

Instructions for use

Radiagreen OSD

Oil spill dispersant type 2 en 3

Radiagreen OSD is a concentrated blend of natural surfactants and solvents.

Due to its high solvency power, **Radiagreen OSD** will easily penetrate into the oil slick as a result of which the surfactants will be incorporated rapidly. The surfactants will reduce the interfacial tension between oil and water, allowing it to divide the hydrocarbons in droplets of such a size that the physical and bacterial action is accelerated, leading to a faster degradation.

Radiagreen OSD (free of aromates) has been engineered for a large number of spills. We differentiate:

- Cleaning of oil spills (crude oil, diesel, gasoil, vegetable oil,...)
 - Oil spills on warehouse floors, port quays, sea, bulkhead areas....(**do not use undiluted on asphalt, always rinse with water**)
 - Rocks and beaches
 - Oil and fats on machines and mechanical parts.
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▪ Recommended application procedure

Radiagreen OSD can be used pure in a 1 on 10 proportion (1 part OSD for 10 parts of oil) for dispersion by means of aircraft or can be used pre-diluted (10% solution) with water or seawater. To prepare this solution, mix approximately 10 cc of **Radiagreen OSD** with 1 liter of water. This will give a white, milky solution.

An appropriate spraying equipment is advisable such that the product is uniformly distributed **on the surface of the spill.** An additional mechanical mixing is advisable to enhance the breaking.

It is essential to note that the amount of **Radiagreen OSD** that should be used, related is to the type of spillage. The type of pollution has an important influence on the effectiveness of the dispersant.

Pollution at sea and on other watersurfaces

It is recommended to enclose the oil spill with boomers before using dispersants. It is also advisable to perform a mechanical cleaning with pumps, skimmers and absorbing material prior to the use of dispersants.

Spray **Radiagreen OSD** (pure or as a 10% solution) on the oil spill. Depending on the type of oil, 1 part of **Radiagreen OSD** for 10 parts of oil will be enough. Always make sure the dispersant is sprayed on top of the spill. Give the dispersant some time (30-40 minutes) to penetrate the oil. Then spread the treated spill using a mechanical device or a water jet (this might not be necessary in open sea).

Warning: It is not advisable to use different types of dispersants together.

Oilstains on floors and on decks

A solution of 10% **Radiagreen OSD** should be enough, however it might be necessary to treat the surface 2-3 times if the stains aren't recent. Leave the product for 30-60 minutes (maximum 5 minutes if used on asphalt) on the stain and always flush it away with plenty of water.

Treatment of engines and engine parts

Use a 10% (or higher) solution. Spray a layer on the oil or the fat, wait 15 minutes and flush away with a jet of water.

▪ **Quantity**

The quantity is dependant on the type and amount of spill. 1 volume of dispersant for 14 volumes light oil to 1 volume of dispersant for 8 volumes heavy oil is sufficient.

▪ **Special treatments and precautions for applications and storage**

* Flammable:
Flash-point-ASTMD 93: >110°C
Keep away from ignition and heat sources

* Avoid contact with eyes and skin

* Maximum storage Temperature: 60°C
Minimum Temperature: -20°C
Optimal storage Temperature: 5 - 35 °C

The product will have a shelf life of minimum 5 years if the storage conditions are respected.

* Although **Radiagreen OSD** doesn't causes any corrosion, it is necessary to clean the used material after every treatment with **Radiagreen OSD**. It is advisable to use pipes and joints made from FPM or FKM-2.



Technical data sheet
Last revision 22/09/2008

RADIAGREEN OSD

Physical Properties (indicative values)	Units	Values	Methods
Appearance at 20°C		liquid	
Pour point	°C	max -18	ASTM D 97
Specific weight at 20°C	kg/l	ca 0.980	DIN 51757
Viscosity at 40°C	mm ² /s	31	DIN 51562
Flash point	°C	>110	ASTM D 92

Standard Availability

Bulk.
Drums (4 x 175 kg net weight on pallet).
1000 litre container.

Safety Data

See Safety Data Sheet (Radiagreen 7834).

Main Applications

Oil spills dispersant.

Head office & fatty acid, fatty alcohol, methyl ester & glycerine plant
Assenedestraat 2 - 9940 Ertvelde - Belgium
T: +32 9 341 10 11 - F: +32 9 341 10 00

Fatty ester & dimer plant
Vaartstraat 130 - 2520 Oelegem - Belgium
T: +32 3 470 62 11 - F: +32 3 470 62 00

Fatty ester plant
Framnesveien 57 - 3202 Sandefjord - Norway
T: +47 33 44 88 00 - F: +47 33 44 88 99

Fatty acid & specialty oleochemicals plant
Industriestrasse 10 - 46446 Emmerich am Rhein - Germany
T: +49 28 22 74 0 - F: + 49 28 22 74 484

