1. IDENTIFICATION OF THE MIXTURE AND OF THE SUPPLIER	
Product Identifier	
Product	2K PRIMER HARDENER [21-47]
Recommended use of chemical	Use as Hardener in 2K paint
Restriction on use	No open flames, No spraks, and No smoking
Supplier's details	
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.

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: 60.00%

Percentage of mixture consisting of ingredient(s) of unknown dermal toxicity: 60.00%

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 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).

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	35.08 - 58.67
Homopolymer	28182-81-2	46 96 - 80 72

4. FIRST AND 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 containinated 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.
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 incompatibilities	Keep away from heat or flames. Keep in cool, dry, ventilated storage and in closed containers. Store away from oxidizing agent.
8 EYPOSURE CONTROL S/DEDSONAL PROTECTION	

including any incompatibilities	containers. Store away from oxidizing agent.	
8. EXPOSURE CONTROLS/PERS	8. EXPOSURE CONTROLS/PERSONAL PROTECTION	
Control parameters	Butyl Acetate OSHA	
	PEL-TWA 150 ²²	
	Skin notification N ²³	
	NIOSH	
	REL-TWA 150 ²³	
	REL-STEL 200 ²³	
	Skin notification N ²³	
	ACGIH	
	TLV-TWA 50 ²³	
	TLV-STEL 150 ²³	
	Skin notification N	
	CAL/OSHA	
	PEL-TWA 150 ²³	
	PEL-STEL 200 ²³	
	Skin notification N ²³	
	Homopolymer OSHA	
	Skin notification NA ²⁴	
	NIOSH	
	Skin notification NA ²⁴ ACGIH	
	Skin notification NA ²⁴	
	CAL/OSHA	
	Skin notification NA 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.	

Wear suitable clothing

Skin and body protection

9. PHYSICAL AND CHEMICAL PROPERTIES	
Appearance	Liquid Clear
Odor	Organic solvent
Odor threshold	Not Available
рН	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	lower than 23
Evaporation rate	Not Available
Flammability (solid, gas)	Not available
Upper/lower flammability or	Not available
explosive limits	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
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 ¹⁸
Acute toxicity (dermal)	ATEmix = 16.00 mg/kg (Classify 1)
	Butyl Acetate LD50 (rabbit) dermal = 16.00 mg/kg ¹⁸
Acute toxicity (dermal)	ATEmix = 1651.79 mg/kg (Not classified)
	Butyl Acetate LC50 (rat) inhalation = 740.00 mg/kg ¹⁸
	Homopolymer LC50 (rat) inhalation = 9250.00 mg/kg ¹⁹
Skin corrosion and skin irritation	Not classified
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
	Butyl Acetate LC50 (fish) 96 hr = 18 mg/L ¹⁸
	EC48 (shrimp) 48 hr = 32 mg/L ¹⁸
	Homopolymer ErC-EC72 (Fungi) 96 hr = 1000 mg/L ^{undefined}
Long term aquatic hazard	No information
Persistance and degradability	Rapidly degradable (Butyl Acetate)
Bioaccumulative potential	Bioaccumulative potential
	Butyl Acetate log KOW = 1.78 ²⁵
	$BCF = 7.00^{25}$
Mobility in soil	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.
Other adverse effects	Not available
13. DISPOSAL CONSIDERATION	
Disposal methods	Disposing of this material/container should be done under all the regulations or handled by authorized waste collector in your country
	waste concolor in your country

Do not re-use empty containers

Container disposal

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

16. OTHER INFORMATION

14. TRANSPORT INFORMATION

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