

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : ND-OIL 11

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-  
stance/Mixture : Lubricant

#### 1.3 Details of the supplier of the safety data sheet

Company : DENSO Europe B.V.  
Hogeweyselaan 165  
1382 JL Weesp, The Netherlands

Telephone : +31-294-493493

E-mail address of person  
responsible for the SDS : marketing@denso.nl

#### 1.4 Emergency telephone number

+1-760-476-3961

---

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Germ cell mutagenicity, Category 2 H341: Suspected of causing genetic defects.

Chronic aquatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

##### Classification (67/548/EEC, 1999/45/EC)

Mutagenic Category 3 R68: Possible risk of irreversible effects.

Sensitising R43: May cause sensitisation by skin contact.

Dangerous for the environment R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 2.2 Label elements


##### Labelling (REGULATION (EC) No 1272/2008)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version 2.4      Revision Date: 21.04.2015      MSDS Number: 28657-00006      Date of last issue: 19.02.2015  
Date of first issue: 06.11.2014

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H317      May cause an allergic skin reaction. H341      Suspected of causing genetic defects. H411      Toxic to aquatic life with long lasting effects.
Precautionary statements	:	<b>Prevention:</b> P201      Obtain special instructions before use. P273      Avoid release to the environment. P280      Wear protective gloves/ protective clothing/ eye protection/ face protection. <b>Response:</b> P308 + P313      IF exposed or concerned: Get medical ad- vice/ attention. P333 + P313      If skin irritation or rash occurs: Get medical advice/ attention. P391      Collect spillage.

Hazardous components which must be listed on the label:  
2,3-Epoxypropyl neodecanoate

### Additional Labelling:

EUH205      Contains epoxy constituents. May produce an allergic reaction.

### 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Tris(methylphenyl) phosphate	1330-78-5 215-548-8	Xn; R21/22 Repr.Cat.3; R62- R63 N; R50/53	Acute Tox. 4; H302 Acute Tox. 4; H312 Repr. 2; H361 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 1 - < 2.5
2,3-Epoxypropyl neodecanoate	26761-45-5 247-979-2	Mut.Cat.3; R68 R43 N; R51/53	Skin Sens. 1; H317 Muta. 2; H341 Aquatic Chronic 2;	>= 1 - < 2.5

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version 2.4      Revision Date: 21.04.2015      MSDS Number: 28657-00006      Date of last issue: 19.02.2015  
Date of first issue: 06.11.2014

2,6-Di-tert-butyl-p-cresol	128-37-0 204-881-4	N; R50/53	H411 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 0.25 - < 1$
----------------------------	-----------------------	-----------	--	-------------------

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.

#### 4.2 Most important symptoms and effects, both acute and delayed

- Risks : May cause an allergic skin reaction.  
Suspected of causing genetic defects.

#### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Oxides of phosphorus

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

---

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
Follow safe handling advice and personal protective equipment recommendations.

### 6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
Avoid inhalation of vapour or mist.  
Do not swallow.  
Avoid contact with eyes.  
Handle in accordance with good industrial hygiene and safety practice.  
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Store in accordance with the particular national regulations.
- Advice on common storage : Do not store with the following product types:  
Strong oxidizing agents

### 7.3 Specific end use(s)

- Specific use(s) : No data available
- 

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
2,6-Di-tert-butyl-p-cresol	128-37-0	TWA	10 mg/m <sup>3</sup>	GB EH40

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version 2.4      Revision Date: 21.04.2015      MSDS Number: 28657-00006      Date of last issue: 19.02.2015  
Date of first issue: 06.11.2014

Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used
---------------------	---

