

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

Product	- [46-E5028]
Recommended use of chemical	Use as coating
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
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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
Acute toxicity - dermal	Category 2
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 2
Specific target organ toxicity (single exposure)	Category 3
Hazardous to the aquatic environment - acute hazard	Category 1
Hazardous to the aquatic environment - long-term hazard	Category 3

Remark:

- Percentage of mixture consisting of ingredient(s) of unknown oral toxicity: 11.87%
- Percentage of mixture consisting of ingredient(s) of unknown dermal toxicity: 42.86%
- Percentage of mixture consisting of ingredient(s) of unknown inhalation toxicity: 37.94%

GHS label elements

Pictogram or symbol



Signal word

Danger

Hazard statement:

- H225 Highly Flammable liquid and vapour
- H303 May be harmful if swallowed
- H310 Fatal in contact with skin
- H315 Causes skin irritation
- H335 May cause respiratory irritation
- H336 May cause drowsiness or dizziness
- H361 Suspected of damaging fertility or the unborn child
- H400 Very 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.
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.
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.
P308+P313 IF exposed or concerned Get medical advice / attention.
P310 Immediately call a POISON CENTER or doctor / physician.
P312 Call a POISON CENTER or doctor / physician if you feel unwell.
P321 Specific treatment (see on this label).
P322 Specific measures (see on this label).
P332+P313 IF skin irritation occurs Get medical advice / attention.
P361 Remove / Take off immediately all contaminated clothing.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391 Collect spillage.

[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	1.97 - 2.29
3-HEPTANONE	110-43-0	1.78 - 2.06
Acrylic Polymer	9003-01-4	35.54 - 41.15
Acrylic resin	-	5.79 - 6.71
Butyl Acetate	123-86-4	10.53 - 12.20
Dimethyl adipate	627-93-0	1.16 - 1.35
Dimethyl glutarate	1119-40-0	3.77 - 4.37
Titanium Dioxide	13463-67-7	23.88 - 27.65
Toluene	108-88-3	4.64 - 5.37
Xylene	1330-20-7	5.92 - 6.86

4. FIRST AID MEASURES

Inhalation	Remove to fresh air. If unconscious, place in recovery position and seek medical attention immediately.
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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 ²⁶ Skin notification Y ²⁶ NIOSH REL-TWA 0.5 ²⁶ Skin notification Y ²⁶ ACGIH TLV-TWA 5 ²⁶ Skin notification Y ²⁶ CAL/OSHA PEL-TWA 5 ²⁶ Skin notification Y ²⁶ Safe Work Australia (Australia, 4/2024) TWA : 2 ppm 8 hours. ³² TWA : 10.9 mg/m ³ 8 hours. ³² <u>3-HEPTANONE</u> OSHA PEL-TWA 100 ²⁷ Skin notification N ²⁷ NIOSH REL-TWA 100 ²⁷ Skin notification N ²⁷ ACGIH
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TLV-TWA 50

Skin notification N²⁷

CAL/OSHA

PEL-TWA 50

Skin notification N²⁷

Safe Work Australia (Australia, 4/2024)

TWA : 50 ppm 8 hours. ³³

TWA : 233 mg/m³ 8 hours. ³³

Butyl Acetate

OSHA

PEL-TWA 150²⁸

Skin notification N²⁸

NIOSH

REL-TWA 150²⁸

REL-STEL 200²⁸

Skin notification N²⁸

ACGIH

TLV-TWA 50²⁸

TLV-STEL 150²⁸

Skin notification N

CAL/OSHA

PEL-TWA 150²⁸

PEL-STEL 200²⁸

Skin notification N²⁸

Safe Work Australia (Australia, 4/2024)

TWA : 50 ppm 8 hours. ³²

TWA : 270 mg/m³ 8 hours. ³²

STEL : 100 ppm 15 minutes. ³²

STEL : 541 mg/m³ 15 minutes. ³²

Titanium Dioxide

OSHA

PEL-TWA 15²⁹

Skin notification N²⁹

NIOSH

Skin notification N²⁹

ACGIH

TLV-TWA 10²⁹

Skin notification N²⁹

CAL/OSHA

PEL-TWA 10²⁹

Skin notification N²⁹

Safe Work Australia (Australia, 4/2024)

TWA : 10 mg/m³ 8 hours. ³⁴

Toluene

OSHA

PEL-TWA 200 ppm³⁰

PEL-C 300 ppm; 500 ppm (Peak) [10 min maximum in an 8 hr shift]³⁰

Skin notification N³⁰

NIOSH

REL-TWA 100 ppm (375 mg/m³)³⁰

REL-STEL 150 ppm (560 mg/m³)³⁰

Skin notification N³⁰

ACGIH

TLV-TWA 20 ppm [2006]³⁰

Skin notification N³⁰
 CAL/OSHA
 PEL-TWA 10 ppm (37 mg/m³)³⁰
 PEL-STEL 150 ppm (560 mg/m³)³⁰
 PEL-C 500 ppm³⁰
 Skin notification Y³⁰
 Safe Work Australia (Australia, 4/2024)
 TWA : 20 ppm 8 hours. ³⁴
 TWA : 75 mg/m³ 8 hours. ³⁴
Xylene
 OSHA
 PEL-TWA 100³¹
 Skin notification N³¹
 NIOSH
 REL-TWA 100³¹
 Skin notification N³¹
 ACGIH
 TLV-TWA 100³¹
 TLV-STEL 150³¹
 Skin notification N³¹
 CAL/OSHA
 PEL-TWA 100³¹
 PEL-STEL 150³¹
 PEL-C 300³¹
 Skin notification N³¹
 Safe Work Australia (Australia, 4/2024)
 TWA : 80 ppm 8 hours. ³⁴
 TWA : 350 mg/m³ 8 hours. ³⁴
 STEL : 150 ppm 15 minutes. ³⁴
 STEL : 655 mg/m³ 15 minutes. ³⁴
 Provide adequate ventilation. Install local exhaust.