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RADIAGREEN OSD

Date of issue SDS: 01/03/2009

1. Identification of the substance/preparation and of the company/undertaking

Trade name	RADIAGREEN OSD
Chemical name	Mixture of Fatty esters and Specialities.
REACH type	Preparation
Use of the substance/preparation	No supplementary information available
Main use category	Industrial use
Industrial/Professional use spec.	wide dispersive use
Industrial category	IC2 - Chemical industry: basic chemicals IC3 - Chemical industry: chemicals used in synthesis
Responsible	sds@oleon.com
Emergency number	ERS SGS: +32 3 575 55 55
Official advisory body UK	National Poisons Information Service +44 870 600 6266 worldwide: http://www.who.int/ipcs/poisons/centre/directory/en

2. Hazards identification

R-phrases	Not classified as dangerous according to the criteria of directive(s) 67/548/EEC and/or 1999/45/EC
Fire hazard	DIRECT FIRE HAZARD - Combustible - INDIRECT FIRE HAZARD - Heating increases the fire hazard - Temperature above flashpoint: higher fire/explosion hazard
Explosion hazard	DIRECT EXPLOSION HAZARD - Its dust is explosive with air - INDIRECT EXPLOSION HAZARD - Dust cloud can be ignited by a spark

3. Composition/Information on ingredients

Product identification:	Mixture of Fatty esters and Specialities.
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4. First-aid measures

Symptoms/injuries	Unlikely to cause harmful effects
First-aid measures general	If you feel unwell, seek medical advice
First-aid measures after inhalation	Remove the victim into fresh air - Respiratory problems: consult a doctor/medical service
First-aid measures after skin contact	Rinse with water - Soap may be used - Take victim to a doctor if irritation persists
First-aid measures after eye contact	Rinse with water - Take victim to an ophtalmologist if irritation persists
First-aid measures after ingestion	Rinse mouth with water - Call Poison Information Centre (www.who.int/ipcs/poisons/centre/directory/en) - Consult a doctor/medical service if you feel unwell
Advice to doctor/physicist	No supplementary information available

5. Fire-fighting measures

General measures	Mark the danger area - Exposure to heat: have neighbourhood close doors and windows - Exposure to fire/heat: consider evacuation - Wash contaminated clothes
Extinguishing agents - fire fighting instructions	FIRE EXTINGUISHING MEDIA - ABC powder - Carbon dioxide - Dry chemical powder - Polyvalent foam - Water spray - Solid water jet ineffective as extinguishing medium

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Fire hazard	DIRECT FIRE HAZARD - Combustible - INDIRECT FIRE HAZARD - Heating increases the fire hazard - Temperature above flashpoint: higher fire/explosion hazard
Reactivity hazard	On burning: release of (carbon monoxide - carbon dioxide)
Other information (fire-fighting)	No supplementary information available

6. Accidental release measures

General measures Mark the danger area - Exposure to heat: have neighbourhood close doors and windows - Exposure to fire/heat: consider evacuation - Wash contaminated clothes

Personal protection (Emergency response) Fire-resistant protective clothing - Gloves - Heat/fire exposure: compressed air/oxygen apparatus



Handling the product Comply with the legal requirements - Keep container tightly closed - Keep away from ignition sources/sparks - Clean contaminated clothing - Observe normal hygiene standards

Environmental precautions No supplementary information available

Leak Contain released substance, pump into suitable containers - Plug the leak, cut off the supply - Knock down/dilute dust cloud with water spray - Powdered form: no compressed air for pumping over spills

Disposal Prevent dispersion by covering with dry absorbent - Scoop solid spill into closing containers - Scoop absorbed substance into closing containers - Clean contaminated surfaces with an excess of water and soap solution - Wash clothing and equipment after handling

Methods for cleaning No supplementary information available

Other information (accidental release) No supplementary information available

7. Handling and storage

Handling and storage information is applicable on all mentioned identified uses of this SDS.

Handling temperature No supplementary information available

Handling the product Comply with the legal requirements. Keep container tightly closed. Keep away from ignition sources/sparks. Clean contaminated clothing. Observe normal hygiene standards

Storage area Keep container in a well-ventilated place. Store at ambient temperature. Keep out of direct sunlight. Meet the legal requirements

Prohibitions on mixed storage KEEP SUBSTANCE AWAY FROM: - heat sources

Containers : requirements SPECIAL REQUIREMENTS: - closing - correctly labelled - meet the legal requirements

Containers : material selection No supplementary information available

Recommended materials stainless steel
glass

Unsuitable materials No supplementary information available

8. Exposure controls / Personal protection

Risk Management Measures No supplementary information available

Handling the product Comply with the legal requirements. Keep container tightly closed. Keep away

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from ignition sources/sparks. Clean contaminated clothing. Observe normal hygiene standards

Personal protection (Material-Handling)

