

Material Safety Data Sheet

1. Identification Of The Substance / Preparation And Company / Undertaking

Material Name	: Stabilis AE Base – High Build Epoxy Finish
Product Type	: Solvent-base Coating
Supplier Name	: AWATRAHANA SDN BHD.
Address	: Bangunan Awatra, Lot 615, Pelita Commercial Centre 98000 Miri, Sarawak, Malaysia
Telephone	: 6085-417 323
Fax	: 6085- 429 323
Recommended Usage	: As top coat coating for all steel structures, wood, floor etc.

2. Hazard Identification

GHS CLASSIFICATION :

Physical Hazard

Flammable Liquid : Category 3

Health Hazards

Serious eye damage / eye irritation : Category 2
Skin corrosion / irritation : Category 2
Carcinogenicity : Category 1
Reproductive toxicity : Category 1
Specific target organ / systemic toxicity
(single exposure) : Category 1 (respiratory organ, liver, central
nervous system, kidney)
Specific target organ / systemic toxicity
(repeated exposure) : Category 1 (respiratory organ, nervous system,
central nervous system, peripheral nervous
system)

Environmental Hazards

Aquatic environment hazard/acute : Category 2
Aquatic environment hazard/long term : Category 3

GHS LABEL ELEMENTS

Pictograms



Signal Word

Danger

HAZARD INFORMATION :

- ❖ H350 : May cause cancer
- ❖ H226 : Flammable liquid
- ❖ H315 : Causes skin irritation
- ❖ H319 : Caused serious eye irritation

- ❖ H360 : May damage fertility or the unborn child
- ❖ H370 : Causes damage to respiratory organs, liver, central nervous system, kidney, anesthetic action, respiratory tract irritation through inhalation.
- ❖ H372 : Causes damage to respiratory organs, nervous system, central nervous system, peripheral nervous system by prolong or repeated exposure
- ❖ H401 : Toxic to aquatic life
- ❖ H412 : Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS

Preventive Measures

- ❖ P210 : Keep away from ignition sources such as heat / sparks / open flames – No Smoking.
- ❖ P243 : Take precautionary measures against static discharge
- ❖ P241 : Use explosion-proof electrical / ventilating / lighting / equipment by the manufacturer / supplier or the competent authority.
- ❖ P242 : Use only non-sparking tools
- ❖ P271 : Use only outdoors or in a well-ventilated area
- ❖ P233 : Keep container tightly closed
- ❖ P260 : Do not breathe dust / fume / gas / mist / vapours / spray.
- ❖ P273 : Avoid release to the environment
- ❖ P264 + P280 : Wash hands and exposed body thoroughly after handling
- ❖ P281 : Wear protective gloves, glasses and respirator.

First Aid Measures

- ❖ **P304 + P340 + P310** : IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a doctor / physician.
- ❖ **P301 + P312** : IF SWALLOWED : Immediately call a doctor / physician. Rinse mouth. DO NOT induce vomiting.
- ❖ **P305 + P351 + P338** : IF IN EYES : Rinse cautiously with water for minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice / attention.
- ❖ **P302 + P361 + P352** : IF ON SKIN(OR HAIR) : Remove / take off immediately all contaminated clothing. Wash with plenty of soap and water.
- ❖ **P305 + P351 + P338** : If on skin and skin irritation or rash occurs, get medical advice / attention.
- ❖ **P362** : Wash / Decontaminate removed clothing before reuse
- ❖ **P312** : Get medical advice / attention if you feel unwell
- ❖ Refer to section 5 : Fire-Fighting Measures

Storage

- ❖ **P235 + P410 + P403** : Store in cool / covered / well-ventilated place

Disposal

- ❖ **P501** : Paint ingredients, incinerated ash and used container should be disposed by recognized companies which are licensed as industrial waste disposal by respective authority.

Other Hazard Information

- ❖ It is a flammable liquid and explosive if a steam piles up
- ❖ It may possibly cause intoxication of organic-solvent.

3. Composition Information

Specific of chemical material : Mixture

Hazard Component

Ingredient Name	Content	CAS No.
Xylene	1-5	1330-20-7
Ethyl Benzene	1-5	100-41-4
Methyl Isobuthyl Ketone	10-20	108-10-1
Ethanol, 2-butoxy-	5 - 10	111-76-2
2-Propanol, 1-methoxy-	5 - 10	107-98-2

4. First-Aid Measures**Eye Contact**

- ❖ Rinse eyes and eyelids for 15 minutes or more with pure running water immediately.
- ❖ Consult a doctor if symptoms persist.

