



SAFETY DATA SHEET



Royco 481

Version: 1.1

Revision Date: 04/09/2015

Print Date: 10/27/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Royco 481
MINERAL OIL TURBINE ENGINE OIL

Product Use Description: Lubricant

Company:

Manufacturer

Anderol Specialty Lubricants, a division of Chemtura Corporation
215 Merry Lane
East Hanover, NJ
07936
United States of America

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

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300
:
: 703-527-3887

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

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

MSDSRequest@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION

Form	liquid
Colour	light yellow
Odour	slight hydrocarbon-like

GHS Classification

Acute aquatic toxicity : Category 3
Chronic aquatic toxicity : Category 3



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GHS Label element

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Other hazards : None

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

IARC Group 3: Not classifiable as to its carcinogenicity to humans
2,6-di-tert-butyl-p-cresol 128-37-0

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

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 (%)
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	>= 70 - < 90 %
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	>= 10 - < 20 %
2,6-di-tert-butyl-p-cresol	128-37-0	>= 0.1 - < 1 %

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 discoloration (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.



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- 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 : No information available.
- Notes to physician : No information available.

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 methods : In the event of fire, cool tanks with water spray.
- 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).



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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
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA P0
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH
		TWA	400 ppm 1,600 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA P0
2,6-di-tert-butyl-p-cresol	128-37-0	TWA	10 mg/m3	OSHA P0
		TWA (Inhalable fraction and vapor)	2 mg/m3	ACGIH
		TWA (Inhalable fraction and vapor)	2 mg/m3	ACGIH
		TWA	10 mg/m3	NIOSH REL



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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
- Color : light yellow
- Odor : slight hydrocarbon-like
- Odour Threshold : No data available
- pH : No data available
- Melting point/range :
Not applicable
- Boiling point/boiling range : No data available
- Evaporation rate : No data available
- Flash point : 143 °C
Method: open cup
- 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 : 0.88
- Solubility(ies)
- Water solubility : slightly soluble
- Solubility in other solvents : No data available



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Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : No data available
Viscosity
Viscosity, kinematic : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
No dangerous reaction known under conditions of normal use.
Chemical stability : No decomposition if stored and applied as directed.
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 oral toxicity
2,6-di-tert-butyl-p-cresol (Component) : LD50: > 2,930 mg/kg
Species: Rat
Method: OECD Test Guideline 401

Acute dermal toxicity
2,6-di-tert-butyl-p-cresol (Component) : LD50: > 2,000 mg/kg
Species: Rat
Method: OECD Test Guideline 402

Skin irritation
2,6-di-tert-butyl-p-cresol (Component) : Species: Rabbit
Result: No skin irritation

Eye irritation
2,6-di-tert-butyl-p-cresol (Component) : Species: Rabbit
Result: No eye irritation



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Sensitisation
2,6-di-tert-butyl-p-cresol (Component) : Species: Guinea pig
Classification: Did not cause sensitisation on laboratory animals.

CMR effects
2,6-di-tert-butyl-p-cresol (Component) : Mutagenicity: Animal testing did not show any mutagenic effects.
Teratogenicity: No effects on or via lactation
Reproductive toxicity: No toxicity to reproduction

Further information (Product) : There is no data available for this product.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish (Product) : Remarks:
No data available

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

Toxicity to algae (Product) : Remarks:
No data available

Elimination information (persistence and degradability)

Bioaccumulation (Product) : Remarks:
No data available

Mobility (Product) : Remarks:
No data available

Biodegradability
2,6-di-tert-butyl-p-cresol (Component) : aerobic
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
4.5 %

Further information on ecology

Ecotoxicology Assessment



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Results of PBT assessment (Product)

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information (Product) : 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

ADR

Not dangerous goods

RID

Not dangerous goods

MERCOSUR

Not dangerous goods

DOT

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

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

SARA 311/312 Hazards : No SARA Hazards



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SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

US.TSCA	On TSCA Inventory
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

SECTION 16. OTHER INFORMATION

Further information

Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+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.