

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

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| Product | Hardener for 2K Primer 4:1 [21-20] |
| Recommended use of chemical | Use as Hardener in 2K paint |
| Restriction on use | No open flames, No spraks, and No smoking |

Supplier's details

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|------------------------|---|
| Company | Big-Ben (Paints) Company Limited |
| Address | 38 Mu 7 Suanluangruamjai Road Suanluang 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.

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| Flammable liquids | Category 1 |
| Acute toxicity - dermal | Category 1 |
| 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: 40.00%

Percentage of mixture consisting of ingredient(s) of unknown dermal toxicity: 40.00%

Percentage of mixture consisting of ingredient(s) of unknown inhalation toxicity: 0.00%

GHS label elements

Pictogram or symbol



Signal word

Danger

Hazard statement:

H224 Extremely flammable liquid and vapour

H310 Fatal in contact with skin

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 not 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).

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) |
|---------------|------------|-----------------|
| Butyl Acetate | 123-86-4 | 39.97 - 70.28 |
| Homopolymer | 28182-81-2 | 33.64 - 56.01 |

4. FIRST AND MEASURES

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| 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 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

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| 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


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| 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

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| 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. |
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| 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>Butyl Acetate</u> OSHA PEL-TWA 150 ⁵ Skin notification N ⁶ NIOSH REL-TWA 150 ⁶ REL-STEL 200 ⁶ Skin notification N ⁶ ACGIH TLV-TWA 50 ⁶ TLV-STEL 150 ⁶ Skin notification N CAL/OSHA PEL-TWA 150 ⁶ PEL-STEL 200 ⁶ Skin notification N ⁶ <u>Homopolymer</u> OSHA Skin notification NA ⁷ NIOSH Skin notification NA ⁷ ACGIH Skin notification NA ⁷ CAL/OSHA Skin notification NA ⁷ |
| 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 | |
| Appearance | Liquid |
| Odor | Organic solvent |
| Odor threshold | Not Available |
| pH | Not Available |
| Melting point/freezing point | Not Available |
| Initial boiling point and boiling range | Not Available |
| Flash point | lower than 23 C |
| Evaporation rate | Not Available |
| Flammability (solid, gas) | Not available |
| Upper/lower flammability or explosive limits | Not available Not available |
| Vapor pressure | Not Available |
| Vapor density | Not Available |
| Relative density | 0.91 - 1.01 g/cm3 |
| Solubility(ies) | Soluble in Organic solvent |
| Partition coefficient n-Octanol-water | Not Available |

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| Auto-ignition temperature | Not Available |
| Decomposition temperature | Not Available |
| Viscosity | 8-12 second by Ford cup No.4 |
| 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 = 10736.00 mg/kg (Not classified) Butyl Acetate LD50 (rat) oral = 10736.00 mg/kg ¹ |
| Acute toxicity (dermal) | ATEmix = 16.00 mg/kg (Classify 1) Butyl Acetate LD50 (rabbit) dermal = 16.00 mg/kg ¹ |
| Acute toxicity (dermal) | ATEmix = 1170.89 mg/kg (Not classified) Butyl Acetate LC50 (rat) inhalation = 740.00 mg/kg ¹ Homopolymer LC50 (rat) inhalation = 9250.00 mg/kg ² |
| Skin corrosion and skin irritation | Not classified |
| 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 | 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 <u>Butyl Acetate</u> LC50 (fish) 96 hr = 18 mg/L ¹ EC48 (shrimp) 48 hr = 32 mg/L ¹ <u>Homopolymer</u> ErC-EC72 (Fungi) 96 hr = 1000 mg/L ^{undefined} |
| Long term aquatic hazard | No information |
| Persistence and degradability | Rapidly degradable (Butyl Acetate) |
| Bioaccumulative potential | Bioaccumulative potential <u>Butyl Acetate</u> log KOW = 1.78 ⁸ BCF = 7.00 ⁸ |
| 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 | |

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| 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: 18 June 2020 | |
| References | |
| 1. https://echa.europa.eu/brief-profile/-/briefprofile/100.004.236#ScientificProperties (17-12-19) | |
| 2. https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/view/6025 (9-5-19) | |
| 3. https://echa.europa.eu/brief-profile/-/briefprofile/100.004.236 (04-05-19) | |
| 4. https://echa.europa.eu/brief-profile/-/briefprofile/100.155.514 (9-5-19) | |
| 5. www.osha.gov/chemicaldata/chemResult.html?recNo=178 (17-12-19)a.gov | |
| 6. https://www.osha.gov/chemicaldata/chemResult.html?recNo=178 (17-12-19) | |
| 7. https://www.osha.gov/chemicaldata/chemResult.html?recNo=808 (9-5-19) | |
| 8. https://pubchem.ncbi.nlm.nih.gov/compound/31272#section=Environmental-Abiotic-Degradation (04-05-19) | |