

# MATERIAL DATA SAFETY SHEET



Based on Regulation (EC) 1907/2006 of the European Parliament and Council (REACH)

Trade Name: **Neonol AF 9-9, Neonol AF 9-9,5**

Issue Date: 2010-11

Review Date: -

Revision: 1.0

## 1 Identification of substance/mixture Identification of company/enterprise

### 1.1 Identification of substance/mixture:

Identification on the label/trade name:

Synonyms:

Supplementary information:

Регистрационный номер REACH:

**Neonol AF 9-9, Neonol AF 9-9,5**

**Nonylphenol ethoxylated**

**Nonylphenol** 01-2119510715-45-0008

Ethylene Oxide: 01-2119432402-53-0036

### 1.2 Usage of substance/mixture:

Used for oil formation flooding making oil production more efficient, for well drilling, in textile, pulp and paper, woodworking industry, as a component of coolants, hydraulic and other process fluids, in iron industry

#### 1.2.1 Identified Usage Types:

#### 1.2.2 Non-recommended Usage Types:

#### Legislation

May not be placed on the market or used as a substance or constituent of preparations in concentrations equal or higher than 0,1 % by mass for the following purposes:

(1) industrial and institutional cleaning except: controlled closed dry cleaning systems where the washing liquid is recycled or incinerated, cleaning systems with special treatment where the washing liquid is recycled or incinerated;

(2) domestic cleaning;

(3) textiles and leather processing except: processing with no release into waste water, systems with special treatment where the process water is pretreated to remove the organic fraction completely prior to biological waste water treatment (degreasing of sheepskin);

(4) emulsifier in agricultural teat dips;

(5) metal working except: uses in controlled closed systems where the washing liquid is recycled or incinerated;

(6) manufacturing of pulp and paper;

(7) cosmetic products;

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## 2 Hazards Identification

**2.1 Hazard Description:** Moderately hazardous substance. N – Hazardous for environment

### 2.1.1 Classification:

**According to Resolution (EC) №1272/2008 (CLP):**

**Classification:**

**Hazard Sign:**

GHS09



### **Hazard Statement - H-phrases:**

H411: Toxic to aquatic life with long lasting

### **Precautionary Statement - P-phrases:**

P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container to ... see p.13

### **According to Directive 67/548/EEC or 1999/45/EC):**

### **The substance to be classified as follows:**

Health impact:

R 36 Irritating to eyes

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### **Marking**

Hazard Statement:

**Hazard Symbols: Xi, N**



Xi-Irritant



N- Dangerous for  
the Environment

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## Risk phrases:

R 36 Irritating to eyes

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

## Safety phrases:

S 26 In case of ingress into eyes, immediately wash with plenty of water and seek medical assistance

S61 Avoid entry into the environment. See special instructions/Material Data Sheet

## 2.2 Information on special hazards for humans and environment:

No physical and chemical impact: None

Negative health effects and their symptoms:

Eye contact	Irritant for eyes. Attributes and symptoms of eyes irritation include redness, lacrimation
Skin contact	Irritation is possible in case of contact with the damaged skin
Inhalation	Inhalation intoxication is unlikely due to low vapour pressure. Upon impact of high concentrations – dormancy, aggravation of reaction to exogenous irritants.
Ingestion	Inhalation might cause damage of gastrointestinal tract.

Negative environmental impact: Toxic impact on aquatic organisms might have long-term adverse impact in the aquatic environment. Water course pollutant. Special flavour of water could be signs of such impact.

Other hazards: Subject to transformation in the environment. Transformation products: Nonylphenol, hexaethyleneglycol.

## 3 Composition / Information on components

### 3.1 Substance Information:

Chemical name/ Synonyms	№ EC	№ REACH	№ Index	№ CAS	Content (%)	Classification according to Directive (EC) № 1272/2008 [CLP]		Classification according to 67/548/EEC
						Hazard class / Hazard Category	Hazard Designations	
Neonol AF 9-9 Neonol AF 9-9,5	500-024-6	Not subject to registration	None	9016-45-9	98,5	Aquatic chronic 2	H411 GHS09	N:R36; R 51/53
Polyethyleneglycol	500-038-2	Not subject to registration	None	25322-68-3	1,0	not classified		
Water	231-791-2	Not subject to registration	None	7732-18-5	0,5	not classified		

3.3. Note:

Complete text of R-and H-phrases: see Section 16

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## 4 First aid measures

- 4.1 General: Moderately hazardous substance in terms of impact on the organism. Inhalation intoxication is unlikely due to low vapour pressure.
- 4.2 Inhalation: Fresh air. In case of labored respiration call a doctor.
- 4.3 Skin contact: Remove contaminated clothes. Wash the skin with warm water and soap. Before subsequent usage, wash the clothes.
- 4.4 Eye contact: Immediately wash eyes with plenty of warm water, holding the lids open. Deliver a person to the nearest medical facility to administer further medical treatment.
- 4.5 Ingestion: Abundant water drink, activated carbon. Do not induce vomiting. In case of vomiting turn the victim to the left side in order to minimize risk of aspiration. Do not give anything to an unconscious person. Call a doctor.
- 4.6 Advice to physician: Request instructions from the Entoxication Control Center.