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Tris(methylphenyl) phosphate : End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 0.47 mg/m<sup>3</sup>  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Acute systemic effects  
Value: 1.11 mg/m<sup>3</sup>  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 3.33 mg/kg bw/day  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Acute systemic effects  
Value: 74 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 0.06 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Acute systemic effects  
Value: 0.28 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 1.67 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Acute systemic effects  
Value: 37 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: Long-term systemic effects  
Value: 0.03 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: Acute systemic effects  
Value: 157.5 mg/kg bw/day  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Acute local effects  
Value: 16 mg/cm<sup>2</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Acute local effects  
Value: 8 mg/cm<sup>2</sup>  
2,3-Epoxypropyl neodecanoate : End Use: Workers  
Exposure routes: Inhalation

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version 2.4      Revision Date: 21.04.2015      MSDS Number: 28657-00006      Date of last issue: 19.02.2015  
Date of first issue: 06.11.2014

---

Potential health effects: Long-term systemic effects  
Value: 1.965 mg/m<sup>3</sup>  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 1.4 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 1 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 0.7 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: Long-term systemic effects  
Value: 1.1 mg/kg bw/day  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 1.74 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 5 mg/kg bw/day  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 5.8 mg/m<sup>3</sup>  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 8.3 mg/kg bw/day

2,6-Di-tert-butyl-p-cresol

### **Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

Tris(methylphenyl) phosphate : Fresh water  
Value: 0.001 mg/l  
Marine water  
Value: 0.0001 mg/l  
Intermittent use/release  
Value: 0.00146 mg/l  
Sewage treatment plant  
Value: 10 mg/l  
Fresh water sediment  
Value: 2.05 mg/kg  
Marine sediment  
Value: 0.205 mg/kg  
Soil  
Value: 0.409 mg/kg  
Oral  
Value: 0.67 mg/kg  
2,3-Epoxypropyl neodecanoate : Fresh water  
Value: 0.0012 mg/l

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

2,6-Di-tert-butyl-p-cresol	:	Marine sediment
		Value: 0.00012 mg/l
		Intermittent use/release
		Value: 0.012 mg/l
		Sewage treatment plant
		Value: 50 mg/l
		Marine water
		Value: 0.4 µg/l
		Fresh water
		Value: 4 µg/l
		Intermittent use/release
		Value: 4 µg/l
		Sewage treatment plant
		Value: 100 mg/l
	Fresh water sediment	
	Value: 1.29 mg/kg	
	Soil	
	Value: 1.04 mg/kg	
	Oral	
	Value: 16.7 mg/kg	

### 8.2 Exposure controls

#### Engineering measures

Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

#### Personal protective equipment

Eye protection	:	Wear the following personal protective equipment: Safety glasses
Hand protection	:	
Material	:	butyl-rubber
Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Filter type	:	Organic vapour type (A)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: light yellow
Odour	: slight
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
pour point	-35 °C
Initial boiling point and boiling range	: No data available
Flash point	: 200 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: 0.98 (15 °C)
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006

**ND-OIL 11**

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

**9.2 Other information**

No data available

---

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Not classified as a reactivity hazard.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Can react with strong oxidizing agents.

**10.4 Conditions to avoid**

Conditions to avoid : None known.

**10.5 Incompatible materials**

Materials to avoid : Oxidizing agents

**10.6 Hazardous decomposition products**

No hazardous decomposition products are known.

---

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

**Components:**

**Tris(methylphenyl) phosphate:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Acute toxicity estimate: 500 mg/kg  
Method: Expert judgement  
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute inhalation toxicity : LC50 (Rat): > 11.1 mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 3,700 mg/kg  
Acute toxicity estimate: 1,100 mg/kg  
Method: Expert judgement  
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

### **2,3-Epoxypropyl neodecanoate:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 420  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **2,6-Di-tert-butyl-p-cresol:**

Acute oral toxicity : LD50 (Rat): > 2,930 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **Skin corrosion/irritation**

Not classified based on available information.

### **Components:**

#### **Tris(methylphenyl) phosphate:**

Species: Rabbit  
Result: No skin irritation

#### **2,3-Epoxypropyl neodecanoate:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation

#### **2,6-Di-tert-butyl-p-cresol:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

Species: Rabbit  
Result: No skin irritation

### **Serious eye damage/eye irritation**

Not classified based on available information.

