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QUALITY MANAGEMENT SYSTEM

TPD-1108

POUR POINT DEPRESSANT

MATERIAL SAFETY DATA SHEET

Issue date: 03/2009

1. PRODUCT AND MANUFACTURER IDENTIFICATION

Trade Name: TPD-1108

Product Family: Pour Point Depressant / Wax Inhibitor

Product Description: Synergistic blend of wax-crystal modifiers and other polymers in solvent

system.

Application: Pour point depressant for treatment of crude oils in production and pipeline

operations.

Manufacturer / Supplier: THUAN PHONG Co., Ltd.

Add: 159 Binh Gia St, Ward 8, Vung Tau City, S.R. Viet Nam

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2. COMPOSITION INFORMATION

Component	CAS No.	Content (% by weight)
Solvent naphtha (petroleum) Ethylbenzene Naphthalene Xylene Other proprietary blends		15 - 30% < 2% 5 - 10% 30 - 60% 10 -15%

Total 100%

3. HAZARDS IDENTIFICATION

Flammable.

May cause gastrointestinal irritation nausea and vomiting if swallowed

Contact with liquid or vapour at high concentrations may cause redness and irritation of eyes.

Direct contact with skin may cause irritation.

Inhalation of high concentrations of vapour may cause nausea or vomiting and irritation to mucous membranes and upper respiratory tract.

4. FIRST-AID MEASURES

EYE CONTACT

Promptly wash eyes by holding eyelids apart and flush with plenty of running water for at least 15 minutes. Get medical attention promptly if symptoms occur.

SKIN CONTACT

Wash the skin thoroughly with mold soap and water. Remove contaminated clothing and launder thoroughly before re-wearing. Seek medical attention in event of irritation

INHALATION

Remove victim immediately from source of exposure. If breathing is difficult, give oxygen. Seek medical advice

INGESTION

Wash out mouth with water. Seek medical attention immediately. Do not induce vomiting (or Only induce vomiting at the instructions of medical personnel).

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Fire can be extinguished using: foam, carbon dioxide, dry powder extinguishers.

SPECIAL FIRE FIGHTING PROCEDURES

Use a self-contained breathing apparatus. Cool fire-exposed containers using water spray until well after the fire is out. Avoid exposure to vapors

HAZARDOUS COMBUSTION PRODUCTS

Carbon monoxide (CO), Carbon dioxide (CO₂)

PROTECTIVE MEASURES IN FIRE

Full protective equipment including suitable respiratory protection.

OTHER INFORMATION

Vapors can release form explosive mixtures at temperature at or above the flash point. Vapour can travel to source of ignition and flash back. Never use welding or cutting torch on or near drums, even when empty, explosion may result. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Chemical safety goggles, neoprene or PVC gloves, safety boots recommended.

Wear suitable protective clothing to prevent skin contact.

PRECAUTIONS TO PROTECT ENVIRONMENT

Take appropriate steps to prevent discharges to drains, water courses or onto the ground. Contain spillages with sand or any suitable adsorbent material. This product may pose a risk to the aquatic ecosystem if released.

SPILL CLEAN UP METHODS

Restrict access to the area and stop the flow of chemical. Ventilate. Eliminate all open flames. Extinguish all ignition sources. The recommended personal protective equipment must be worn when addressing the cleanup of any spill. Absorb with an inert absorbent material and collect spillage in containers and deliver for disposal according to local regulations. Do not let washing down water contaminate ponds or waterways.

7. HANDLING AND STORAGE

STORAGE PRECAUTIONS

Store in suitable labeled containers. Bulk deliveries should be stored in carbon steel tanks. Store away from heat, from sources of ignition and separately from oxidizers. Have appropriate fire extinguishers available in and near the storage area.

Storage class: Flammable and toxic liquid.

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Do not take internally. Use with adequate ventilation. Ventilate well, avoid breathing vapors. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks)

Shelf life: Use within 18 months

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

PROCESS CONDITIONS

Use engineering controls to reduce air contamination to permissible exposure level (explosion-proof general and local exhaust ventilation).

HAND PROTECTION

Use protective gloves made of: neoprene, nitrile, polyethylene or PVC.

EYE/FACE PROTECTION

Wear approved chemical safety goggles where eye exposure is reasonably probable.

SKIN PROTECTION

Wear protective clothing chemically resistant to this material to prevent any possibility of skin contact RESPIRATORY PROTECTION

Respiratory protection must be used if air concentration exceeds acceptable level. Use chemical respirator with appropriate organic vapor cartridge.

OTHER PROTECTION

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Wash promptly with soap & water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. No eating or drinking while working with this material. DO NOT SMOKE IN WORK AREA.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state Viscous liquid Color Muddy white

Flash point Above 32°C (ASTM D92) Pour Point < 20°C (ASTM D97)

Molecular weight Mixture
Autoignition temperature N/A
Boiling point (760 mmHg) N/A
Specific gravity ($H_2O=1$) 0.86 – 0.90

Solubility in water Insoluble

Solubility in organic solvents Soluble in most hydrocarbon solvents

pH (diluted solution 5%) N/A

Kinetic viscosity at 25° C 55 – 160 mm²/s (stoke)

10. STABILITY AND REACTIVITY

STABILITY

Stable at normal storage temperature

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition.

MATERIALS TO AVOID

Contact with strong oxidizers may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide (CO), Carbon dioxide (CO₂)

11. TOXICOLOGICAL INFORMATION

INGESTION

Harmful: may cause gastrointestinal distress with nausea and vomiting.

INHALATION

Harmful by inhalation: Exposure may result in eye, nose and respiratory irritation and may produce nausea, headache and dizziness. Inhalation of high concentrations of vapour may cause nausea or vomiting and irritation to mucous membranes and upper respiratory tract

SKIN CONTACT

Harmful in contact with skin: liquid may irritate skin. Toxic through skin absorption.

EYE CONTACT

Contact with liquid or vapour at high concentrations may cause redness, irritation of eyes with reversible injury.

12. ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the environment.

13. DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. ALL DISPOSAL PRACTICES MUST BE IN COMPLIANCE WITH ALL LOCAL LAWS AND REGULATIONS. THE MANUFACTURE HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

14. TRANSPORT INFORMATION

Not available

15. REGULATORY INFORMATION

No specific information.

16. OTHER/ADDITIONAL INFORMATIONS

THIS MATERIAL IS DEVELOPED AND MANUFACTURED FOR INDUSTRIAL APPLICATION ONLY.

THE INFORMATION HEREIN IS MADE BASED ON REFERENCES, INFORMATION AND DATA AVAILABLE AT PRESENT. IT MAY BE REVISED NEW INFORMATION IS AVAILABLE. THE DESCRIPTIONS HEREIN ARE FOR NORMAL HANDLING. FOR SPECIAL APPLICATIONS, MAKE SAFETY PROVISIONS SUITABLE TO THEM PRIOR TO USE.