Skin Contact

- ❖ Remove immediately contaminants with clothes etc.
- ❖ Wash skin thoroughly with fresh water, soap or skin detergent. Do not use solvents and thinners.
- ❖ Receive diagnosis of a doctor, when there is visual changes or when painful.

Inhalation

- ❖ If inhaled large quantity of a steam, gas and a like, move the victim to the fresh air immediately and keep him warm and quiet. If breathing is irregular or stopped, respire artificially. If rapid recovery does not occur, get medical attention.
- ❖ If inhaled a steam, gas and a like or feel worse, remove the victim to fresh air and consult a doctor immediately.

Ingestion

- ❖ If swallowed accidentally, do not induce vomiting, move the victim in a quiet place and consult a doctor immediately. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

5. Fire Fighting Measures

Clear fire area of all non-emergency personnel.

Specific Hazards

: Carbon monoxide may be evolved if incomplete combustion occurs. The vapours is heavier than air, spreads along the ground and distant ignition is possible.

Extinguishing Media

: Carbon dioxide fire extinguisher, foam, dry chemical powder, sand may be used for small fires only. Do not discharge extinguishing waters into

Unsuitable Extinguishing Media	: Do not use water in a jet
Protective Equipment for firefighters	: Wear full protective clothing and self-contained breathing apparatus.
Extinguishing Methods	: Removes any inflammable things promptly from the circumference. Use the adequate fire extinguisher Fight the fire from the windy side Cool off closed container exposed at high temperature with water mist

6. Accident Release Measures

Observe all relevant local and international regulations

- ❖ Avoid contact with spilled or released material.
- ❖ Remove all contaminated clothing immediately
- ❖ Wear appropriate protective equipments (glove, protective mask, apron and goggles)
- ❖ Clear away all sources of ignition, heat and inflammable materials immediately.
- ❖ Collect spills with the appropriate tools which are equipped to prevent sparks caused by impact and static electricity.
- ❖ Absorb spills with non combustible materials such as dry sand and soil and collect in closed container. For extensive spillage, prevent outflow with land elevation.
- ❖ Provide a suitable fire extinguisher for a precaution of a fire.
- ❖ Do not let spills to drains, rivers and sea. Special care must be taken for environmental protection.

7. Handling and Storage

Handling

- ❖ Do not overturn, knock or drag the container and handle with care.
- ❖ Handle carefully in a well ventilated place.
- ❖ Wear appropriate protective equipments (glove, protective mask, apron and goggles)
- ❖ Avoid contact with skin, eye and clothing
- ❖ Keep container tightly closed.
- ❖ Absorb spills with absorbent materials such as cloth and wool and collect in closed container. For extensive spillage, prevent outflow with land elevation.
- ❖ Provide earthing leads and an explosion-prevention for electrical equipments and installations.
- ❖ Absorb spills with non combustible materials such as dry sand and soil and collect in closed container. For extensive spillage, prevent outflow with land elevation.
- ❖ Provide a suitable fire extinguisher for a precaution of a fire.
- ❖ Do not let spills to drains, rivers and sea. Special care must be taken for environmental protection.

Storage

- ❖ Avoid direct sun light
- ❖ Keep away from heat, open fire and ignition sources etc.
- ❖ Store in a well ventilated place.
- ❖ Store containers against descent and fall in earthquake etc.
- ❖ Keep away from reach of children, water , food and feed stocks.

8. Exposure Controls and Personal Protection

Not contain restricted occupational exposure material

Ingredient Name	Exposure Limit	ACGIH (TLV)
Xylene	50ppm	100ppm
Ethyl Benzene	20ppm	100ppm
Methyl Isobuthyl Ketone	20ppm	20ppm
Ethanol, 2-butoxy-	25 ppm	25 ppm
2-Propanol, 1-methoxy-	-	-

Equipment Requirement

- ❖ Install the equipment of the explosion-proof type.
- ❖ Install the ventilation to control airborne concentrations below the exposure limits.
- ❖ Provide earthing leads to equipments for transportation, loading / unloading and stirring of a liquid.
- ❖ When working in the confined space, provide a local ventilation to circulate the air sufficiently.
- ❖ Provide eye washes and showers for emergency use. Showed the location of the installation.

Protection

Respiratory Protection

- ❖ Wear the gas mask for organic vapours for short term or lower exposure level.
- ❖ Under emergency of high level of exposure, use self-contained breathing apparatus(SCBA) or use suitable respiratory protection meeting NIOSH or relevant legislation.

Eye Protection

- ❖ Wear chemical splash goggles. Under possible chemical splash circumstances, wear chemical splash eye shield. Normal goggles can not provide adequate protection.

