

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

E8475

General Use: Viscosity Index Improving Additive

Company Profile (Manufacturer):

Energis8 Indústria e Comercio de Lubrificantes Ltda.
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SECTION 2 - HAZARDS IDENTIFICATION

2.1 NBR 14725-2 CLASSIFICATION:

It not classified as dangerous according to the Brazilian standard NBR 14725-2.

2.2 LABELING ELEMENTS: Not rated

2.3 HAZARDS: Not applicable.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

This material is a substance.

This material contains no ingredients that requires to be disclosed in accordance with the regulatory criteria for this jurisdiction.

SECTION 4 – FIRST AID MEASURES

Eyes: No specific first aid measures are required. As a precaution, remove contact lenses, if applicable, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if they have been contaminated. To remove the material from the skin, apply a cleaning agent for hands, of the type which is used without water or else mineral oil or petrolatum. Then wash with soap and water. Throw away the contaminated clothing and shoes, or wash them thoroughly before using them again.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, consult a doctor.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, take fresh air. Get medical attention if cough or difficulty breathing

4.1 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: EFEITOS IMEDIATOS À SAÚDE

Eyes: Not expected prolonged or significant eye irritation.

Skin: The skin contact is not prolonged or significant irritation. It is not expected that the contact with the skin causes allergic reactions in it. It is not considered harmful to internal organs if absorbed through the skin.

Ingestion: Not considered harmful if swallowed.

Inhalation: Not considered harmful if inhaled.

LATE EFFECTS TO HEALTH AND OTHER: Not Rated

4.2 Note to physicians: Not applicable

SECTION 5 - FIRE-FIGHTING MEASURES

5.1 EXTINCTION MEANS:

Use water or fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

5.2 SPECIFIC DANGERS OF THE SUBSTANCE OR MIXTURE

Combustion Products: High degree of variation as the combustion conditions. A complex mixture of gases, liquids and solids existing in the air, including carbon monoxide, carbon dioxide and unidentified organic compounds will be formed when this material undergoes combustion.

5.3 PROTECTION MEASURES FOR THE FIRE FIGHTING TEAM:

Fire Fighting Measures: This material will burn although it is not easily ignited. Instructions on the correct way of handling and storage in Section 7. For fire involving this material, do not enter any enclosed space or room or confined without proper protective equipment, including self-contained breathing equipment.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Eliminate all sources of ignition in vicinity of spilled material.

6.2 Environmental precautions:

Contains the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater.

6.3 Methods and materials for containment and cleaning up:

Perform cleanup spill as soon as possible, observing the precautions listed in Exposure Controls / Personal Protection. Use techniques such as the use of non-combustible absorbent materials or pumping. Remove contaminated soil, in circumstances where this is possible and appropriate. Place other contaminated materials in disposable containers and dispose of them in a manner consistent with the requirements aplicáveis. Comunicar spills to local authorities as appropriate or required.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling:

Precautionary Measures: Avoid contact with eyes, skin or clothing. After handling, wash very well.

General Handling Information: The maximum temperature for handling / transportation is 90oC. Avoid contamination of the soil or discharge of material into sewers, drainage systems and bodies of water.

Static Hazard: Electrostatic charges can accumulate and create a hazardous condition when you are handling this material. To minimize this danger, you may need to make a connection or grounding. However, only the use of these two methods is not sufficient to neutralize all loads. Perform a review of all operations that have the potential to generate and accumulate electrostatic charges and / or other sources of fire (including the supply of containers and tanks, spray, cleaning tanks, runs samples, runs measures, trade loads, filtering, mixing, agitation, and operations in vacuum trucks), then do so necessary to mitigate such dangerous.

Containers of caveats: The vessel was not built to withstand pressure. Do not use pressure to empty container because it may rupture with explosive force. Containers or empty containers contain product residue (solid, liquid or vapor) and can be dangerous. These containers should not pressurize, cut, weld, strong, drill, grind weld and should not be exposed to heat, flame, sparks, static electricity or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or must be disposed of properly.

7.2 Conditions for safe storage, including any incompatibilities:

General Information Storage: The maximum storage temperature is 40 ° C but the recommendation is storage at room temperature. The polymer should be stored in a covered and dry place that is not exposed to sunlight.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Take into account the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and choose the personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, it is recommended personal protective equipment listed below. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under specific circumstances.

8.1 CONTROL PARAMETERS:

There is no occupational exposure limit recommended by OSHA, ACGIH or Energis8 for this material or its components. Consult local competent authorities for appropriate values.

8.2 ENGINEERING MEASURES CONTROL:

Use in well ventilated area.

8.3 PERSONAL PROTECTION MEASURES:

Eye and Face Protection: Normally it is not required no special eye protection. When there is risk of splash, you should wear protective glasses with side, as a security measure.

Skin Protection: Normally, no protective clothing is required. When it may splash, choose protective clothing according to the operations to be conducted, physical requirements and other substances present in the workplace. The recommended materials for protective gloves include: Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: Normally, no special respiratory protection is not required. Use a self-contained breathing positive pressure in circumstances where air-purifying respirators do not provide adequate protection.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Warning: the following data correspond to the common values and do not constitute specification.

