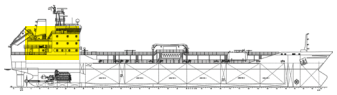
BIOGREASE LIQUID



BIOLOGICAL ACTIVATOR FOR ELIMINATING GREASE AND FAT IN SHIP GALLEYS, INDUSTRIAL KITCHENS AND FOOD INDUSTRY

PHYSICAL DATA

Bacterial count: approx. 40 millions/ml
Free enzymes: approx. 3000 units/ml
pH: 7.2 ± 0.1 @ 15°C
Density: 1 ± 0.1 @ 15°C
Appearance: green/blue liquid
Odor: Citrus flower
Stability: 15 months
Toxicity: none

DESCRIPTION

BIOGREASE is composed of specific enzymes for digesting grease, fats, surfactants, proteins, acids and cellulose. It is activated by additional bacteria that can operate in aerobic as well as anaerobic mode (with or without the presence of oxygen), enzymes, nutritious elements aiming at the digestion and subsequent fluidizing of:

- Proteins contained in food
- Starch contained in basic carbohydrate foodstuff (pasta, bread, etc.)
- Surfactants contained in detergents
- Vegetable and animal fats
- Cellulose from disposal of paper towels, napkins, etc.

BIOGREASE prevents clogging of pipes, unpleasant odors, and activates the regeneration of bacteria population in septic tanks.

BIOGREASE discharged through drains improves digestion of polluting substances and restores oxygen to optimum level; it fights development of growths because it feeds on phosphates.

BIOGREASE does not have any side effect and represents the most efficient and natural solution for maintenance of galleys, professional kitchens, drains and septic tanks, particularly on board vessels.

APPLICATION

Apply BIOGREASE where necessary, thus activating for longest times the creation of an optimum bacteria population. Dosing can be done either manually, or through an automatic dosing equipment.

BIOGEASE performs within a pH range of 6.0-8.5 and a temperature range of 10-44 degrees C. (50-110 degrees F). Extreme variations of pH and temperature as well as wide shifts in either parameter over a short period of time should be avoided.

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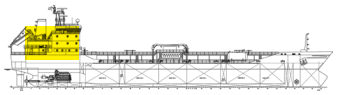

DOSAGE

Cafeterias/Restaurants

Number of meals served per day	Start up Liter/day	Maintenance Liter/day
1000 – 2000	0.8	0.4
2000 – 4000	1.0	0.5
4000 – 6000	1.2	0.6
Over 6000 meals	1.4	0.7

DRAINS AND LINES

Shock treatment (first and second week)
Dosage per day: 0.5 liters per m^3 or per 100 meters of piping.

Daily maintenance
Dosage per day: 0.2 liters per m^3 or per 100 meters of piping.

WARNING

Preferably apply when drains are used the less, for example at night.
Do not use together with acids, alkali, chlorine or disinfectants.
Wash hands after manipulating the product (as a simple precaution).
Store in cool and dry place at temperatures comprised between 10 and 30 °C.
Shake well before using as the product has a natural tendency to sedimentation.
Keep away from children.
Close containers properly after us.

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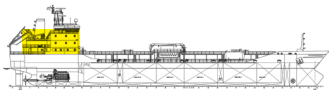

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Safety Data Sheet

1. Identification of the substance / preparation and the Company

1.1 Identification of the substance or preparation

Product name	BIOGREASE LIQUID
1.2 Use of the substance / preparation	
Intended use	Grease and Fat biological eliminator
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	
For urgent inquiries refer to	First Aid Information: Centro Antiveleni Milano - Niguarda Phone: 02 - 66101029 (specialized in chemical products poisoning).