#### **Components:**

##### **Tris(methylphenyl) phosphate:**

Species: Rabbit  
Result: No eye irritation

##### **2,3-Epoxypropyl neodecanoate:**

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: No eye irritation

##### **2,6-Di-tert-butyl-p-cresol:**

Species: Rabbit  
Result: No eye irritation

### **Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.  
Respiratory sensitisation: Not classified based on available information.

#### **Components:**

##### **Tris(methylphenyl) phosphate:**

Test Type: Local lymph node assay (LLNA)  
Exposure routes: Skin contact  
Species: Mouse  
Method: OECD Test Guideline 429  
Result: Equivocal

##### **2,3-Epoxypropyl neodecanoate:**

Test Type: Maximisation Test (GPMT)  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

##### **2,6-Di-tert-butyl-p-cresol:**

Test Type: Maximisation Test (GPMT)  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: Magnusson-Kligman-Test  
Result: negative

### **Germ cell mutagenicity**

Suspected of causing genetic defects.

#### **Components:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

### **Tris(methylphenyl) phosphate:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Result: negative

: Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

: Test Type: In vitro sister chromatid exchange assay in mammalian cells  
Result: negative

### **2,3-Epoxypropyl neodecanoate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: positive

Genotoxicity in vivo : Test Type: Transgenic rodent somatic cell gene mutation assay  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 488  
Result: positive

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

### **2,6-Di-tert-butyl-p-cresol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Mouse  
Application Route: Ingestion  
Result: negative

### **Carcinogenicity**

Not classified based on available information.

### **Components:**

#### **2,6-Di-tert-butyl-p-cresol:**

Species: Rat  
Application Route: Ingestion  
Exposure time: 22 Months  
Result: negative

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **Tris(methylphenyl) phosphate:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

Application Route: Ingestion  
Result: positive

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Method: OPPTS 870.3700  
Result: positive

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

**2,6-Di-tert-butyl-p-cresol:**  
Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### Repeated dose toxicity

#### Components:

#### **Tris(methylphenyl) phosphate:**

Species: Rat  
NOAEL: 1,000 mg/kg  
Application Route: Ingestion  
Exposure time: 3 m

#### **2,3-Epoxypropyl neodecanoate:**

Species: Rat  
NOAEL: 5000 ppm  
Application Route: Ingestion  
Exposure time: 5 w

#### **2,6-Di-tert-butyl-p-cresol:**

Species: Rat  
LOAEL: 160 mg/kg  
Application Route: Ingestion  
Exposure time: 24 m

### Aspiration toxicity

Not classified based on available information.

---

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version 2.4      Revision Date: 21.04.2015      MSDS Number: 28657-00006      Date of last issue: 19.02.2015  
Date of first issue: 06.11.2014

---

### **Tris(methylphenyl) phosphate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.6 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.146 mg/l  
Exposure time: 48 h
- Toxicity to algae : EL50 (Selenastrum capricornutum (green algae)): > 2.500 mg/l  
Exposure time: 72 h
- NOEC (Selenastrum capricornutum (green algae)): > 2.500 mg/l  
Exposure time: 72 h
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to bacteria : EC50 : > 1,000 mg/l  
Exposure time: 3 h
- Toxicity to fish (Chronic toxicity) : NOEC: 0.01 mg/l  
Exposure time: 28 d  
Species: Jordanella floridae
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)
- M-Factor (Chronic aquatic toxicity) : 10

### **2,3-Epoxypropyl neodecanoate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.8 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.9 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to bacteria : NOEC : 500 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

### **2,6-Di-tert-butyl-p-cresol:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0.57 mg/l  
Exposure time: 96 h

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.45 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 0.4 mg/l  
Exposure time: 72 h  
Method: Directive 67/548/EEC, Annex V, C.3.

