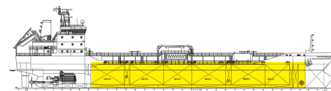


COAL TAR REMOVER



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EMULSIFYING CLEANING AGENT FOR THE REMOVAL OF COAL TAR, CRUDE BENZENE, PYROLYSE GAS OIL, BITUMEN AND SIMILAR SUBSTANCES

PHYSICAL DATA

Slightly yellow coloured liquid with characteristic odour, consisting of a mixture of chlorinated aromatic hydrocarbons and nonionic + cationic detergents.

Suitable for use on most common metals, however should NOT be used on rubbers (except Viton rubber) and lastics (except nylon, polypropylene, epoxy coating and polyurethane).

Flash point PM CC: above

pH (1% solution): 7

Specific gravity (20° C): 1.20

DESCRIPTION

- Effective cleaner which will not leave carbon residues on the cleaned surface.
- Excellent for cleaning of heavily contaminated heat exchangers.
- Economical cleaner which can be used as an emulsion with sea water.
- Minimises waste water, because of fast separating properties. (product contamination sink to the bottom of separation tank because it is heavier than water)

APPLICATION

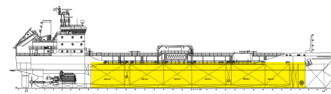
COAL TAR REMOVER is used for cleaning of tanks, heat exchangers, air coolers etc.

DIRECTIONS FOR USE

Cleaning of Tanks

1. After discharging, pre-wash (2 hrs.) the tanks with seawater at a maximum temp. of 50 °C.
2. Remove any sediment by hand.
3. Make a solution in the tank which has to be cleaned in the ratio of 100 litres of COAL TAR REMOVER to 900 litres of water.
4. Heat the solution up to approx. 50° C, by use of the heating coils.
5. Start the circulation. (cargo pump, cargo line with jump to the Butterworth line to the Butterworth machines)
6. Continue circulation for about 4-8 hours at the same temperature.
7. Pump the solution into another tank.
8. Wash the tank with water and inject some seaclean or cold wash into the Butterworth line if necessary.
9. If the tanks are coated with zinc silicate, there may be a discolouration after the cleaning. If so, make a solution of fresh water and BUFFERCLEAN 5.5 in the tank in the ratio of 9 to 1 = 10% solution.
10. Heat this solution up to 50° C. (follow)

COAL TAR REMOVER



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11. Start circulation following item 3.
12. Continue with the circulation for 1-2 hours.
13. Wash with fresh water.
14. Drain the tank.
15. For chloride free cleaning, steam the tank with live steam.

Cleaning of Heat Exchangers etc

1. Start with a shock treatment with steam followed by flushing with cold water to break hard deposit layers, which will help the cleaning with COAL TAR REMOVER afterwards.
2. Fill the system with COAL TAR REMOVER and circulate by means of a pump at max. 50° C for approx. 8 hours.
3. Drain and flush with water.

Cleaning of Aircoolers

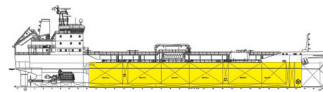
For badly soiled aircoolers use the circulation method or spray system. COAL TAR REMOVER is used undiluted by means of a pump, spray and daintank by circulation through the aircooler. The cleaning temperature should be 50° C, cleaning time approx. 8 hours. During the cleaning, the system should be closed and the area around must be ventilated well.

Cleaning in immersion baths

COAL TAR REMOVER is used undiluted in immersion baths for the cleaning of metal compents, which are badly soiled with coal tar or similar substances. Afterwards, the parts must be wellflushed with water. During the cleaning, the bath must be closed and the area must be ventilated well.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, THIS INFORMATION IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU DO A TEST TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION FURNISHED BY URRUTY GG NIEGO SRL HEREUNDER ARE GIVEN GRATIS, AND URRUTY GG NIEGO SRL ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

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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 COAL TAR REMOVER

1.2 Use of the substance / preparation

Intended use Emulsifying cleaning agent for the removal of coal tar, crude benzene, pyrolyse gas oil, bitumen.

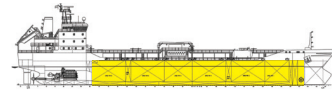
1.3 Company identification

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 info@uniservicemarine.com
competent person responsible
for the Safety Data Sheet

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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2. Hazards Identification

2.1 Substance/Preparation Classification

This product is dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments. Therefore, this product requires a safety data sheet according to the Regulation (EC) 1907/2006 and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbols: Xn-N
R phrases: 22-38-40-41-51/53

2.2 Danger Identification

HARMFUL IF SWALLOWED.

