

ANDEROL 465

Version 1.10

Revision Date 31.08.2017

Print Date 12.09.2017

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

1.1 Product identifier

Trade name : ANDEROL 465

Registration number :

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

Use of the Substance/Mixture : Lubricant

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company: Manufacturer
Anderol Specialty Lubricants
Groot Egtenrayseweg 23
5928 PA Venlo
Netherlands

Telephone : +31-77 396 0340

Supplier
LANXESS Solutions UK Ltd.
Tenax Road, Trafford Park
Manchester
United Kingdom
M17 1WT

Customer Service: +44 161 875 3800
Prepared by Product Safety Department
(US) +1 866-430-2775

Further information for the safety data sheet :
msdsrequest@chemtura.com

1.4 Emergency telephone number

Emergency telephone number: +44 (0) 1235 239 670 (NCEC)

For additional emergency telephone numbers see section 16 of

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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : No hazards which require special first aid measures.
- If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : None known.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

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5.3 Advice for firefighters

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

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.

Other data : No decomposition if stored and applied as directed.

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7.3 Specific end use(s)

Specific use(s) : Raw material for industry

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
triphenyl phosphate	115-86-6	TWA	3 mg/m ³	GB EH40
triphenyl phosphate	115-86-6	STEL	6 mg/m ³	GB EH40
2,6-di-tert-butyl-p-cresol	128-37-0	TWA	10 mg/m ³	GB EH40

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

Component	End Use	Exposure routes	Potential health effects	Value:
N-1-naphthylaniline	Workers	Dermal	Long-term systemic effects	0.12 mg/kg
	Workers	Inhalation	Long-term systemic effects	0.41 mg/m ³
	General exposures	Ingestion	Long-term systemic effects	0.06 mg/kg
	General exposures	Dermal	Long-term systemic effects	0.06 mg/kg
	General exposures	Inhalation	Long-term systemic effects	0.1 mg/m ³
2,6-di-tert-butyl-p-cresol	Workers	Skin contact		0.5 mg/kg
	Workers	Inhalation		3.5 mg/m ³

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

Component	Environmental Compartment	Value
N-1-naphthylaniline	Fresh water	Value: 0.0002 mg/l
	Marine water	Value: 0.00002 mg/l
	Fresh water sediment	Value: 0.0344 mg/kg
	Marine sediment	Value: 0.00344 mg/kg
	Soil	Value: 0.0068 mg/kg
	STP	Value: 100 mg/l
2,6-di-tert-butyl-p-cresol	Fresh water	Value: 0.000199 mg/l
	Marine water	Value: 0.000019 mg/l
	Fresh water sediment	Value: 0.0996 mg/kg
	Marine sediment	Value: 0.00996 mg/kg

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	Soil	Value: 0.04769 mg/kg

8.2 Exposure controls

Engineering measures

Ensure that eyewash stations and safety showers are close to the workstation location.
Effective exhaust ventilation system

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection

: Polyvinyl alcohol or nitrile- butyl-rubber gloves
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Before removing gloves clean them with soap and water.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Not required; except in case of aerosol formation.

Environmental exposure controls

General advice : If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

pour point : -54 °C

Flash point : 246 °C
Method: ASTM D92

Viscosity
Viscosity, kinematic : 62.1 mm²/s (40 °C)
Method: ASTM D 445

11.4 mm²/s (100 °C)

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Method: ASTM D 445

9.2 Other information

Oxidizing potential : No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No decomposition if used as directed.

10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture
Contamination

10.5 Incompatible materials

Materials to avoid : Strong acids and oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : Nitrogen oxides (NO_x)
Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Remarks: Not classified due to lack of data.

Acute inhalation toxicity : Remarks: Not classified due to lack of data.

Acute dermal toxicity : Remarks: Not classified due to lack of data.

