temperature	Not applicable
Viscosity	7 - 10 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 = 3273.70 mg/kg (Category 5) 1-ACETOXY-2-ETHOXYETHANE LD50 (rat) oral = 2900.00 mg/kg ¹ 1-Butanol LD50 (rat) oral = 790.00 mg/kg ² Toluene LD50 (rat) oral = 5000.00 mg/kg ³
Acute toxicity (dermal)	ATEmix = 10974.24 mg/kg (Not classified) 1-ACETOXY-2-ETHOXYETHANE LD50 (rabbit) dermal = 10300.00 mg/kg ¹ 1-Butanol LD50 (rabbit) dermal = 3400.00 mg/kg ² Toluene LD50 (rabbit) dermal = 14100.00 mg/kg ³
Acute toxicity (inhalation)	Not available

Skin corrosion and skin irritation	Causes skin irritation (Toluene,Xylene)
Serious eye damage or eye irritation	Not classified
Respirator and skin sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled (1-Butanol)
Skin sentization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Suspected of damaging fertility or the unborn child (Toluene)
Specific target organ toxicity following single exposure	May cause respiratory irritation (1-Butanol,Toluene)
Specific target organ toxicity following repeated exposure	May cause damage to organs through prolonged or repeated exposure (Toluene)
Aspiration hazard	May be fatal if swallowed and enters airways (Toluene)

12. ECOLOGICAL INFORMATION

Acute aquatic hazard	<p>Toxic to aquatic life</p> <p><u>1-ACETOXY-2-ETHOXYETHANE</u> LC50 (fish) 96 hr = 40 mg/L⁹</p> <p><u>1-Butanol</u> LC50 (fish) 96 hr = 100 mg/L²</p> <p>EC48 (shrimp) 48 hr = 1983 mg/L²</p> <p><u>Homopolymer</u> ErC-EC72 (Fungi) 96 hr = 1000 mg/L^{undefined}</p> <p><u>Toluene</u> LC50 (fish) 96 hr = 7.3 mg/L¹⁰</p> <p>EC48 (shrimp) 48 hr = 6 mg/L¹⁰</p> <p>ErC-EC72 (Fungi) 96 hr = 12.5 mg/L¹⁰</p> <p><u>Xylene</u> LC50 (fish) 96 hr = 3.30 mg/L⁵</p>
Long term aquatic hazard	<p>Harmful to aquatic life with long lasting effects</p> <p><u>1-Butanol</u> NOEC shrimp = 4.1 mg/L⁸</p> <p><u>Toluene</u> NOEC fish = 1.4 mg/L¹²</p> <p>NOEC shrimp = 7.4 mg/L¹²</p> <p>NOEC fungi = 10 mg/L¹²</p> <p><u>Xylene</u> NOEC fish = 1.30 mg/L¹³</p> <p>NOEC shrimp = 1.57 mg/L⁷</p> <p>NOEC fungi = 0.44 mg/L⁷</p>
Persistence and degradability	Rapidly degradable (Toluene,Xylene)
Bioaccumulative potential	<p>Bioaccumulative potential</p> <p><u>1-ACETOXY-2-ETHOXYETHANE</u> log KOW = 0.24¹⁴</p> <p>BCF = 3¹⁴</p> <p><u>1-Butanol</u> log KOW = 0.88¹⁵</p> <p>BCF = 3¹⁵</p> <p><u>Toluene</u> log KOW = 2.73¹⁶</p> <p>BCF = 13¹⁶</p> <p><u>Xylene</u> log KOW = 3.20¹⁷</p> <p>BCF = 14.80¹⁷</p>
Mobility in soil	<p>The product is insoluable 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.</p>

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: 29 May 2025

References

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- <https://www.osha.gov/chemicaldata/chemResult.html?recNo=122> (3-5-19)
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- Safe Work Australia Workplace exposure limits for airborne contaminants April 2024 (20-8-2024)
- Safe Work Australia Workplace exposure limits for airborne contaminants April 2024 (21-8-2024)



SAFETY DATA SHEET