## 5 Fire fighting measures

- 5.1 Recommended fire-extinguishing means In case of fire of minor product quantity, use foam, carbon-dioxide fire extinguishers, sand, dry powder. In case of major fire, use finely dispersed water, generated mechanical and chemical foam.
- 5.2 Prohibited fire-extinguishing means Prohibited fire extinguishing means are not established.
- 5.3 Special hazards of the product exposure, hazardous products of combustion and thermal decomposition Carbon oxides and carbon dioxides. Heated product might decompose forming: carbon oxide (CAS №124-38-9). Carbon oxides reduce oxygen (O<sub>2</sub>) content in the air; they may have a toxic effect on the cells causing the cell respiration disturbance.
- 5.4 Personal protection and fire-extinguishing equipment Use a fire-resistant suit and a self-contained breathing apparatus.
- 5.5 General recommendations Remove personnel not participating in fire-fighting from the site of the fire.

## 6 Measures for prevention and management of emergencies

- 6.1 Personal protection Use a fire-resistant suit and a self-contained breathing apparatus.
- 6.2 Environmental protection measures Contamination of water bodies and soil should be avoided.

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6.3 Methods of neutralization, removal and cleaning	Collect the product and put it in the appropriate containers for disposal or reuse. After the material is collected ventilate the zone and wash the contaminated area with water. Prevent from entering sewer/surface waters/ground waters and soil.
6.4 Supplementary recommendation	None

## 7 Handling and storage

### 7.1 Handling

#### 7.1.1 Advice for safe handling:

##### Safety precautions

Arrangement of supply-and-exhaust ventilation system and local ventilation. Use of pressure tight equipment for production. Equipment grounding is mandatory.  
Use of personal protection equipment.

#### 7.1.2 Technical measures:

Prevention of mist and dust formation

No mist or dust formation during handling

Measures to be taken for environmental protection:

Reduction of product loss during transportation and storage, prevention from discharge to water bodies, sewage system

#### 7.1.3 Special requirements and handling rules:

None

#### 7.1.4 Prevention from ignition and explosion:

Elimination of open fire sources

### 7.2 Storage

Technical measures and storage conditions

In steel containers under nitrogen under conditions excluding ingress of mechanical objects and moisture into the product.

#### **Packaging materials:**

- steel cisterns with heating jacket;
- truck tanks;
- steel barrels;
- plastic barrels;

Requirements to storage premises and containers:

The product is stored at the ambient temperature in the closed room. Storage is allowed in the open areas, protected from direct sun rays. Multiple product heating is allowed at temperature not exceeding 100 °C.

Other information on storage conditions:

Storage together with oxidizers, acids and caustics is prohibited. Shelf life – 1 year from manufacture date.

## 8 Exposure control and personal protection

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8.1 Exposure limits MACw.a./TSELw.a.	Due to physical and chemical properties and low toxicity there is no hygienic regulations for the air exposure limits.
8.2 Exposure control at the working place	Ensuring that the content of harmful substances is within permissible concentration limits by using supply-and-exhaust ventilation system in of the most contaminant air locations.
8.3 Personal protection	Use protective clothing made of cotton fabric.
8.3.1 Respiratory protection	Not required under normal operating conditions. In case of emergency – use filter gas-mask, breathing masks.
8.3.2 Hand protection:	Oil-and-petrol resistant gloves, butyl rubber dispersion gloves
8.3.3 Eye protection:	Protective goggles when working in open systems
8.3.4 Skin protection:	Protective clothing made of cotton fabric.
8.4 Control of environmental impact	Mesure concentration of pollutants. Entry of product should not be allowed either to the sewage and waste water, or to the soil and ground water.
8.5 In everyday life:	Not used in everyday life.

## 9 Physical and chemical properties

Appearance	Transparent oily liquid from colourless to yellowish colour
Odor	Weak
Odor threshold	Not established
Hydrogen index (pH)	(7,0±1,0) units
Solidification temperature	(3-8) °C
Flash point	Max. 245 deg. C (open crucible)
Ignition temperature	Min. 245°C.
Auto-ignition temperature	Min. 395°C
Molecular weight	616 (638)
Density at 40°C	(1045±3) kg/m <sup>3</sup>
Solubility in water	Soluble

## 10 Stability and reactivity

10.1 Stability	The product is highly stable under normal conditions, no hazardous polymerization and decomposition is observed
10.2 Conditions resulting in dangerous reactions	Heating above 200°C.
10.3 Materials causing dangerous reactions	Oxidizers, acids, alkali
10.4 Dangerous decomposition products	Carbon oxides, nonylphenol, hexaethyleneglycol

## 11 Toxicological properties

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**Oral toxicity at single ingestion** LD50 = 5000 mg/kg, intragastric, rats  
CL50 - not achieved

**Percutaneous action** Absence  
**Cumulative effect** K = 3,9  
**Sensibilization** NA  
**Embriotropic action** NA  
**Teratogenic action** NA  
**Mutagenicity** NA  
**Carcinogenicity** NA  
**Toxicity for reproductive function and development** NA

## 12 Environmental impact

### 12.1 Ecotoxicity:

Might accumulate in water course, soil and impact flora and fauna, in certain cases might lead to fish kill.