Hand and Skin Protection

- ❖ Wear the appropriate gloves which are not permeable with the organic solvent or chemicals.
- ❖ Wear cloths that impermeable with chemicals including rubber apron which do not expose skin directly
- ❖ Wear safety shoes and boots that is chemical resistant.
- ❖ Contaminated gloves or clothing should be replaced



Other Protection

- ❖ Monitoring the PPE periodically. During work, no smoking and eating. After work, should wash the body thoroughly.
- ❖ During working for electrostatic coating, wear appropriate antistatic shoes.

9. Physical and Chemical Properties

Apperance	: Colored liquid
Odour	: Solvent odour
Boiling Point	: 78.0 ~ 172.0 ⁰ C
Flash Point	: 23.0 ⁰ C (close cup)
Explosion Limits	: (lower limit) 1.1% (upper limit) 19.0 %

Vapour Pressure	: 5946 Pa (20 ⁰ C)
Density	: 1.30 ~ 1.40
pH	: Not applicable
Auto-ignition Point	: 240 ⁰ C

10. Stability and Reactivity

Stability	: Stable under normal conditions of use. Reacts with strong oxidizing agent and strong acids.
Hazardous Decomposition Products	: Generate smoke, carbon dioxide, carbon monoxide and other toxic gases.
Other reactivity information	: No reaction is generated in particular
Conditions to avoid	: Avoid heat, sparks, open flames and other ignition sources.
Material to avoid	: Strong oxidizing agents, strong acids

11. Toxicological Information

Material categorized as “Not Classified” or “Classification not Possible” by GHS are not described.

Xylene

Acute toxicity	Oral (LD50)	: 3500mg/kg
	Dermal (LD50)	: 4350mg/kg
	Inhalation(LC50)	: 29.08mg/L (4 hours)

Serious eye damage / irritation	: Category 2B
Skin corrosion/irritation	: Category 2
Reproductive toxicity	: Category 1B
Specific target organ/systemic toxicity(single exposure)	: Category 3 (anesthetic action)
Specific target organ/systemic toxicity(single exposure)	: Category 1 (respiratory organs, liver, central nervous system, kidney)
Specific target organ/systemic toxicity(repeated exposure)	: Category 1 (respiratory organs, nervous system)

Ethyl Benzene

Acute toxicity	Oral (LD50)	: 3500mg/kg
	Inhalation(LC50)	: 17.2mg/L (4 hours)

Serious eye damage / irritation	: Category 2B
Carcinogenicity	: Category 2
Reproductive toxicity	: Category 1B
Specific target organ/systemic toxicity(single exposure)	: Category 2 (central nervous system)
Specific target organ/systemic toxicity(single exposure)	: Category 1 (respiratory tract irritation)
Aspiration hazards	: Category 1

Ethanol, 2-butoxy

Acute toxicity Oral (LD50) : 1746 mg/kg
 Dermal (LD50) : 610 mg/kg
 Inhalation (LD50) : 2.4mg/L (4 hrs)

Serious eye damage / irritation : Category 2A
 Skin corrosion/irritation : Category 2
 Reproductive toxicity : Category 2
 Specific target organ/systemic toxicity(single exposure) : Category 1 (central nervous system, blood, kidney, liver)
 Specific target organ/systemic toxicity(single exposure) : Category 3 (respiratory tract irritation)
 Specific target organ/systemic toxicity(repeated exposure) : Category 2 (blood)

Methyl Isobutyl Ketone

Acute toxicity Oral (LD50) : 2500mg/kg
 Inhalation(LC50) : 8.2mg/L (4 hours)

Serious eye damage / irritation : Category 2B
 Carcinogenicity : Category 2
 Specific target organ/systemic toxicity(single exposure) : Category 1 (central nervous system)
 Specific target organ/systemic toxicity(single exposure) : Category 3 (respiratory tract irritation, anesthetic action)
 Specific target organ/systemic toxicity(repeated exposure) : Category 1 (nervous system)

2-Propanol, 1-methoxy-

Acute toxicity : No data available
 Serious eye damage / irritation : Category 2B
 Specific target organ/systemic toxicity(single exposure) : Category 3 (anesthetic action)

12. Ecological Information

*Pay careful attention to leakage and waste disposal as it may seriously influence to the environment.