IRRITATING TO SKIN.

LIMITED EVIDENCE OF A CARCINOGENIC EFFECT.

RISK OF SERIOUS DAMAGE TO EYES.

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

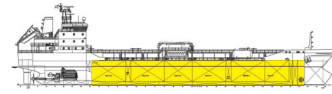
3. Composition / Information on ingredients

Contains:

Name	Concentration % (C)	Classification
NONIL FENOLO ETOSSILATO	2 <= C < 2,5	Xn R22
CAS No 37205-87-1		Xi R41
		N R51/53
NONFIX 6	2 <= C < 2,5	Xi R36/38
CAS No 37205-87-1		N R51/53
TETRACHLOROETHYLENE	94 <= C < 98	Xn R40
CAS No 127-18-4		Carc. Cat. 3
CE No 204-825-9		N R51/53
Index No 602-028-00-4		

The complete text of -R- phrases is specified in section 16.

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4. First aid measures

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

SKIN: Immediately wash with plenty of water. Remove all contaminated clothing. Obtain immediate medical attention. Wash contaminated clothing separately before using them again.

INHALATION: Remove to open air. If breathing is irregular or stopped, administer artificial respiration. Obtain immediate medical attention.

INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Give nothing by mouth to an unconscious person.

5. Fire-fighting measures

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SUITABLE EXTINGUISHING MEDIA

The extinction equipment should be of the conventional kind: carbon dioxide, foam, powder and nebulised water.

EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS

None in particular.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

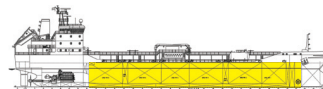
Hardhat with visor, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist), work gloves (fireproof, cut proof and dielectric), a depressurised mask with facemask covering the whole of the operator's face or a self-respirator (self-protector) in the event of large quantities of fume.

6. Accidental release measures

PERSONAL PRECAUTIONS

Eliminate sources of ignition (cigarettes, flames, sparks, etc.) from the air in which the leak occurred. If there are no contraindications, spray solid products with water to prevent the formation of dust. Use breathing equipment if fumes or powders are released into the air. Block the leakage if there is no hazard. Do not handle damaged containers or leaked product before donning appropriate protective gear. Send away individuals who are not suitably equipped. For

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information on risks for the environmental and health, respiratory tract protection, ventilation and personal protection equipment, refer to the other sections of this sheet.

ENVIRONMENTAL PRECAUTIONS

The product must not penetrate the sewers, surface water, ground water and neighbouring areas.

METHODS FOR CLEANING UP

For liquid products, suck into a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomeous earth, Kieselguhr, etc). Collect the majority of the remaining material and deposit in containers for disposal. For solid products, use spark proof mechanical tools to collect the leaked product and place in plastic containers. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

7. Handling and storage

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, bright flames and sparks and other sources of ignition.

8. Exposure control / personal protection.

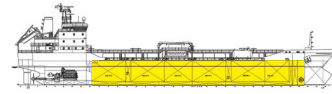
8.1 Exposure limit values

Name	Type	Country	TWA/8h		STEL/15min		
			mg/m3	ppm	mg/m3	ppm	
TETRACHLOROETHYLENE							
	TLV-ACGIH		170		685		Skin
	OEL	IRL		25			Skin
	WEL	UK		50		100	Skin

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be

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used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.

HAND PROTECTION

Protect hands with category III (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVA, butyl, fluoroelastomer or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

EYE PROTECTION

Wear hood visor or protective visor together with airtight goggles (ref. standard EN 166)

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

RESPIRATORY PROTECTION

If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an B or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141).

The use of breathing protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited.

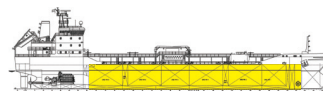
If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

An emergency eye washing and shower system must be provided.

The product must be used in a closed cycle, in well-aired environments fitted with strong localised aspiration systems (capture speed > 1.5 m/s), otherwise it is compulsory to use the personal protection equipment indicated and always in well-aired environments fitted with strong localised aspiration systems (capture speed > 1.5 m/s).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

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9. Physical and chemical properties

Colour	Not available
Odour	aromatic solvent
Appearance	liquid
Solubility	emulsifying in water
Vapour density	Not available
Evaporation speed	Not available
Comburent properties	Not available
Partition coefficient: n-octanol/water	Not available
pH	Not available
Boiling point	190°C
Melting point	<-15°C
Flash point	>90°C
	2,2°C
	12°C
Ignition temperature	450°C
Vapour pressure	0,04kPa
Specific gravity	1,561Kg/l

10. Stability and reactivity

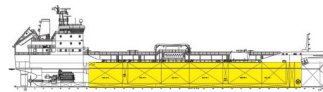
The product is stable in normal conditions of use and storage. Due to thermal decomposition or in the event of a fire vapours may be produced potentially dangerous to health.