EC10 (Desmodesmus subspicatus (green algae)): 0.4 mg/l  
Exposure time: 72 h  
Method: Directive 67/548/EEC, Annex V, C.3.

M-Factor (Acute aquatic toxicity) : 1

Toxicity to bacteria : EC50 : > 10,000 mg/l  
Exposure time: 3 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.316 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

### 12.2 Persistence and degradability

#### Components:

##### **Tris(methylphenyl) phosphate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 24.2 %  
Exposure time: 28 d

##### **2,3-Epoxypropyl neodecanoate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 7 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

##### **2,6-Di-tert-butyl-p-cresol:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 4.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

### 12.3 Bioaccumulative potential

#### Components:

##### **Tris(methylphenyl) phosphate:**

Partition coefficient: n-octanol/water : log Pow: 5.93

##### **2,3-Epoxypropyl neodecanoate:**

Partition coefficient: n-octanol/water : log Pow: 4.4



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

octanol/water

### 2,6-Di-tert-butyl-p-cresol:

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 330 - 1,800  
Method: OECD Test Guideline 305C

Partition coefficient: n-octanol/water : log Pow: 5.1

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

No data available

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.  
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.  
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

---

## SECTION 14: Transport information

### 14.1 UN number

ADN	: UN 3082
ADR	: UN 3082
RID	: UN 3082
IMDG	: UN 3082
IATA	: UN 3082

### 14.2 UN proper shipping name

ADN	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tris(methylphenyl) phosphate)
ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

(Tris(methylphenyl) phosphate)

**RID** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Tris(methylphenyl) phosphate)

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Tris(methylphenyl) phosphate)

**IATA** : Environmentally hazardous substance, liquid, n.o.s.  
(Tris(methylphenyl) phosphate)

### 14.3 Transport hazard class(es)

**ADN** : 9

**ADR** : 9

**RID** : 9

**IMDG** : 9

**IATA** : 9

### 14.4 Packing group

**ADN**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

**ADR**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (E)

**RID**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

**IMDG**  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

**IATA**  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006

**ND-OIL 11**

Version            Revision Date:            MSDS Number:            Date of last issue: 19.02.2015  
2.4                21.04.2015                28657-00006              Date of first issue: 06.11.2014

---

**14.5 Environmental hazards**

**ADN**  
Environmentally hazardous            : yes

**ADR**  
Environmentally hazardous            : yes

**RID**  
Environmentally hazardous            : yes

**IMDG**  
Marine pollutant                        : yes

**14.6 Special precautions for user**

Not applicable

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Remarks                                : Not applicable for product as supplied.

---

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals            : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).            : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer            : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants            : Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances  
Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

Other regulations                        : Take note of Dir 94/33/EC on the protection of young people at work.  
Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

**The components of this product are reported in the following inventories:**

AICS                                        : All ingredients listed or exempt.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

---

## SECTION 16: Other information

### Full text of R-Phrases

R21/22	: Harmful in contact with skin and if swallowed.
R43	: May cause sensitisation by skin contact.
R50/53	: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	: Possible risk of impaired fertility.
R63	: Possible risk of harm to the unborn child.
R68	: Possible risk of irreversible effects.

### Full text of H-Statements

H302	: Harmful if swallowed.
H312	: Harmful in contact with skin.
H317	: May cause an allergic skin reaction.
H341	: Suspected of causing genetic defects.
H361	: Suspected of damaging fertility or the unborn child.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Acute aquatic toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Muta.	: Germ cell mutagenicity
Repr.	: Reproductive toxicity
Skin Sens.	: Skin sensitisation
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)

### Further information

Sources of key data used to compile the Safety Data Sheet	: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
---	---

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## ND-OIL 11

Version	Revision Date:	MSDS Number:	Date of last issue: 19.02.2015
2.4	21.04.2015	28657-00006	Date of first issue: 06.11.2014

---

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

GB / EN