Appearance

Color: Yellowish to amber

Physical state: Pasty

Odor: Not available data

Odor threshold: Not available pH data: Not applicable

Melting point: No data available

Freezing Point: No data available

Initial Boiling Point: Not available data

Flash Point: Not applicable

Evaporation rate: No data available

Flammability (explosive) (% by volume in air):

Lower: No data available Upper: No data available

Vapour pressure: No data available

Vapour Density (Air = 1): No data available

Relative density: 0.871 @ 15.6 ° C (60 ° F)

Density: 0.8699 kg / l @ 15 ° C (59 ° F)

Solubility: Insoluble in water.

Partition coefficient n-octanol / water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: Not applicable

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

10.2 Chemical stability: This material is considered stable under normal environment and conditions of temperature and pressure during storage and handling.

10.3 Hazardous Polymerization: Should not occur hazardous polymerization.

10.4 Conditions to Avoid: Do not store or handle at temperatures above those indicated in section 7 (Handling and Storage) of the Material Safety Data Sheet (MSDS).

10.5 Incompatibility with Other Materials: Not applicable

10.6 Hazardous decomposition products: None known to (none expected)

SECTION 11 – TOXICOLOGICAL INFORMATION

Serious eye damage / eye irritation: Risk of irritation to eyes is based on evaluation of data for similar products or materials components.

Corrosion / irritation: The risk of skin irritation is based on evaluation of data for similar products or materials components.

Skin Sensitization: The risk of skin sensitization is based on evaluation of data for similar products or materials components.

Dermatologic Toxicity: The risk of acute dermal toxicity is based on evaluation of data for similar products or materials components.

Severe Oral Toxicity: The risk of acute oral toxicity is based on evaluation of data for similar products or materials components.

Respiratory toxicity: The risk of acute inhalation toxicity is based on evaluation of data for similar products or materials components.

Acute toxicity estimate: Not determined

Germ cell mutagenicity: The risk assessment is based on the evaluation of data relating to similar material components.

Carcinogenicity: The risk assessment is based on the evaluation of data relating to similar material components.

Reproductive toxicity: The risk assessment is based on the evaluation of data relating to similar material components.

Toxicity for specific target organs - single exposure: The risk assessment is based on the evaluation of data relating to similar material components.

Toxicity for specific target organs - repeated exposure: The risk assessment is based on the evaluation of data relating to similar material components.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

This material is not considered harmful to aquatic organisms. Information on the ecotoxicity based on information about a similar material. The product has not been tested. The statement is derived from the properties of individual components.

12.2 PERSISTENCE AND DEGRADABILITY

This material is not considered immediate biodegradation material. The biodegradability of this material is based on evaluating data relating to product components semelhante.O material was not tested. The observation is based on products of similar structure and composition.

12.3 BIOACCUMULATIVE POTENTIAL

Bioconcentration factor: No data available.

Partition coefficient n-octanol / water: No data available

12.4 MOBILITY IN SOIL

Data not available.

12.5 OTHER ADVERSE EFFECTS

No other adverse effects identified.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Disposal Considerations

Use the material for the purpose intended or recycle, if possible. In case you need to dispose this material, it may fall within the criteria of dangerous goods, as defined by international laws and regulations, national or local.

SECTION 14 – TRANSPORT INFORMATION

A descrição apresentada não se aplica a todas as condições de transporte. Consultar a norma 49CFR ou as regulamentações referentes a cargas perigosas para ver outros requisitos de descrição (ex.: nome técnico) e requisitos de transporte específicos ao meio ou quantidade.

Descrição do DOT para remessas: NOT REGULATED AS HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Descrição do IMO / IMDG para remessas: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

Descrição para Remessas do ICAO / IATA: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 – REGULATORY INFORMATION

LIST OF SEARCHED REGULATIONS:

01-1 = IARC Group 1

01-2A = IARC Group 2

01-2B = IARC Group 3

No part of this material was found in the regulatory relations above.

CHEMICAL PRODUCTS INVENTORY:

All components comply with the following inventory requirements of chemicals: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines) TSCA (United States).

Prepared in accordance with Brazilian Standard NBR 14725-4

SECTION 16 - OTHER INFORMATION

GRADUATIONS NFPA: Health: 0 Flammability: 1 Reactivity: 0

CORRECTION DECLARATION: This review is an update of the following sections of this Material Safety Data Sheet (MSDS): 9.10

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Input Limit Value	TWA - Average time in scale
STEL - Short Term Exposure Limit	PEL - Acceptable Exposure Limit

	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG -International Maritime Dangerous Goods Code
API - American Petroleum Institute	FISPQ - Material Safety Sata Sheet
CVX - Energis8	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

The above information is based on data that we have considered correct on this date. Because this information can be applied in conditions that are beyond our control or knowledge, and as there is a possibility that new information after the date hereof, which may necessitate certain modifications of the information, we assume no responsibility for the results of its use . This information is provided under the condition that the person who receives them take their own decisions regarding the suitability of the material for a particular purpose