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DIESEL OIL LUBRICITY IMPROVER

PHYSICAL DATA

Appearance : yellow amber liquid Specific gravity @ 16°C : 0,900 Flash point PMCC : >100°C Active matter % : 100%

DESCRIPTION

UNI LBR 2000.04 is a marine fuel lubricity improver blended to restore the natural lubricity of ultra desulfurized oils (sulphur less than 50 ppm) UNI LBR 2000.04 used regularly, will reduce the wear of fuel pumps and injection/distribution system occurring when low intrinsic lubricity fuels are adopted.

PROPERTIES

- Improve fuel lubricity
- Reduces wear of distribution systems and fuel pumps
- Fully compatible with system and engine components
- Fully compatible with marine fuels/diesels and lube oils
- Metal free high molecular organic acid
- Reduces rust formation
- Safe on rubber, light alloys and copper

APPLICATIONS

BIO CONTROL FOT is used in oil storage facilities which have problems due to bacteria colonisation and/or algae in the oil / water interface.

DOSAGE

The "perfect" dosage should be calculated upon the result of HFRR test done ashore by a laboratory as there is no direct link between the value of the Sulphur and the lubricity capability of the fuel. Considering the average value of HFRR found in several ULS fuels (Ultra Low Sulphur) analysed by independent laboratories the dosage rate may be set between 100 and 600 ppm in the worst cases. If we adopt a dosage of 200 ppm of UNI LBR 2000.04 without knowing the real HFRR value of the bunkered fuel we will for sure limitate any possible damage to the distribution system; this dosage expressed in litres is equal to 1 liter each 5 Tonn of fuel. In any case an eventual over dosage of UNI LBR 2000.04 will not cause any problems.





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Since the lubricity of the fuel does not depends only and/or directly to the content of sulphur, but is the result of the process of desulphurization of virgin naphtha, there is no fixed calculation for the dosage unless a specific fuel test is performed by a specialised laboratory.

PACKAGING

UNI LBR 2000.04 is supplied in 25 litres pails or in 208 litres Drums.

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Safety Data Sheet

1. Identification of the substance / preparation and the Company

1.1 Identification of the substance or preparation

Product name UNI LBR 2000-04

1.2 Use of the substance /

preparation

Intended use Ultra Low Sulphur Diesel lubricity improver

1.3 Company identification

Name Urruty gg Niego S.r.l.

Full address Via al Santuario di N.S. Guardia 58 a

District and Country 16162 Genova Bolzaneto (GE)

Italia

Tel. + 39 010 711395 Fax + 39 010 713120

e-mail address of the

competent person

responsible for the Safety

Data Sheet

info@uniservicemarine.com

1.4 Emergency telephone

First Aid Information: Centro Antiveleni Milano -

For urgent inquiries refer Niquarda

to

Phone: 02 - 66101029 (specialized in chemical

products poisoning).



2. Hazards Identification

This product is not dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments. Nevertheless, this preparation contains dangerous substances in concentrations that must be declared in section No. 3 and requires a safety data sheet containing all the information required under the Regulation (EC) 1907/2006 and subsequent amendments.

3. Composition / Information on ingredients

Contains:

Name Concentration % (C) Classification

FATTY ACIDS, TALL OIL 100%

CAS No 61790-12-3 EC 263-107-3

4. First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing in an unconscious person.

In the event of splashes or contact with eyes:

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin:

Wash the skin thoroughly with soap and water or a recognised cleaner.

In the event of swallowing:

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Consult a doctor and show him the label.

5. Fire-fighting measures

Keep packages near the fire cool, prevent pressurised containers from bursting



6. Accidental release measures

PERSONAL PRECAUTIONS

Consult the safety measures listed under headings 7 and 8.

ENVIRONMENTAL PRECAUTIONS

Contain and control the leaks or spills with non-combustible absorbent material such as sand, earth, vermiculite in drums for disposal.

Prevent any material from entering drains or waterways

METHODS FOR CLEANING UP

Clean preferably with a detergent, do not use solvents.

7. Handling and storage

Make sure that equipment is available for cooling the vessels, to prevent the danger of overpressure and overheating in the event of fire in the vicinity. Refer to the other sections of this data sheet for information relating to health and environmental risks.

8. Exposure control / personal protection.

Use personal protection equipment as per Directive 89/686/EEC

Technical measures

Personnel shall wear regularly laundered overalls

Hand protection

Type of gloves recommended:

In the event of prolonged or repeated contact with hands, use appropriate gloves.

Eye and face protection

Wear safety goggles



9. Physical and chemical properties

Colour Amber Odour mild Appearance liquid insoluble Solubility in water Specific gravity 0,89-0,93 Kg/l Vapour density 3 mbar (150°C) Not available Evaporation speed Comburent properties Not available Partition coefficient: n-octanol/water Not available not relevant рН Boiling point > 155°C Melting point -5°C Flash point > 61°C

10. Stability and reactivity

The product is stable in normal conditions of use and storage. In the event of thermal decomposition or fire, vapours potentially dangerous to health may be released.

11. Toxicological information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled carefully according to good industrial practices. This product may have slight health effects on sensitive people, by inhalation and/or cutaneous absorption and/or contact with eyes and/or ingestion.

12. Ecological information

Classification on the basis of environmental effects: LC50 (for fish 96h): LC50 > 100 mg/l EC50 (for daphnia 48h): EC50 > 100 mg/l IC50 (for algae 72h): IC50 > 100 mg/l Other adverse effects:

Germany: WGK 2 (VwVwS vom 17/05/99, KBws)



13. Disposal consideration

Do not pour into drains or waterways.

Waste:

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging:

Empty container completely. Keep label(s) on container. Give to a certified disposal contractor.

14. Transport information

Exempt from transport classification and labelling. Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2009 - IMDG 2008 - ICAO/IATA 2009).

15. Regulatory information

This preparation was classified in compliance with the directive known as <All preparations> 1999/45/EC and its adaptations

In addition directive 2008/58/EC with the 30° adaptation of directive 67/548/EEC (Hazardous substances) have been taken into account.

In addition directive 2009/2/EC with the 31° adaptation of directive 67/548/EEC (Hazardous substances) have been taken into account.

In addition Regulation (EC) No 1272/2008 have been taken into account.

This preparation is not classified as hazardous to health by directive 1999/45/EC. This product is not classified as flammable.

Particular provisions:

Germany: WGK 2 (VwVwS vom 17/05/99, KBws)



16. Other information

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The product must not be used for any purposes other than those specified under heading 1 without first obtaining written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties

GENERAL BIBLIOGRAPHY

- 1. Directive 1999/45/EC and following amendments;
- 2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
- 3. Regulation (EC) 1272/2008 (CLP) of the European Parliament;
- 4. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
- 5. The Merck Index. 10th Edition;
- 6. Handling Chemical Safety;
- 7. Niosh Registry of Toxic Effects of Chemical Substances;
- 8. INRS Fiche Toxicologique (toxicological sheet);
- 9. Patty Industrial Hygiene and Toxicology;
- 10. N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition;

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product .

This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Changes to previous review

The following sections were modified:

01 / 08 / 09 / 13