Appropriate engineering controls

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	White
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	16 hPa at 20 °C (Butyl Acetate)
Density and/or relative density	1.33 - 1.43 g/cm ³
Relative vapour density	Not available
Solubility	Soluble in Organic solvent

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	68 - 78 KU 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 = 2674.18 mg/kg (Category 5) 1-ACETOXY-2-ETHOXYETHANE LD50 (rat) oral = 2900.00 mg/kg ¹ 3-HEPTANONE LD50 (rat) oral = 1600.00 mg/kg ² Acrylic Polymer LD50 (rat) oral = 1500.00 mg/kg ³ Butyl Acetate LD50 (rat) oral = 10736.00 mg/kg ⁴ Dimethyl adipate LD50 (rat) oral = 1920.00 mg/kg ⁵ Dimethyl glutarate LD50 (rat) oral = 5000.00 mg/kg ⁶ Titanium Dioxide LD50 (rat) oral = 10000.00 mg/kg ⁷ Toluene LD50 (rat) oral = 5000.00 mg/kg ⁸
Acute toxicity (dermal)	ATEmix = 77.87 mg/kg (Category 2) 1-ACETOXY-2-ETHOXYETHANE LD50 (rabbit) dermal = 10300.00 mg/kg ¹ Acrylic Polymer LD50 (rabbit) dermal = 2000.00 mg/kg ³ Butyl Acetate LD50 (rabbit) dermal = 16.00 mg/kg ⁴ Toluene LD50 (rabbit) dermal = 14100.00 mg/kg ⁸
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	Not classified
Skin sensitization	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 (Butyl Acetate,Toluene)
Specific target organ toxicity following repeated exposure	Not classified
Aspiration hazard	Not classified

12. ECOLOGICAL INFORMATION

Acute aquatic hazard	Very toxic to aquatic life <u>1-ACETOXY-2-ETHOXYETHANE</u> LC50 (fish) 96 hr = 40 mg/L ¹⁴ <u>3-HEPTANONE</u> EC48 (shrimp) 48 hr = 90.1 mg/L ¹⁶ ErC-EC72 (Fungi) 96 hr = 77.5-98.2 mg/L ¹⁶ <u>Acrylic Polymer</u> LC50 (fish) 96 hr = 27 mg/L ³ EC48 (shrimp) 48 hr = 17 mg/L ³
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Long term aquatic hazard

EC48 (shrimp) 48 hr = 47 mg/L⁷

ErC-EC72 (Fungi) 96 hr = 0.13 mg/L³

Butyl Acetate

LC50 (fish) 96 hr = 18 mg/L⁴

EC48 (shrimp) 48 hr = 32 mg/L⁴

Titanium Dioxide

EC48 (shrimp) 48 hr = 100 mg/L⁷

ErC-EC72 (Fungi) 96 hr = 35.9 mg/L⁷

Toluene

LC50 (fish) 96 hr = 7.3 mg/L¹⁵

EC48 (shrimp) 48 hr = 6 mg/L¹⁵

ErC-EC72 (Fungi) 96 hr = 12.5 mg/L¹⁵

Xylene

LC50 (fish) 96 hr = 3.30 mg/L⁹

Harmful to aquatic life with long lasting effects

3-HEPTANONE

NOEC fish = 104 mg/L¹⁶

NOEC shrimp = 90.1 mg/L¹⁶

NOEC fungi = 42.7 mg/L¹⁶

Butyl Acetate

NOEC fish = 23 mg/L⁴

NOEC shrimp = 23 mg/L⁴

NOEC fungi = 196 mg/L⁴

Titanium Dioxide

NOEC shrimp = 1.72 mg/L¹⁹

NOEC fungi = 1 mg/L¹⁹

Toluene

NOEC fish = 1.4 mg/L¹⁷

NOEC shrimp = 7.4 mg/L¹⁷

NOEC fungi = 10 mg/L¹⁷

Xylene

NOEC fish = 1.30 mg/L¹⁸

NOEC shrimp = 1.57 mg/L¹¹

NOEC fungi = 0.44 mg/L¹¹

Persistence and degradability

Rapidly degradable (3-HEPTANONE,Acrylic Polymer,Butyl Acetate,Dimethyl glutarate,Toluene,Xylene)

Bioaccumulative potential

Bioaccumulative potential

1-ACETOXY-2-ETHOXYETHANE

log KOW = 0.24²⁰

BCF = 3²⁰

3-HEPTANONE

log KOW = 1.98²¹

BCF = 7²¹

Acrylic Polymer

log KOW = 0.35²²

BCF = 3²²

Butyl Acetate

log KOW = 1.78²³

BCF = 7.00²³

Toluene

log KOW = 2.73²⁴

BCF = 13²⁴

Xylene

log KOW = 3.20²⁵

BCF = 14.80²⁵

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: 30 June 2025

References

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