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MATERIAL SAFETY DATA SHEET

PUFFIN TOPGARD ENAMEL BASE A

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TRADE NAME: PUFFIN TOPGARD ENAMEL BASE A

1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Identification of Substance or Preparation

Chemical description : Polyurethane

Recommendation : Paint

Company/ Undertaking Identification Supplier

PT. Indowijaya Sakti Teguh

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2. HAZARD IDENTIFICATION

Classification of the substance or mixture

- **FLAMMABLE LIQUIDS – Category 3**
- **SKIN CORROSION / IRRITATION – Category 2**
- **SERIOUS EYE DAMAGE / EYE IRRITATION – Category 2A**
- **SKIN SENSITISATION – Category 1**

GHS Label elements

Hazard pictograms:

Signal word : **Warning.**

Hazard statements : Flammable liquid and vapour. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction.

Pre cautionary statements

Prevention: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Wash hands thoroughly after handling.

Response : IF ON SKIN : Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs : Get medical attention.

IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store in a well-ventilated place, Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations

Other hazards which do not result in classification : None known

3. COMPOSITION / INFORMATION ON INGREDIENTS:

Substance / mixture : Mixture

Other means of identification : Not available

CAS number /other identifiers

CAS number : Not applicable.

EC number : Mixture

Product code : 3140

Ingredients name	%	Cas number
Xylene	≥10-≤16	1330-20-7
n-butyl acetate ethyl benzene hydro	≤10	123-86-4
carbons,C9,aromatic	≤5	100-41-4
2-Propenoicacid, 2-methyl-, 2-(dimethyl amino)	≤3	64742-95-6
ethyl ester, polymer with butyl 2-propenoate,	≤50	1259547-09-5
comps. with polyethylene glycol hydrogen maleate		
C9-11- alkyl ethers		
n-butyl methacrylate	<1	97-88-1
bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	≤0.3	41556-26-7
TI02(Titanium dioxide)	>25	13463-67-7.

There are no additional ingredients present which, with in the current knowledge of the supplier and in the concentrations applicable, are classified as hazard us to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

Chemical formula : Not applicable.

4. FIRST AID MEASURES

Description of first aid measures

1. **Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check or and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
2. **Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self - contained breathing apparatus. If not breathing, if breathing is irregularor if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

3. **Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for atleast 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
4. **Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting maybe dangerous. Do not in duce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms and effects, both acute and delayed Potential acute health effects

Eye contact **:** Causes serious eye damage.
Inhalation **:** May cause respiratory irritation.
Skin contact **:** Causes skin irritation. May cause an allergic skin reaction.
Ingestion **:** No known significant effect so critical hazards

Over-exposure signs/symptoms

Eye contact **:** Adverse symptoms may include the following: pain or irritation, watering, redness
Inhalation **:** Adverse symptoms may include the following : respiratory tract Irritation, coughing.
Skin contact **:** Adverse symptoms may include the following : irritation redness blistering may occur
Ingestion **:** Adverse symptoms may include the following : stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician **:** Treat symptomatically. Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments **:** No specific treatment.

Protection of first - aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self - contained breathing apparatus. It may be dangerous to the person providing aid to give mouth - to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media **:** Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media **:** Do not use water jet.

Specific hazards arising from the chemical: Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a sub sequent explosion. Run off to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any water way, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide, carbon monoxide, metal oxide / oxides,

Special protective actions for fire - fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be take involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire - exposed containers cool.

Special protective equipment for fire - fighters: Fire - fighters should wear appropriate protective equipment and self – contained breathing apparatus (SCBA) with a full face -piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non - emergency personel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walkthrough spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and run off and contact with soil, water ways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if release in large quantities.