Gloves - Protective clothing - Safety glasses



Materials for protective clothing

GIVE GOOD RESISTANCE: - nitrile rubber

9. Physical and chemical properties

Appearance	Liquid
Odour	characteristic odour. sweet odour
Colour	Yellow to amber
Flashpoint	> 110 °C (ASTM D92)
Viscosity	ca. 31 mm ² /s (40°C)
Vapour pressure	No supplementary information available
Absolute density	ca. 995 kg/m ³ (20°C)
Auto-ignition temperature	No supplementary information available
Solidification point	< -10 °C
Other properties	Oily. Soluble in oils/fats. soluble in most organic solvents. Insoluble in water

10. Stability and reactivity

Instability	Stable under normal conditions
Conditions to avoid	No supplementary information available
Reactivity hazard	On burning: release of (carbon monoxide - carbon dioxide)
Prohibitions on mixed storage	KEEP SUBSTANCE AWAY FROM: - heat sources
Materials to avoid	No supplementary information available
Hazardous decomposition products	No supplementary information available

11. Toxicological information

Eye irritation	No supplementary information available
Skin irritation	No supplementary information available
Skin sensitization	No supplementary information available
General toxicity	ACUTE TOXICITY - Non-toxic if swallowed (LD50 oral,rat >5000 mg/kg) - Literat. reports: practically non-toxic in contact with skin - No toxicity data on inhalation - CHRONIC TOXICITY - Not listed in carcinogenicity class (IARC,EC,TLV,MAK) - Not listed in mutagenicity class (EC,MAK) - Not classified as toxic to reproduction (EC)
Toxicity hazard	DIRECT TOXICITY HAZARD - INDIRECT TOXICITY HAZARD - Literature reports practically non-toxic
LD50 oral rat	> 5000 mg/kg Non-toxic
RTECS no	No supplementary information available

12. Ecological information

Ecology - general	According to literature: no environmental hazard - No data available on ecotoxicity
Ecology - waste materials	Do not discharge into drains or the environment - Remove to an authorized waste treatment plant

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Ecology - soil	Biodegradability in soil: no data available
Ecology - water	No bioaccumulation data available
Ecology - air	No supplementary information available
Other properties	Oily - Soluble in oils/fats - soluble in most organic solvents - Insoluble in water
Other information (adverse effects)	No supplementary information available

13. Disposal considerations

Disposal	Prevent dispersion by covering with dry absorbent - Scoop solid spill into closing containers - Scoop absorbed substance into closing containers - Clean contaminated surfaces with an excess of water and soap solution - Wash clothing and equipment after handling
EURAL	No supplementary information available
Regional legislation (waste)	No supplementary information available

14. Transport information

ADR transport regulations	Not subject
ADR transport document description	
RID class	Not subject
RID transport regulations	Not subject
ADNR class	Not subject
IMDG class	-
IMDG transport regulations	Not subject
ICAO class	Not subject
ICAO transport regulations	Not subject
ICAO subsidiary risks	004
ICAO Instruction "cargo"	Not applicable
ICAO Instruction "passenger"	Not applicable
ICAO Instruction "passenger" - Limited quantities	Not applicable
Other information (transport)	No supplementary information available

15. Regulatory information

Chemical inventories	Listed on DSL, IECS, NDSL, NZIoC, TSCA, EC inventories
REACH preregistration number	all the ingredients of this product in the scope of Regulation 1907/2006/EC (REACH), if not exempted, have been pre-registered.
R-phrases	Not classified as dangerous according to the criteria of directive(s) 67/548/EEC and/or 1999/45/EC
Extra phrases	Safety data sheet available for professional user on request
Label name	No supplementary information available
Not classified as dangerous according to the criteria of directive(s) 67/548/EEC and/or 1999/45/EC	

16. Other information

Chem. inventories legend	DSL = Canadian Domestic Substances List IECS = Inventory of Existing Chemicals Substances in China NDSL = Canadian Non Domestic Substances List NZIoC = New Zealand Inventory of Chemicals TSCA = USA Toxic Substances Control Act
Training advice	No supplementary information available

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Date of issue SDS: 01/03/2009

SDS Version	01.02
Date of issue SDS	19/11/2008
SDS Reason for revision	Regulatory information (section 15)
REACH references	No supplementary information available
Other Regional depending information	No supplementary information available
Other information	No supplementary information available

MSDS: according to EC directive 2001/58/EC and the REACH regulation 1907/2006 Annex II

REACH Disclaimer:

This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



**Regional Organization for the Protection of the Marine Environment
(ROPME)**

ROPME List of Approved Oil Spill Chemicals

(Last updated: 1 March 2015)

COREXIT[®] EC9500A *
DASIC SLICKGONE NS
FINASOL OSR-51
FINASOL OSR-52 / ECOSPERSE 52
OD 4000 (PE 998)
RADIAGREEN OSD **
SUPER-DISPERSANT 25
SEACARE ECOSPERSE LT23

* for Sea and Beach, but not for Rocky Shore

** for Sea, but not for Beach and Rocky Shore

The existing stock of NU CRU may still be used during the shelf life until exhaustion.