Getting to water courses with ground waters, waste waters, containing neonols, slow down self-cleaning processes, aggravate organoleptic properties of water, have adverse impact on development of animals and plants, which inhabit water courses. Notwithstanding low toxicity of neonols, their presence in water courses above allowable concentration level might lead to fish intoxication as a result of substance accumulatuon in branchiaes and violation od gas exchange. Neonols are also hazardous for baby fish, eggs, aquatic microorganisms.

#### LC50 Fish (96 hours)

Minimum: 1,3 mg/l

Maximum: 7,9 mg/l

Median: 6 mg/l

Study number: 5

Reference: Swedmark, M., A. Granmo, and S. Kollberg 1973. Effects of Oil Dispersants and Oil Emulsions on Marine Animals. Water Res. 7(11):1649-1672

#### LC50 Crustaceans (48 hours)

Minimum: 0,0026 mg/l

Maximum: 89,5 mg/l

Median: 11 mg/l

Study number: 9

Reference: Moore, S.B., R.A. Diehl, J.M. Barnhardt, and G.B. Avery 1987. Aquatic Toxicities of Textile Surfactants. Text.Chem.Color. 19(5):29-32

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## **EC50 Crustaceans (48 hours)**

Minimum: 14 mg/l

Maximum: 14 mg/l

Median: 14 mg/l

Study number: 1

Reference: Dorn, P.B., J.P. Salanitro, S.H. Evans, and L. Kravetz 1993.  
Assessing the Aquatic Hazard of Some Branched and Linear Nonionic  
Surfactants by Biodegradation and Toxicity. Environ.Toxicol.Chem.  
12(10):1751-1762

12.2 Immunity and degradability:	Complete biological degradability less then 60%
12.3 Bioaccumulation:	Moderate bioaccumulation
12.4 Other negative effects:	NA
12.5 PBT/vPvB	Fail to meet the criteria

## **13 Removal and/or disposal of wastes (remains)**

### 13.1 Methods of disposal of wastes (remains)

Send polluted waste waters and washing waters to the concentration unit, thereafter deliver concentrated waters to incineration at the approved incinerator, and dispose of conventionally treated waters and partially send them to advanced treatment to the biological treatment plant.

Code of wastes

07 01 wastes from manufacture, processing, supply and use of principal organic chemical substances

S61 – avoid entry into the environment

### 13.2 Appropriate packaging

Packaging is designed for liquid wastes

## **14 Safety requirements during transportation**

### **ADR**

Class	9
Group of packing	III
Classification code	M6
Hazard identification number	90
UNO number	3082
Hazard identification (principal risk)	9082 9
Precise name for transportation	НЕОНОЛ АФ 9-6 Neonol AF 9-9 (Neonol AF 9-9,5)



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## RID

Class 9  
Group of packing III III  
Classification code M6  
Hazard identification number 90  
UNO number 3082  
Hazard identification (principal risk) 9082  
Precise name for transportation Неонол АФ 9-6  
Neonol AF 9-9 (Neonol AF 9-9,5)

## IMDG

UNO number 3082  
Precise name for transportation Neonol AF 9-9 (Neonol AF 9-9,5)  
Class / Subdivision 9  
Group of packing III  
Pollutant of marine environment: Yes (•)

## IATA

UNO number 3082  
Correct name for transportation Neonol AF 9-9 (Neonol AF 9-9,5)  
Class 9  
Group of packing III

## 15 Regulatory information

Hazard according to definition of hazardous substances given in EC/Directives on preparations:



EC Marking:

Symbol: N (Hazardous for environment) Xi

### Risk phrases:

R 36 Irritating to eyes.  
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Safety phrases:

S 26 In case of ingress into eyes, immediately wash with plenty of water and seek medical assistance

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S61 Avoid entry into the environment. See special instructions/Material Data Sheet

## Hazard According to Resolution (EC) №1272/2008 (CLP):

GHS09



### Hazard Statement - H-phrases:

H411: Toxic to aquatic life with long lasting

### Precautionary Statement - P-phrases:

P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container to ... see p.13

## 16 Supplementary information

### EC Directives on Hazardous Substances/Compositions

#### **67/548/EEC or 1999/45/EC, Regulation (EC) № 1272/2008 [CLP]**

Information source: ESIS – European Chemical Substances Information System (European Chemicals Bureau).  
Hazardous Substance Data Bank (HSDB).-U.S.National Library of Medicine, 2001-1.

Information in this Material Safety Data Sheet is based on the current state of knowledge and legislation in force and refers solely to the description of rules for safe work with the product. This product should not be used for purposes other than those specified in section 1. The consumer is fully responsible for fulfilling of all the requirements of local rules and laws. The above information is not the guarantee of the product quality.