Components:

triphenyl phosphate:

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- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male and female): > 200 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 7,900 mg/kg
- N-1-naphthylaniline:**
- Acute oral toxicity : LD50 (Rat): 1,625 mg/kg
- Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg
- 2,6-di-tert-butyl-p-cresol:**
- Acute oral toxicity : LD50 (Rat, male and female): > 2,930 mg/kg
Method: OECD Test Guideline 401
GLP: yes
- Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Product:

Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Components:

triphenyl phosphate:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

N-1-naphthylaniline:

Species: Rabbit
Method: Draize Test
Result: No skin irritation

2,6-di-tert-butyl-p-cresol:

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

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Components:

triphenyl phosphate:

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

N-1-naphthylaniline:

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

Components:

triphenyl phosphate:

Test Type: Maximisation Test
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406
GLP: yes

N-1-naphthylaniline:

Test Type: Maximisation Test
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Result: May cause sensitisation by skin contact.

Test Type: Patch Test

Species: Human
Assessment: May cause sensitisation by skin contact.
Result: May cause sensitisation by skin contact.

2,6-di-tert-butyl-p-cresol:

Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:

Germ cell mutagenicity
Assessment : Not classified due to lack of data.

Components:

triphenyl phosphate:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation

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Result: negative

: Test Type: in vitro assay
Metabolic activation: with and without metabolic activation
Result: negative

: Test Type: Unscheduled DNA synthesis (UDS)
Result: negative

Germ cell mutagenicity
Assessment

: In vitro tests did not show mutagenic effects

N-1-naphthylaniline:
Genotoxicity in vitro

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

: Test Type: Chinese Hamster Ovary (CHO)
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo

: Test Type: in vivo assay
Test species: Mouse (male)
Result: negative

Germ cell mutagenicity
Assessment

: Animal testing did not show any mutagenic effects., Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

2,6-di-tert-butyl-p-cresol:
Genotoxicity in vitro

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

: Test Type: Chromosome aberration test in vitro
Result: Conflicting results have been seen in different studies.

: Test Type: Unscheduled DNA synthesis (UDS)
Result: negative

: Test Type: In Vitro mammalian Cell Gene Mutation Test
Result: negative

Genotoxicity in vivo

: Test Type: In vivo micronucleus test
Test species: Mouse (male and female)
Cell type: Bone marrow
Method: Mutagenicity (micronucleus test)
Result: negative

Test Type: in vivo assay
Test species: Rat (male)
Cell type: Bone marrow

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Application Route: Oral
Method: Mutagenicity (in vivo mammalian bone-marrow
cytogenetic test, chromosomal analysis)
Result: negative

Germ cell mutagenicity
Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Carcinogenicity
Assessment : Not classified due to lack of data.

Components:

triphenyl phosphate:

Carcinogenicity
Assessment : Animal testing did not show any carcinogenic effects.

N-1-naphthylaniline:

Carcinogenicity
Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Product:

Reproductive toxicity
Assessment : Not classified due to lack of data.

Components:

triphenyl phosphate:

Reproductive toxicity
Assessment : No toxicity to reproduction

2,6-di-tert-butyl-p-cresol:

Reproductive toxicity
Assessment : No toxicity to reproduction
No effects on or via lactation

STOT - single exposure

Product:

Assessment: Not classified due to lack of data.

STOT - repeated exposure

Product:

Assessment: Not classified due to lack of data.

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Components:

triphenyl phosphate:

Exposure routes: Oral

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

N-1-naphthylaniline:

Exposure routes: Oral

Target Organs: Liver, Kidney

Assessment: May cause damage to organs through prolonged or repeated exposure.

