PRODUCT NAME: NAFFCOOL # 230AR

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

IDENTIFICATION OF THE SUBTANCE: NAFFCOOL #230 AR

This is a Petroleum-derived complex substance

CHEMICAL FAMILY: Aliphatic, cycloparaffinic hydrocarbon

PRODUCT DESCRIPTION: Rust Preventives Liquid

COMPANY: PT. TANESHA WAHANAMAS

Tangerang City Business Park Blok E-2

Jl. Jend. Sudirman No.1 Cikokol Tangerang

Phone: +6221-55782341 Fax: :+6221-55782347

2. COMPOSITION/INFORMATION ON INGREDIENTS

HEALTH HAZARDOUS COMPONENT : SYBOL/R-PHRASE

Wt%

OR OEL

Naptha (Petroleum), Hydrotreted Heavy

Xn,R10,R65,R66

80-90

Additives

10-20

3. HAZARD IDENTIFICATION

HEALTH HAZARDS

Harmful: may cause lung damage if swallowed Repeated exposure may cause skin dryness or cracking PHYSICAL & CHEMICAL HAZARDS/ FIRE & EXPLOSION HAZARDS

Moderate hazard. Liquids can release vapors that can form flammable mixture upon moderate heating to temperature at or above the flash point.

Static Discharge. Product can accumulated static charges which can cause an incendiary electrical discharge.

4. FIRST AID MEASURES

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep it rest. Call for prompt medical attention.

SKIN CONTACT:

Flush with large amounts of water, use soap if available.

Remove grossly contaminated clothing, include shoes, and launder before re-use

EYE CONTACT:

Flush eyes with large amount water until irritation subsides. If irritation persists, get medical attention.

INGESTION: If swallowed, do not induce vomiting. Keep at rest, get prompt medical attention.

5. FIRE FIGHTING MEASURE

FIRE FIGHTING PROCEDURE:

Use water spray to cool fire exposed surfaces and to protect personnel. Shut off fuel to fire.

Use foam, dry chemical, or water spray to extinguish fire.

SPECIAL FIRE PRECAUTION:

Avoid spraying water directly into storage containers due to danger of boilover.

See also Section 4 " FIRST AID MEASURE" as well as Section 9 " STABILLITY AND RECTIVITY"

HAZARDOUS COMBUATION PRODUCTS:

No. unusual.

ACCIDENTAL RELEASE MEASURE

LAND SPILL:

- Eliminate sources of ignition. Prevent liquid from entering sewers, watercourses, or low areas.
- Keep public away. Shut off source if possible to do so without hazard.
- Contain spilled liquid with sand or earth.
- Recovery by pumping (use an explosion proof or hand pump) or with a suitable absorbent.
- Consult an expert on disposal of recovered material insure conformity to local disposal regulations.

WATER SPILL:

- Eliminate sources of ignition and request other shipping to stay clear.
- Notify port or relevant authority and keep public away. Shut off source if possible to do so without hazard.
- Remove from surface by skimming or with suitable absorbents. If swallowed by local authorities and environmental agencies sinking and/or suitable dispersants may be used in non confined waters.

HANDLING & STORAGE

STORAGE TEMPERATURE (DegC) : Ambient TRANSPORT TEMPERATURE (DegC) : Ambient

LOADING/ UNLOADING TEMPERATURE (DegC): Ambient STORGE/ TRANSPORT PRESSURE (kPa): Atmospheric

STORAGE/ HANDLING, GENERAL NOTES:

- Keep container closed. Handle containers with care. Open slowly in order to control possible pressure
 release. Store in cool, well-ventilated place away from incompatible materials.
- DO NOT handle, store or open near or open flame, sources of heat or source of ignition. Protect material from direct sunlight.
- DO NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue.
 DO NOT reuse empty containers without commercial cleaning or reconditioning.

8. PHYSICAL & CHEMICAL PROPERTIES

These are indicative values only. Please refer also to the product data sheet.

PHYSICAL STATE : Liquid

COLOUR

: Dark brown liquid

ODOR

: Aliphatic hydrocarbon odor

NAFFCOOL # 230AR - MATERIAL SAFETY DATA SHEET

ASTM D4052

< -20 DegC ASTM D97 FREEZ/MELT/POINT: **ASTM D86 BOLING PONT RANGE:** 163-190 DegC FLASH PONT, MINIMUM 46 DegC ASTM D56

AUTOIGNITION TEMPERATURE >200 DegC 0.183 kPa VAPOR PRESSURE (20 DegC)

0.771 Kg/dm3 DENSITY (15 DegC)

SOLUBILITY IN WATER (20 DegC) <0.10 Wt%

ASTM D445 1.33 mm²/s VISCOCITY (25 DegC) **MOLECULAR WEIGHT** 143 Calculated

STABILLITY & REACTIVITY

HAZARDOUS POLYMERIZATION : NO : Stable **STABILITY** CONDITIONS TO AVOID INSTABILITY: Not Applicable

MATERIALS & CONDITIONS TO AVOID (INCOMPABILITY): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: None

10. ECOLOGICAL INFORMATION

ENVIRONMENTAL MOBILITY

This product is highly volatile and will rapidly evaporate to air if released in to water.

ENVIRONMENTALY DEGRADABILITY

This product biodegrades rapidly and is "readily" biodegradable according to OECD guidelines.

This product can degrade rapidly in air.

This substance is expected to be removed in a wastewater treatment facility.

ECOTOXICITY & BIOACCUMULATION

No acute toxicity to aquatic organisms is expected at maximum water solubility of this material. Long term adverse effect to aquatic organisms are not expected.

-END MSDS