Method sand material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion - proof equipment. Dilute with water and mop up if water - soluble. Alternatively, or if water - insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Use spark - proof tools and explosion - proof equipment. Approach release from up wind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or processed as follows. Contain and collect spillage with non - combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note : see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see section 8). Persons with a history of skin sensitization problems should not be employee in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do no tingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is in adequate. Do not enter storage area sand confined space sunless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use a way from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take pre cautionary measures against electro static discharges. Empty containers retain product residue and can be hazard do us. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in are as where this material is handled, stored and processed. Workers should wash hands and face Before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Xylene	**Work place Safety and Health Act (Singapore, 2/2006).** PEL(short term) :651 mg/m³15minutes. PEL (short term) : 150 ppm 15 minutes. PEL (long term) : 434 mg/m³ 8 hours. PEL (long term) : 100 ppm8 hours.
n-butyl acetate	**Work place Safety and Health Act (Singapore, 2/2006).** PEL(short term) :950 mg/m³15minutes. PEL (short term) : 200 ppm 15 minutes. PEL (long term) : 713 mg/m³ 8 hours. PEL (long term) : 150 ppm8 hours.
ethyl benzene	**Work place Safety and Health Act (Singapore, 2/2006). Notes:** PEL (long term) : 100 ppm 8 hours. PEL(long term) :434 mg/m³8hours. **Workplace Safety and Health Act (Singapore, 2/2006).** PEL(short term) :543 mg/m³15minutes. PEL (short term) : 125 ppm 15 minutes

Appropriate engineering controls : Use only with adequate eventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to air borne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In

some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable level.

Individual protection measures Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying to EN166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred. Wear suitable gloves tested to EN374. May be used, gloves (breakthrough time) 4–8 hours: butyl rubber, neoprene Not recommended, gloves (breakthrough time) <1 hour: PVC, Viton®, PE Recommended, gloves (breakthrough time) >8 hours: Teflon, 4H, Poly Vinyl Alcohol (PVA), nitrile rubber For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of us.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	: Liquid
Colour	: Various colours
Odour	: Characteristic
Odour threshold	: Not available
pH	: Not applicable
Melting/freezing point	: Not applicable
Boiling point	: Lowest known value : 126 °C (258.8 °F) (n-butyl acetate).
Weighted average	: 140.26 °C (284.5 °F)
Flash point	: Closed cup : 30 °C (86 °F)
Burning time	: Not applicable
Burning rate	: Not applicable
Evaporation rate	: Highest known value : 1 (n-butyl acetate)
Weighted average	: 0.78 (compared with butyl acetate)
Flammability (solid, gas)	: Not applicable
Lower and upper explosive (flammable) limits	: 0.8–9.8%
Vapour pressure	: Highest known value : 1.5 kPa

(11.3 mmHg) (at 20 °C) (n-butyl acetate).

Weighted average : 1.04 kPa (7.8 mmHg) (at 20 °C)

Vapour density : Highest known value : 4 (Air = 1) (n-butyl acetate).

Weighted average : 3.79 (Air = 1)

Relative density : 1.2 to 1.453 g/cm³

Solubility : Insoluble in the following materials : cold water and hot water

Solubility in water : Not available

Partition coefficient n-octanol/water : Not available

Auto-ignition temperature : Lowest known value : 280 to 470 °C (536 to 878 °F) (hydrocarbons, C9, aromatic)

Decomposition temperature : Not available

SADT : Not available

Viscosity

- **Dynamic** : Highest known value : 0.9 cP (propanoic acid, 3-ethoxy-, ethyl ester)
- **Weighted average** : 0.63 Cp
- **Kinematic** : Highest known value : 1.33 cSt (propanoic acid, 3-ethoxy-, ethyl ester)
- **Weighted average** : 0.9 cSt
- **Kinematic (40C)** :>20.5cSt

10. STABILITY AND REACTIVITY

Reactivity : No specific test data related to reactivity is available for this product or its ingredients.

Chemical Stability : The product is stable.

Possibility of Hazardous Reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat or sources of ignition.

Incompatible Materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, and strong acids.

Hazardous Decomposition Products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SADT (Self-Accelerating Decomposition Temperature) : Not available.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Product/Ingredient name	Result	Species	Dose	Exposure
xylene	LC50Inhalation Vapour	Rat	20mg/l	4 hours
	LD50 Oral	Rat	4300mg/kg	-
	TDLo Dermal	Rabbit	4300mg/kg	-
n-butyl acetate	LC50 Inhalation Vapour	Rat	>21.1mg/l	4 hours
	TDLo Dermal	Rabbit	>17600mg/kg	-
	LD50 Oral	Rat	13100mg/kg	-
ethyl benzene	LC50 inhalation Vapour	Rat-Male	17.8mg/l	4 hours
	LD50 Dermal	Rabbit	>5000mg/kg	-
	LD50 Oral	Rat	3500mg/kg	-
n-butyl methacrylate	LD50 Oral	Rat	16g/kg	-