2,6-di-tert-butyl-p-cresol:

Exposure routes: Oral

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Components:

triphenyl phosphate:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.78 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oryzias latipes (Orange-red killifish)): 1.2 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 mg/l
Exposure time: 48 h

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- EC50 : 0.36 mg/l
Exposure time: 48 h
- Toxicity to algae : NOEC (Green algae (*Scenedesmus subspicatus*)): 0.25 - 2.5 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
- Toxicity to fish (Chronic toxicity) : NOEC: 0.037 mg/l
Exposure time: 30 d
Species: *Oncorhynchus mykiss* (rainbow trout)

N-1-naphthylaniline:

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.44 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes

- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.68 mg/l
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes

- Toxicity to bacteria : EC50 (Protozoa): 2 mg/l
Exposure time: 48 h
- EC50 (Bacteria): > 10,000 mg/l
Exposure time: 3 h

- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.02 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Analytical monitoring: yes

2,6-di-tert-butyl-p-cresol:

- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.07 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Analytical monitoring: yes
GLP: yes

12.2 Persistence and degradability

Product:

- Biodegradability : Result: No data available

Components:

triphenyl phosphate:

- Biodegradability : Test Type: aerobic

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Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 83 - 94 %
Exposure time: 28 d
Method: OECD Test Guideline 301

N-1-naphthylaniline:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

2,6-di-tert-butyl-p-cresol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 50 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 4.5 %
Exposure time: 28 d

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

triphenyl phosphate:

Bioaccumulation : Species: *Oryzias latipes* (Orange-red killifish)
Exposure time: 18 d
Temperature: 25 °C
Concentration: 0.01 mg/l
Bioconcentration factor (BCF): 144

Partition coefficient: n-octanol/water : log Pow: 4.59 - 4.76

N-1-naphthylaniline:

Bioaccumulation : Species: *Cyprinus carpio* (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0.1 mg/l
Bioconcentration factor (BCF): 427 - 2,730

Partition coefficient: n- : log Pow: 4.28

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octanol/water

2,6-di-tert-butyl-p-cresol:

Bioaccumulation

: Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0.05 mg/l
Bioconcentration factor (BCF): 230 - 2,500

Partition coefficient: n-
octanol/water

: log Pow: 5.1
GLP: yes

log Pow: 4.2

12.4 Mobility in soil

Product:

Mobility

: Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment

: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Additional ecological
information

: Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

: The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

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SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

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

Major Accident Hazard Legislation

Seveso Directive

Directive 96/82/EC does not apply

Please note that Section 3 of this document lists only the hazardous components required by

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the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.

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

- DSL : Not in compliance with the inventory
- AICS : On the inventory, or in compliance with the inventory
- NZIoC : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory
- US.TSCA : On TSCA Inventory

15.2 Chemical safety assessment

No information available.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H412 Harmful to aquatic life with long lasting effects.

Emergency Phone Number

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074 (NCEC)
	Australia	+61 2 8014 4558
	New Zealand	+64 9929 1483 (NCEC)
	China	+86 512 8090 3042 (NCEC)
	Taiwan	+886 2 8793 3212 (NCEC)
	Japan	+81 3 4578 9341 (NCEC)
	Indonesia	007 803 011 0293 (NCEC)
	Malaysia	+60 3 6207 4347 (NCEC)
	Thailand	001 800 120 666 751 (NCEC)
	Korea	+65 3158 1285 (NCEC)

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	Vietnam	+84 8 4458 2388 (NCEC)
	India	+65 3158 1198 (NCEC)
	Pakistan	+65 3158 1329 (NCEC)
	Philippines	+65 3158 1203 (NCEC)
	Sri Lanka	+65 3158 1195 (NCEC)
	Bangladesh	+65 3158 1200 (NCEC)
<u>Middle East / Africa:</u>		+44 (0) 1235 239 671 (NCEC)
<u>North America</u>	United States of America (USA)	(800) 424-9300 (CHEMTREC)
	Canada	(800) 424-9300 (CHEMTREC)
<u>Latin America</u>	Mexico	+52 555 004 8763 (NCEC)
	Brazil	+55 11 3197 5891 (NCEC)
	Chile	+56 2 2582 9336 (NCEC)
	All other countries	+44 (0) 1235 239 670 (NCEC)

Further information

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.