SAFETY DATA SHEET

ANDEROL
Specialty Lubricants

ANDEROL 465

Version: 1.5 | Revision Date: 07/11/2018 | Print Date: 04/07/2020

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: ANDEROL 465

SYNTHETIC IMPREGNATING OIL

Product Use Description: Lubricant

Synonyms: Synthetic Lubricant Formulation

Company: Manufacturer
Anderol Specialty Lubricants, a division of Lanxess Solutions US Inc.
215 Merry Lane
East Hanover, NJ
07936
United States of America (USA)

Telephone: +1 203-573-4596, Toll Free: +1 888-263-3765

Email: msdsrequest@chemtura.com
Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300
:
: US : 800-292-5898 (Technical inquiries)

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by: Product Safety Department
(US) +1 866-430-2775

MSDSRequest@lanxess.com

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION

Form	liquid
	oily
Colour	clear
Odour	mild

GHS Classification

Skin sensitisation : Category 1
Acute aquatic toxicity : Category 3
Chronic aquatic toxicity : Category 3

GHS label elements

Signal word : **Warning**

Hazard pictograms :

Hazard statements : H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Other hazards : None

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
2,2',6,6'-tetra-tert-butyl-4,4'-methylenediphenol	118-82-1	>= 1 - < 2.5 %

NJTS#: 46728100000-0002 - Proprietary amine		>= 0.25 - < 1 %
diphenylamine	122-39-4	>= 0.1 - < 0.25 %

SECTION 4. FIRST AID MEASURES

If inhaled : If inhaled
Move to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
In case of bluish discolouration (lips, ear lobes, fingernails), give oxygen as quickly as possible.
If symptoms persist, call a physician.

In case of skin contact : In case of skin contact
Wash off with soap and water.
Remove contaminated clothing and shoes.
Wash contaminated clothing before re-use.
Get medical attention if irritation develops and persists.

In case of eye contact : In case of eye contact
Rinse thoroughly with plenty of water, also under the eyelids.
If eye irritation persists, consult a specialist.

If swallowed : If swallowed, DO NOT induce vomiting.
Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed : None known.

Notes to physician : For specialist advice physicians should contact the Poisons Information Service.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)
Dry powder
Foam
Alcohol-resistant foam
Water mist

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Burning produces noxious and toxic fumes.

Specific extinguishing : In the event of fire, cool tanks with water spray.

methods

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions : Should not be released into the environment. Do not contaminate water. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Keep container closed when not in use. Do not use pressure to empty drums. Ensure all equipment is electrically grounded before beginning transfer operations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : Strong acids and strong bases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
NJTS#: 46728100000-0002 - Proprietary amine		TWA	10 ml/m3	ACGIH
diphenylamine	122-39-4	TWA	10 mg/m3	ACGIH
		TWA	10 mg/m3	OSHA P0

		TWA	10 mg/m3	NIOSH REL
		PEL	10 mg/m3	CAL PEL

Personal protective equipment

Respiratory protection	:	Breathing apparatus needed only when aerosol or mist is formed. In the case of vapour formation use a respirator with an approved filter.
Hand protection Remarks	:	Neoprene gloves
Eye protection	:	Safety glasses with side-shields Tightly fitting safety goggles
Skin and body protection	:	Impervious clothing
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Provide adequate ventilation. Do not breathe dust or spray mist.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid oily
Color	:	clear
Odor	:	mild
Odour Threshold	:	No data available
pH	:	No data available
Pour point	:	-54 °C
Boiling point/boiling range	:	No data available
Evaporation rate	:	No data available
Flash point	:	>= 238 °C Method: No information available.
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	:	0.9100 - 0.9300No data available

Density	:	0.91 - 0.93 g/cm3 (15 °C) Method: No information available.
Solubility(ies)		
Water solubility	:	slightly soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	9.60 - 65 mPa.s (40 - 100 °C) Method: ASTM D 445
Viscosity, kinematic	:	No data available
Molecular weight	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Heat
Incompatible materials	:	Strong acids and strong bases
Hazardous decomposition products	:	Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 200 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 2,690 mg/kg
Method: Calculation method