*No data available for the mixture

Harmful Information On Substance

12.1 Toxicity

MIBK	Fish (Fathead Minnow) /LC50/505mg/L / 96hr Algae / EC50 / 980mg/L / 72hr Daphnia magna / EC50 / 4280mg/L / 24 hr
Xylene	Fish (Roccus Saxatilis/LC50/>2mg/L / 96hr Algae / EC50 / 3.2mg/L / 72hr
Ethanol, 2-butoxy	Fish (Oncorhynchus Mykiss /LC50/1474mg/L / 96hr Algae / EC50 / 1840mg/L / 72hr Water Flea / EC50 / 1550mg/L / 48hr
2-Propanol, 1-methoxy	Fish (Rainbow Trout/LC50/134mg/L / 96hr

	Algae / EC50 / 20800mg/L / 48hr Daphnia / EC50 / 408mg/L / 48hr
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12.2 Persistence and Degradability

MIBK	Biodegradation (84%) – 14 days Readily Biodegradable BOD : 2.06mg/g / COD : 2.16mg/g
Ethanol, 2-butoxy	Biodegradation (90.4%) – 28 days Readily Biodegradable BOD : No data / COD : 2.25mg/g
Xylene	Biodegradation (88%) – 28 days Readily Biodegradable BOD : No data / COD : No data
2-Propanol, 1-methoxy	Biodegradation (96%) – 28 days Readily Biodegradable BOD : No data / COD : 1.84mg/g

12.3 Bioaccumulation Potential

MIBK	Log Pow : <3 / BCF : 2 - 5 Potential : low
Ethanol, 2-butoxy	Log Pow : 0.83 / BCF : 0.61-10.0 Potential : low
Xylene	Log Pow : 3.12 / BCF : 8.1 – 25.9 Potential : low
2-Propanol, 1-methoxy	Log Pow : 1.2 / BCF : <100 Potential : low

12.4 Mobility in soil

MIBK	It will be highly mobile and may contaminate ground water. Floats on water
Ethanol, 2-butoxy	Expected to Partition to Water
Xylene	It will be highly mobile and may contaminate ground water. Floats on water
2-Propanol, 1-methoxy	It will be highly mobile and may contaminate ground water. Floats on water

12.5 PBT & vPvB Assessment

* not available

13. Disposal Information

Disposal Property : Hazardous Waste

Disposal Method :

- ❖ Paint ingredient, incinerated ash and used container should be disposed by recognized companies which are licensed as industrial waste disposal collector by relevant authority.
- ❖ Do not dispose the sewage to the ground and drains after washed a container, instrument and a like.
- ❖ Incineration waste and waste water should be disposed in accordance with the regulations and legislation for waste disposal.

14. Transport Information

Make sure there are no damage, corrode and leak on the product container. Products should be also prevented from falling, loosening or tumbling during transit. Packing, labeling and transportation should be carried out in accordance to local related regulation.

UN No : 1263
UN Class : Flammable Liquid (class 3)
UN Shipping Name : Paint
Packing Group : II
Marine Pollutant (yes/no) : No
Emergency response guide no. : 128
Precaution for Transportation : Carry personal protective equipment and fire extinguisher
Container may damage, dented , leaked and spilled during loading/unloading and transportation. Avoid direct sunlight and transit in high temperature.

15. Regulation Information

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

- ❖ Environmental Public Health (toxic Industrial Waste) Regulation 1988
- ❖ Workplace Safety and Health , Protection and Management Act
- ❖ Fire Safety Act (Chapter 109A)
- ❖ Environmental Protection and Management Act
- ❖ SS 586: Part 1 – Transport and storage of dangerous good
- ❖ SS 586 : Part 2 – Globally harmonized system of classification and labeling of chemicals – Singapore’s adaptations.
- ❖ SS 586 : Part 3 – Preparation of Safety Data Sheets.
- ❖ IMO GHS purple guide book
- ❖ Japan Paint Manufacturers Association “Chemical Data Base for MSDS (paints)
- ❖ Database of National Institute of Technology and Evaluation (NITE).
- ❖ Raw Materials makers’ “ Material Safety Data Sheet”.
- ❖ Sewage and Drainage Act (Chapter 294).

Registration Status :

The raw material used in this paint listed / comply to the chemical inventories of the following countries.

EU	EINECS	Japan	METI
USA	TSCA	Korea	ECL
Canada	DSL	Australia	AICS
Philippines	PICCS	China	-

16. Other Information

Main Quotation Literature.

- ❖ SS 586: Part 1 – Transport and storage of dangerous good
- ❖ SS 586 : Part 2 – Globally harmonized system of classification and labeling of chemicals – Singapore’s adaptations.
- ❖ SS 586 : Part 3 – Preparation of Safety Data Sheets.
- ❖ IMO GHS purple guide book

- ❖ Japan Paint Manufacturers Association “Chemical Data Base for MSDS (paints)
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- ❖ Raw Materials makers’ “ Material Safety Data Sheet”.

Disclaimer

This information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. We do not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user’s obligation to evaluate and use this product safely and to comply to all applicable national laws and regulations. This MSDS may be amended in the newly acquired knowledge.