Irritation/corrosion

Product/ingredient name	Result	species	score	exposure	observation
Xylene	Eyes-Mild irritant	Rabbit	-	87milligrams	-
	Skin -Mild irritant	Rat		8 hours 60 Microliters	
n-butyl methacrylate	Skin-Mild irritant	Rabbit	-	500microliters	-
	Eyes-Mild irritant				
		Mammal Species unspecified	-	-	-

Sensitisation

Product / ingredient name	Route of exposure	Species	Result
2- Propenoic acid, 2-methyl-, 2-(dimethylamino) ethylester, polymer with butyl 2- propenoate, comps. with polyethylene Glycol hydrogen maleate	Skin	Mammal-species Unspecified	Sensitising
	Skin		Sensitising
C9-11-alkyl- 11-alkyl ethers	Skin	Mammal-species Unspecified	Sensitising
n-butyl methacrylate		Mammal-species unspecified	
bis(1,2,2,6,6-pentamethyl4- piperidyl) sebacate			

- **Mutagenicity** : Not available.
- **Carcinogenicity** : Not available.
- **Reproductive Toxicity** : Not available.
- **Teratogenicity** : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Targetorgans
Xylene n-butyl acetate	Category 3	Not applicable.	Respiratory tract Irritation Narcotic effects Narcotic effects
hydrocarbons C9 aromatic	Category 3	Not applicable.	
	Category 3	Not applicable.	
n-butyl methacrylate	Category 3	Not applicable.	Respiratory tract Irritation
	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Ethyl benzene	Category 2	Not determined	Hearing organs

Aspiration hazard

Name	Result
Xylene Ethylbenzene Hydro carbons	ASPIRATION HAZARD-Category1
C9	ASPIRATION HAZARD-Category1
aromatic	ASPIRATION HAZARD-Category1

Information on Likely Routes of Exposure : Not available.

Potential Acute Health Effects:

- **Eye Contact** : Causes serious eye irritation.
- **Inhalation** : No known significant effects or critical hazards.
- **Skin Contact** : Causes skin irritation. May cause an allergic skin reaction.
- **Ingestion** : No known significant effects or critical hazards.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics :

- **Eye Contact** : Adverse symptoms may include : Pain or irritation, Watering & Redness
- **Inhalation** : No specific data.
- **Skin Contact** : Adverse symptoms may include : Irritation & Redness
- **Ingestion** : No specific data.

Delayed and Immediate Effects as well as Chronic Effects from Short- and Long-Term Exposure :

- **Short-Term Exposure** : Not available.
- **Potential Immediate Effects** : Not available.
- **Potential Delayed Effects** : Not available.
- **Long-Term Exposure** : Not available.
- **Potential Immediate Effects** : Not available.
- **Potential Delayed Effects** : Not available.
- **Potential Chronic Health Effects** : Not available.

- **General** : Once sensitized, a severe allergic reaction may occur upon subsequent exposure to very low levels.
- **Carcinogenicity** **:** No known significant effects or critical hazards.
- **Mutagenicity** **:** No known significant effects or critical hazards.
- **Teratogenicity** **:** No known significant effects or critical hazards.
- **Developmental effects** **:** No known significant effects or critical hazards
- **Fertility effects** **:** No known significant effects or critical hazards.

Numerical measures of toxicity <u>Acute toxicity estimates</u>

Route	**ATE value**
Dermal	9546.07mg/kg
Inhalation (vapours)	126.25mg/l

12. ECOLOGICAL INFORMATION

Toxicity

Product/ ingredient name	**Result**	**Species**	**Exposure**
Ethyl benzene Hydro carbons C9 aromatic n-butyl methacrylate	Acute EC507.2 mg/l AcuteEC502.93mg/l Acute LC50 4.2 mg/l Acute EC50 <10 mg/l Acute IC50 <10 mg/l Acute LC50 <10 mg/l Chronic NOEC 2.6 mg/l Fresh water	Algae Daphn ia Fish Daphn ia Algae Fish Daphnia-Daphnia magna Neonate	48hours 48hours 96hours 48hours 72hours 96hours 21days

Persistence/ degradability

Product/ingredient name	Aquatic half-life	Photolysis	Bio degradability
Xylene Ethylbenzene hydrocarbons C9 Aromatic bis (1,2,2,6,6-pentamethyl4-piperidyl) sebacate	- - - -	- - - -	Readily Readily Not readily Not readily

Bio accumulative potential

Product/ ingredient name	Log Pow	BCF	Potential
Xylene n-butyl acetate ethyl benzene hydrocarbons C9 aromatic n-butyl methacrylate	3.12 2.3 3.6 - 2.99	8.1to25.9 - - 10to2500 -	Low Low Low High Low

- **Mobility in Soil** : Not available.
- **Soil/ Water Partition Coefficient (KOC)** : Not available.
- **Other Adverse Effects** : No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATION

Disposal Methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, its solutions, and any by-products must always comply with applicable environmental protection and waste disposal regulations, as well as any regional or local authority requirements.