Components:

2,2',6,6'-tetra-tert-butyl-4,4'-methylenediphenol:
Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

NJTS#: 46728100000-0002 - Proprietary amine:
Acute oral toxicity : LD50 (Rat): 1,625 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

diphenylamine:
Acute oral toxicity : LD50 (Rat): 2,720 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Components:

NJTS#: 46728100000-0002 - Proprietary amine:
Species: Rabbit
Method: Draize Test
Result: No skin irritation

diphenylamine:
Species: Rabbit
Result: Mild skin irritation

Serious eye damage/eye irritation

Components:

NJTS#: 46728100000-0002 - Proprietary amine:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

diphenylamine:
Species: Rabbit

Result: Eye irritation

Respiratory or skin sensitisation

Components:

NJTS#: 46728100000-0002 - Proprietary amine:
Test Type: Maximisation Test
Species: Guinea pig
Result: Probability or evidence of low to moderate skin sensitisation rate in humans

Test Type: Patch Test
Species: Human
Result: Probability or evidence of low to moderate skin sensitisation rate in humans

Test Type: Maximisation Test
Species: Guinea pig
Result: Probability or evidence of low to moderate skin sensitisation rate in humans

diphenylamine:
Species: Guinea pig
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

NJTS#: 46728100000-0002 - Proprietary amine:

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 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.

diphenylamine:

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

Carcinogenicity

Components:

NJTS#: 46728100000-0002 - Proprietary amine:

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

Assessment

diphenylamine:
Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Components:

diphenylamine:
Reproductive toxicity - Assessment : No toxicity to reproduction
No toxicity to reproduction

STOT - repeated exposure

Components:

NJTS#: 46728100000-0002 - Proprietary amine:
Exposure routes: Oral
Target Organs: Liver, Kidney
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

diphenylamine:
Species: Mouse, male
NOAEL: 1.7 mg/kg
LOAEL: 93.8 mg/kg
Application Route: Oral
Exposure time: 90 d
Target Organs: Blood, Liver, Kidney

Species: Mouse, female
NOAEL: 2.1 mg/kg
LOAEL: 107 mg/kg
Application Route: Oral
Exposure time: 90 d
Target Organs: Blood, Liver, Kidney

Further information

Product:

Remarks: There is no data available for this product.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

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

Components:

2,2',6,6'-tetra-tert-butyl-4,4'-methylenediphenol:

Toxicity to fish	:	LC50 (Cyprinodon variegatus (sheepshead minnow)): > 1,000 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Mysid shrimp): > 1,000 mg/l Exposure time: 96 h Test Type: static test

NJTS#: 46728100000-0002 - Proprietary amine:

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
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.02 mg/l Exposure time: 21 d Analytical monitoring: yes

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (Protozoa): 2 mg/l
Exposure time: 48 h

EC50 (Bacteria): > 10,000 mg/l
Exposure time: 3 h

diphenylamine:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.2 mg/l
Exposure time: 48 h

Persistence and degradability

Components:

NJTS#: 46728100000-0002 - Proprietary amine:

Biodegradability : 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

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

2,2',6,6'-tetra-tert-butyl-4,4'-methylenediphenol:

Partition coefficient: n-octanol/water : log Pow: 6.24 (68 °F / 20 °C)
GLP: yes

NJTS#: 46728100000-0002 - Proprietary amine:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 427 - 2,730
Exposure time: 56 d
Temperature: 77 °F / 25 °C
Concentration: 0.1 mg/l

Partition coefficient: n- : log Pow: 4.28

octanol/water

Mobility in soil

Product:

Mobility : Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.

Contaminated packaging : Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : not rated

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Respiratory or skin sensitisation

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:
aniline 62-53-3

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Prop. 65

WARNING: This product can expose you to chemicals including aniline, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Please note that Section 3 of this document lists only the hazardous components required by 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	All components of this product are on the Canadian DSL
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	Not in compliance with the inventory
US.TSCA	On TSCA Inventory

SECTION 16. OTHER INFORMATION

Further information

Other Emergency Phone Number

Latin America:	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
Mexico:		+52 555 004 8763

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.