Tetrachloroethylene is noncombustible, but above 150 °C it decomposes giving toxic vapours of phosgene and corrosive vapours of hydrochloric acid. It decomposes when exposed to UV rays and hence also in strong sunlight. It reacts violently with finely subdivided light metals, such as aluminium and zinc.

11. Toxicological information

Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea). This product may slightly irritate mucosae, the upper respiratory tract, eyes, and skin. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness.

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This product must be handled carefully because of its possible carcinogenic effects. Anyway, currently available data do not allow us to comprehensively assess this product.

This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

EDTA disodium salt: due to its slightly acid properties it is irritating to the eyes and skin; inhalation of vapours is highly unlikely since it is poorly volatile. Oral LD50 value in the rat (2000 mg/l) coincides with the upper limit of toxicity.

Tetrachloroethylene has a toxic effect on the central and peripheral nervous system, liver, kidneys and heart. Mucous membranes and skin are affected by its irritant effect.

12. Ecological information

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it may even have negative effects on aquatic environment.

Acute and chronic environmental effects: the substance features an average toxicity level for water organisms.

Microtest (EC50 30min)= 117mg/l

EC50 147 mg/l/24h= (Daphnia Magna)

NOEC 29 mg/l/4 days= (Cyprinodon variegatus)

BCF 3.43 ng/l/1 to 21 days= (Lepomis macrochirus).

EC50 (48h):

18 mg/l/48h Daphnia magna

13. Disposal consideration

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

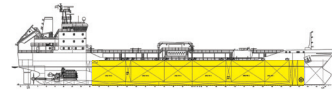
CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

These goods must be transported by vehicles authorised to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all

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the applicable national regulations. These goods must be packed in their original packaging or in packaging made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID Class: 6.1
UN: 2810
Packing Group: III
Label: 6.1
Nr. Kemler: 60
Limited Quantity LQ07
Tunnel restriction code (E)
Proper Shipping Name: Toxic liquid, organic, n.o.s.
(TETRACHLOROETHYLENE)



Carriage by sea (shipping):

IMO Class: 6.1
UN: 2810
Packing Group: III
Label: 6.1
EMS: F-A, S-A
Marine Pollutant YES
Proper Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S.
(TETRACHLOROETHYLENE)

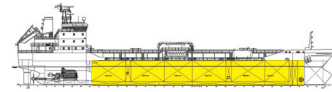


Transport by air:

IATA: 6.1
UN: 2810
Packing Group: III
Label: 6.1
Cargo:
Packaging instructions: 618
Maximum quantity: 220 L
Pass.:
Packaging instructions: 611
Maximum quantity: 60 L
Special Instructions: A3, A4, A137
Proper Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S.
(TETRACHLOROETHYLENE)

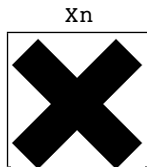


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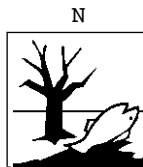


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15. Regulatory information



HARMFUL



DANGEROUS FOR THE ENVIRONMENT

- R22 HARMFUL IF SWALLOWED.
R38 IRRITATING TO SKIN.
R40 LIMITED EVIDENCE OF A CARCINOGENIC EFFECT.
R41 RISK OF SERIOUS DAMAGE TO EYES.
R51/53 TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
S26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S29 DO NOT EMPTY INTO DRAINS.
S36/37/39 WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
S61 AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEETS.

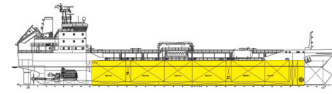
Contains:

NONIL FENOLO ETOSSILATO
TETRACHLOROETHYLENE

Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

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16. Other information

Text of (R) phrases quoted in section 3 of the sheet.

R22	HARMFUL IF SWALLOWED.
R36/38	IRRITATING TO EYES AND SKIN.
R40	LIMITED EVIDENCE OF A CARCINOGENIC EFFECT.
R41	RISK OF SERIOUS DAMAGE TO EYES.
R51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

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 / 02 / 03 / 08 / 09 / 12 / 13 / 14 / 15