Surplus and non-recyclable products should be disposed of via a licensed waste disposal contractor. **Do not dispose of untreated waste into the sewer system unless fully compliant with the requirements of all relevant authorities.**

Waste packaging should be recycled whenever possible. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe and responsible manner.

Take care when handling empty containers that have not been cleaned or rinsed. Empty containers or liners may retain product residues. Vapors from residues may form highly flammable or explosive atmospheres inside the container. **Do not cut, weld, or grind used containers unless they have been thoroughly cleaned internally.**

Avoid dispersal of spilled material and prevent contact with soil, waterways, drains, and sewers. **Do not allow the material to enter drains or watercourses.** This material and/or its container must be treated as **hazardous waste**.

14. TRANSPORT INFORMATION

	UN	**IMDG**	**IATA**
UN number	UN1263	UN1263	UN1263
UN proper shipping name	Paint	Paint	Paint

Transport hazard class(es)	3 	3 	3 
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Additional information	-	Emergency schedules F- E, S-E	-

Additional Information

Transport must be carried out in accordance with **ADR/RID**, **IMDG/IMO**, **ICAO/IATA**, and relevant national regulations.

ADR/RID (Road/Rail Transport) :

- **Tunnel Restriction Code** : (D/E)
- **Hazard Identification Number** : 30
- **Special Provisions** : 640E
- **Classification Note** : Viscous substance. Not restricted under ADR—refer to Chapter 2.2.3.1.5 (applicable to receptacles with a capacity < 450 litres).

IMDG (Maritime Transport) :

- **Classification Note** : Viscous substance. Not restricted under IMDG—transport in accordance with paragraph 2.3.2.5 (applicable to receptacles with a capacity < 450 litres).
- **Special Precautions for User :** Transport within the user's premises should always be carried out in closed containers that are upright and secure. Ensure that personnel involved in transport are aware of procedures in the event of an accident or spillage.

Transport in Bulk According to Annex II of MARPOL and the IBC Code : Not available.

15. REGULATORY INFORMATION

Singapore – Hazardous Chemicals Under Government Control : None.

16. OTHER INFORMATION

Key to Abbreviations:

- **ATE** = Acute Toxicity Estimate
- **BCF** = Bio Concentration Factor
- **GHS** = Globally Harmonized System of Classification and Labelling of Chemicals
- **IATA** = International Air Transport Association
- **IBC** = Intermediate Bulk Container
- **IMDG** = International Maritime Dangerous Goods
- **LogPow** = Logarithm of the octanol/water partition coefficient
- **MARPOL** = International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (“Marpol” = Marine Pollution)
- **UN** = United Nations

References: Not available.

NOTES

PT. INDOWIJAYA SAKTI TEGUH is committed to taking reasonable care for the health and safety of our personnel and others who may be affected by our actions or commissions. This Material Safety Data Sheet (MSDS), current as of the date of issue, contains important health and safety information regarding the product, as well as guidance on how to handle and use it safely in the workplace.

All information provided here in is based on our best knowledge. However, as we cannot anticipate or control the conditions under which this product will be used, it is the responsibility of each user to review this MSDS and determine appropriate handling and usage practices for their specific workplace environment.

PT. INDOWIJAYA SAKTI TEGUH believes this information is accurate and provided in good faith. However, no guarantees or warranties of any kind are made regarding its accuracy or suitability for specific applications, due to potential variations in methods, conditions, and equipment.

Any information, service, recommendations, or advice provided by **PT. INDOWIJAYA SAKTI TEGUH** is based solely on our current knowledge and experience and should not be solely relied upon.

Comprehensive testing and performance evaluation of the product remain the responsibility of the end user. For further information or clarification on any specific points, and to ensure proper risk assessment and precautionary measures are in place, please contact **PT. INDOWIJAYA SAKTI TEGUH.**