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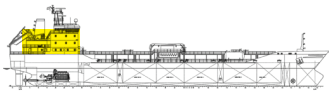

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2. Hazards Identification

Health Hazard (inhalation, ingestion, contact with skin or eyes):
Most Important Hazards: The preparation is not classified according to the criteria laid down in EU Council Directives 67/548/EC (Annex VI of Directive 2001/59/EC) and 1999/45/EEC
Environmental Hazard: High water solubility. Not classified as dangerous for environment according to the criteria laid down in EU Council Directives 67/548/EC (Annex VI of Directive 2001/59/EC) and 1999/45/EEC:

3. Composition / Information on ingredients

Chemical/trade name	Quantity %	Symbols	R phrase	CAS No.	EINECS, ELINCS
Alkylarylsulfonic acid	<10	C	R22, R41	27176-87-0	248-289-4
Sodium Nitrate	<10	Xn	R8, R22, R36/37/38	7631-99-4	231-554-3

4. First aid measures

Exposure by Inhalation: Remove victim to fresh air, in a quiet place, in an half laying position. Seek medical
attention if symptoms occur.
Exposure by skin: Immediately wash affected area thoroughly with water and soap. Take medical
advice if irritation appears. Organisms used are non pathogenic but can cause infection when in contact with open wounds.
Exposure by eyes contact: Immediately flush eyes with plenty of water (during 20 minutes minimum) and seek
medical attention if irritation develops.
Exposure by Ingestion: Rinse mouth, do not drink anything, keep quiet. Seek medical attention.

5. Fire-fighting measures

Suitable Extinguishing Media:In case of fire in the surroundings : water, sand, foam, dry chemical or carbon
dioxide extinguishers may be used.
Extinguishing Media not to be used: None
Specific Exposure Hazards: If the substance is involved in a fire, oxides of carbon and nitrogen may be evolved.
Protective Equipment for Firefighters:
Full protective clothing and self-contained breathing apparatus should be worn.

6. Accidental release measures

Personal Precautions: Evacuate personnel from immediate vicinity. Wear appropriate protective clothing (goggles, gloves, and a vapour mask). Refer to section 8.

Environmental Precautions: Avoid excessive release to drains and natural water. This product and its container must be disposed in a safe way.

Methods for Cleaning Up: Stop the leak or release at source. Transfer the spillage to waste containers labelled in the same way as the original containers. Clean the spillage area with water and detergent.

7. Handling and storage

Handling:
Precautions: The substance should be handled under conditions of good industrial hygiene and in conformity with any local regulations in order to avoid unnecessary exposure.
Technical Measures: The use of gloves will reduce exposure to the preparation.
Specific Requirements: None.

Storage:
Specific design for storage rooms or vessels: None
Incompatible Materials: Keep away from: strong acids or alkali compounds may inactivate biological cultures. Avoid strong oxidising agents. Do not store in non protected metal containers.
Conditions of Storage: Store in a cool, dry, well-ventilated area.
Keep containers tightly closed when not in use. Avoid freezing temperatures. Avoid temperatures above 45 °C to preserve biological stability.
Quantity Limits: None
Packaging Materials: Packaging can be recycled

8. Exposure control / personal protection.

Exposure limits
VME 8h dusts =10 mg/m3 (particles of a diameter < 100μ) and 5 mg/m3 (particle of a diameter < 5μ)

Professional exposure control
Personal Protective Equipment: The provision of personal protective equipment and the need to provide engineering control measures should be decided upon by the user as part of a formal exposure risk assessment. Based upon the available toxicological information the protective measures described below should be regarded as a minimum.

Respiratory Protection: No special ventilation is usually necessary. However if operating conditions create

high airborne concentrations of this material, based upon available information and in the absence of occupational exposure limits the use of a vapour mask to a minimum standard of EN405 FFA1P1 is recommended.

Hand Protection: Prolonged or frequent repeated skin contact especially with broken skin. PVC or Latex protective gloves to a Standard EN374 should be provided.

Eye Protection: Safety glasses with protect from splashes recommended, to prevent eye exposure, should be used when handling the preparation. The protection should be capable of giving chemical protection as classified in BS2092 or EN166.

Skin Protection: Avoid contact with broken skin. However in case of prolonged/ frequent direct handling of the material it is recommended to wear protective clothing (type 6) as classified by Standard NF EN 13034.
.
Engineering Measures: Engineering controls such as LEV are recommended to reduce exposure to the preparation

Specific Control Parameters: None

9. Physical and chemical properties

Physical state:	liquid
Colour:	cream
Odour:	mild soapy
pH:	7.5-9.0
Boiling Point/Boiling Range:	100°C
Melting Point/Melting Range:	Not applicable
Flash Point: Not determined	
Flammability (Solid, Gas):	The product is formulated in water and is not expected to cause fire even if in contact with combustible material
Autoflammability:	Not determined
Explosive Properties:	Predicted not explosive based on chemical structure.
Oxidising Properties:	Not determined
Vapour Pressure:	Not applicable
Relative Density:	approx 1 @ 25 °C
Solubility	
- Water solubility:	soluble
- Fat solubility:	Not determined
Partition coefficient n-octanol/water:	Not determined
Other Data:	None

