1. IDENTIFICATION OF THE MIXTURE AND OF THE SUPPLIER	
Product Identifier	
Product	Flip-Flop control [19-8778]
Recommended use of chemical	Use as additive in coating
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 - oral	Category 5
Acute toxicity - dermal	Category 1
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 2
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration hazard	Category 1
Hazardous to the aquatic environment - acute hazard	Category 2

Remark:

Percentage of mixture consisting of ingredient(s) of unknown oral toxicity: 8.81%

Percentage of mixture consisting of ingredient(s) of unknown dermal toxicity: 29.68%

Percentage of mixture consisting of ingredient(s) of unknown inhalation toxicity: 55.73%

GHS label elements	
Pictogram or symbol	
Signal word	**Danger**

Hazard statement:

H224 Extremely flammable liquid and vapour

H303 May be harmful if swallowed

H304 May be fatal if swallowed and enters airways

H310 Fatal in contact with skin

H315 Causes skin irritation

H361 Suspected of damaging fertility or the unborn child

H370 Causes damage to organs

H373 May cause damage to organs through prolonged or repeated exposure

H401 Toxic to aquatic life

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.
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.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

[RESPONSE]

P301+P310 IF SWALLOWED Immediately call a POISON CENTER or doctor / physician.
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.
P307+P311 IF exposed Call a POISON CENTER or doctor / physician.
P308+P313 IF exposed or concernedGet medical advice / attention.
P310 Immediately call a POISON CENTER or doctor / physician.
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).
P322 Specific measures (see on this label).
P331 Do NOT induce vomiting.
P332+P313 IF skin irritation occursGet 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.

[STORAGE]

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	13.70 - 37.05
Fumed Silica	112945-52-5	5.41 - 12.25
Methanol	67-56-1	4.24 - 13.85
Polyamide wax	-	2.00 - 3.45
Toluene	108-88-3	34.64 - 62.73
Xylene	1330-20-7	4.26 - 7.62

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 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.
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	Butyl Acetate OSHA PEL-TWA 150[15] Skin notification N[19] NIOSH REL-TWA 150[19] REL-STEL 200[19] Skin notification N[19] ACGIH TLV-TWA 50[19] TLV-STEL 150[19] Skin notification N CAL/OSHA PEL-TWA 150[19] PEL-STEL 200[19] Skin notification N[19] Fumed Silica Methanol OSHA PEL-TWA 200[16] Skin notification N[16] NIOSH REL-TWA 200[16] REL-STEL 250[16] Skin notification Y[16] ACGIH TLV-TWA 200[16] TLV-STEL 250[16] Skin notification Y[16] CAL/OSHA PEL-TWA 200[16] PEL-STEL 250[16] PEL-C 1000[16] Skin notification Y[16] Polyamide wax Toluene OSHA

	PEL-TWA 200 ppm[17] PEL-C 300 ppm; 500 ppm (Peak) [10 min maximum in an 8 hr shift][17] Skin notification N[17] NIOSH REL-TWA 100 ppm (375 mg/m³)[17] REL-STEL 150 ppm (560 mg/m³)[17] Skin notification N[17] ACGIH TLV-TWA 20 ppm [2006][17] Skin notification N[17] CAL/OSHA PEL-TWA 10 ppm (37 mg/m³)[17] PEL-STEL 150 ppm (560 mg/m³)[17] PEL-C 500 ppm[17] Skin notification Y[17] Xylene OSHA PEL-TWA 100[18] Skin notification N[18] NIOSH REL-TWA 100[18] Skin notification N[18] ACGIH TLV-TWA 100[18] TLV-STEL 150[18] Skin notification N[18] CAL/OSHA PEL-TWA 100[18] PEL-STEL 150[18] PEL-C 300[18] Skin notification N[18]
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	High viscosity liquid paint
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
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	0.85 - 0.95
Solubility(ies)	Soluble in Organic solvent
Partition coefficient n-Octanol-water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	9-11 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 = 4527.21 mg/kg (Category 5) Butyl Acetate LD50 (rat) oral = 10736.00 mg/kg[1] Fumed Silica LD50 (rat) oral = 22500.00 mg/kg[2] Methanol LD50 (rat) oral = 1187.00 mg/kg[3] Toluene LD50 (rat) oral = 5000.00 mg/kg[4]
Acute toxicity (dermal)	ATEmix = 41.33 mg/kg (Classify 1) Butyl Acetate LD50 (rabbit) dermal = 16.00 mg/kg[1] Toluene LD50 (rabbit) dermal = 14100.00 mg/kg[4]
Acute toxicity (dermal)	ATEmix = 349.10 mg/kg (Not classified) Butyl Acetate LC50 (rat) inhalation = 740.00 mg/kg[1] Methanol LC50 (rat) inhalation = 115.90 mg/kg[3] Xylene LC50 (rat) inhalation = 6360.00 mg/kg[5]
Skin corrosion and skin irritation	Causes skin irritation (Toluene,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	Suspected of damaging fertility or the unborn child (Toluene)
Specific target organ toxicity following single exposure	Causes damage to organs (Butyl Acetate,Methanol,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	Toxic to aquatic life Butyl Acetate LC50 (fish) 96 hr = 18 mg/L[1] EC48 (shrimp) 48 hr = 32 mg/L[1] Methanol LC50 (fish) 96 hr = 15400 mg/L[3] EC48 (shrimp) 48 hr = 18260 mg/L[3] ErC-EC72 (Fungi) 96 hr = 2200 mg/L[3] Toluene LC50 (fish) 96 hr = 7.3 mg/L[11] EC48 (shrimp) 48 hr = 6 mg/L[11] ErC-EC72 (Fungi) 96 hr = 12.5 mg/L[11] Xylene LC50 (fish) 96 hr = 3.30 mg/L[12]
Long term aquatic hazard	No information
Persistance and degradability	Rapidly degradable (Butyl Acetate,Methanol,Toluene,Xylene)
Bioaccumulative potential	Bioaccumulative potential Butyl Acetate log KOW = 1.78[20] BCF = 7.00[20] Methanol log KOW = -0.77[21] BCF = 10[21] Toluene log KOW = 2.73[22] BCF = 13[22] Xylene log KOW = 3.20[23] BCF = 14.80[23]
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 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: 06 April 2022
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