

Product MSDS Number Version Date : HYDROKINDO 9001-35 : HMSD-013 : November 29, 2010

: November 29, 2010

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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product : HYDROKINDO 9001-35

Type : Aliphatic Polyurethane Dispersion (PUD)

Supplier details:

PT ALKINDO MITRARAYA (AMR)PT ALKINDO MITRARAYA (AMR)JI Gatot Subroto km. 8, Desa Kadu Jaya, Kecamatan CurugTangerang 15810INDONESIAPhone: + 62 - 21 - 59302250 (hunting 10 lines)Facsimile: + 62 - 21 - 59302251E-mail: alkindo@alkindo.netWeb: www.alkindo.net

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Skin Corrosion / Irritation Hazard Category 2 Serious Eye Damage / Eye Irritation Hazard Category 2A Oral toxicity Category 5

GHS LABELING



GHS SIGNAL WORD Warning

HAZARD STATEMENTS

Causes mild skin irritation Cause eye irritation Maybe harmful if swallowed

PRECAUTIONARY STATEMENTS

Prevention

Wash hands thoroughly after handling.

Response

If skin irritation occurs: Get medical advice/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 advice/attention.

Storage

Store in well ventilated place. Keep cool. Store locked up. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local and national regulations.



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3. COMPOSITION INFORMATION

CHEMICAL DESCRIPTION

Aliphatic Polyurethane Dispersion (PUD), dispersed in demineralized water & NMP.

HAZARDOUS COMPONENTS N-methyl-2-pyrrolidone CAS No. 872-50-4

±11 %

4. FIRST AID MEASURES

EYE CONTACT:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

SKIN CONTACT:

Wash thoroughly with soap & water.

INHALATION:

If difficulties occur after vapor/aerosol has been inhaled, remove to fresh air and seek medical.

INGESTION:

Rinse mouth and then drink plenty of water.

Note to Physician:

Treatment: treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

Water spay, dry extinguisher media, foam, carbon dioxide.

SPESIFIC HAZARDS:

Harmful vapors. Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

PROTECTIVE EQUIPMENT:

Fire fighters and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Use personal protection recommended in Section 8.

ENVIRONMENTAL PRECAUTIONS:

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

METHODS FOR CLEANING UP:

For large amounts: pump off products.

For residues: pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.



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7. HANDLING & STORAGE

HANDLING:

No special measures necessary provided product is used correctly.

STORAGE:

Store in closed containers away from sources of heat in a well-ventilated flameproof area. Storage temperature: $25 - 30^{\circ}$ C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended.

EYES:

Goggles.

RESPIRATORY PROTECTION: Respiratory protection not required. HAND PROTECTION: Chemical resistant protective gloves. e.g. nitrile rubber (0.4mm), chloroprene rubber (0.5mm), polyvinylchloride (0.7mm). SKIN PROTECTION: Wear suitable protective clothing.

9. PHYSICAL & CHEMICAL PROPERTIES

Phase	: Liquid (25.0 °C)
Color	: Milky White
Odor	: Faint odor
Boiling point (760 mmHg)	: 100 °C
Water solubility	: soluble

10. STABILITY & REACTIVITY

Stability: Stable Conditions To Avoid: None known Polymerization: Will not occur Conditions To Avoid: None known Materials to avoid: Avoid contact with peroxides. Avoid contact with oxidizing agents. Avoid contact with acids and alkali"s.

Hazardous Decomposition Products:

Carbon dioxide

Carbon monoxide (CO)

11. TOXICOLOGICAL INFORMATION

Potential Health Effects None

Product Toxicity Information

ACUTE TOXICITY DATA

Oral	rat	Acute LD50	>2000 mg/kg
Dermal	rabbit	Acute LD50	>2000 mg/kg
Inhalation	rat	Acute LC50	No data



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LOCAL EFFECTS ON SKIN AND EYE				
Acute Irritation	dermal	Not irritating		
Acute Irritation	eye	Not irritating		

ALLERGIC SENSITIZATION Sensitization skin

No data No data

Additional information:

Sensitization

The product has not been tested. The statement has been derived from products of a similar structure and composition.

12. ECOLOGICAL INFORMATION

The ecological properties of this material have not been fully investigated.

respiratory

13. DISPOSAL CONSIDERATIONS

METHODS OF DISPOSAL; WASTE OF RESIDUES; Must be dumped or incinerated in accordance with local regulations.

CONTAMINATED PACKAGING:

Uncontaminated packs can be re-used. Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. TRANSPORT INFORMATION

UNDG

Dangerous Goods? Not applicable/Not regulated HAZCHEM Code: Not applicable

IMO

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

15. REGULATORY INFORMATION

European Union (EU): All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

China: All components of this product are included on the Chinese Inventory or are not required to be listed on the Chinese Inventory.

Japan: All components of this product are included on the Japanese (ENCS) Inventory or are not required to be listed on the Japanese Inventory.

16. OTHER INFORMATION

Whilst every care has been taken in the preparation of this material safety data sheet, the same has been produced from information and data currently available to PT Alkindo Mitraraya at the date hereof; however, PT Alkindo Mitraraya cannot be responsible for any errors or omissions. If in any doubt, please consult PT Alkindo Mitraraya. Reasons for issue: New format.