10. Stability and reactivity

Conditions to Avoid: Excessive temperature variations, below 0°C or above 45 °C
Materials to Avoid: Strong acids or alkali compounds may inactivate biological cultures and strong oxidising agents.
Hazardous Decomposition Products:
None anticipated

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

Mobility: This preparation has high water solubility and low vapour pressure. Therefore it is likely to distribute predominantly to the aqueous environment.

Biodegradability: The preparation is expected to biodegrade rapidly. However no information on anaerobic biodegradation is available.

Accumulation: Not anticipated to bioaccumulate due to high water solubility and hence,
biomagnification is not likely.

Ecotoxicity: The preparation is not anticipated to pose any environmental hazard.
No data on toxicity specifically to soil organisms, plants and terrestrial animals are available.

Other adverse effects: There is no ozone depletion, photochemical ozone creation or global warming potential. Adverse effects in the sewage treatment plant are not anticipated.

Other information: Class 1 micro-organisms (European Federation of Biotechnology) selected from the natural environment.

13. Disposal consideration

Waste from Residues: Collect all waste in suitable and labelled containers and dispose according to local legislation.
Contaminated Packaging: Dispose of by incineration or landfill in accordance with local regulations. Empty packaging can be recycled or reused.

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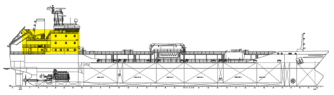

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14. Transport information

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

EC Regulations: The preparation is NOT classified as "dangerous" according to the criteria laid down
in EU Council Directives 67/548/EC (Annex VI of Directive 2001/59/EC) and 1999/45/EEC.
Classification proposal

Symbols: None
R-phrases: None
S-phrases: S2 Keep out of reach of children

Microbial classification
The preparation is not deemed 'hazardous' according to the requirements of Council Directive 2000/54/EEC. All bacteria
contained in this preparation are designated Class 1 according to Council Directive 90/679/EEC (as amended by Council
Directive 93/88/EEC) and all other recognised classification systems for micro-organisms.

Labeling according to Regulation (EC) n° 648/2004 (Detergent): to be declared
COMPONENT FUNCTION QUANTITY (%)
Non ionic agent surfactant < 5
Anionic agent surfactant < 5
Diammonium phosphate nutrient <5
1,2 Benzizothialosin-3-one Conservative agent < 5
EDTA Conservative agent < 5

Local Regulations: Any relevant local regulations should be observed.

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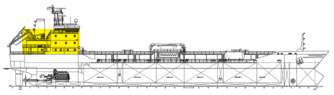

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16. Other information

R phrases

R8 Contact with combustible material may cause fire
R22 Harmful if swallowed
R36 Irritating to eyes
R37 Irritating to respiratory system
R38 Irritating to skin
R41 Risk of serious damage to eyes

Miscellaneous

Regulation (EC) n° 648/2004 (Detergent)
The surfactants contained in this preparation comply with the biodegradability criteria as laid down in Regulation (EC) 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Sources
Detailed composition,
SDS of ingredients.
ECB website
http://ecb.jrc.it/classification-labelling/search-classlab/

ChemExpertwebsite:
http://www.chemexper.com/index.shtml?main=http://www.chemexper.com/search/cas/3844-45-9.html

Miscellaneous
Safety/Classification:
http://biosafety.ihe.be/RA/Class/ClassMain.html
http://www.baua.de/prax/abas/trba_466.pdf

Occupational Exposure:
http://europa.eu.int/eur-lex/pri/en/oj/dat/2000/l_262/l_26220001017en00210045.pdf

LEV: Local Exhaust Ventilation

The information contained is based on our knowledge of the product at the date of publishing. It applies to the product as such. In case of formulation or mixture make sure no new danger appear. Users are advised of possible additional danger
when the product is used in applications for which it is not intended to. The user must satisfy himself that the product is entirely suitable.