



SAFETY DATA SHEET



ROYCO 560 PRF-23699F

Version: 1.1

Revision Date: 01/12/2015

Print Date: 05/05/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: ROYCO 560 PRF-23699F
HIGH TEMPERATURE STABILITY 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

Email: mdsdrequest@chemtura.com
Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300
:
Chemtura Corporation Emergency Response: CHEMTURA : 800-292-5898

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	amber
Odour	mild

GHS Classification

Reproductive toxicity : Category 2
Acute aquatic toxicity : Category 3
Chronic aquatic toxicity : Category 3

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GHS Label element

Signal word : **Warning**

Hazard pictograms : 

Hazard statements : H361 Suspected of damaging fertility or the unborn child.
H412 Harmful to aquatic life with long lasting effects.

Other hazards : None

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/attention.
Storage:
P405 Store locked up.
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 identified as probable, possible or confirmed human carcinogen by IARC.

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.

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.

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



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by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
Fatty acids, C5-9, tetraesters with pentaerythritol	67762-53-2	>= 70 - < 90 %
Fatty acids, C5-9, hexaesters with dipentaerythritol	67762-52-1	>= 5 - < 10 %
tris(methylphenyl) phosphate	1330-78-5	>= 1 - < 5 %
NJTS-46728100000-0001		>= 1 - < 5 %

SECTION 4. FIRST AID MEASURES

- If inhaled : If inhaled
Move to fresh air.
If breathing is difficult, give oxygen.
Get medical attention if irritation develops and persists.
- In case of skin contact : In case of skin contact
Wash off with soap and water.
If symptoms persist, call a physician.
- In case of eye contact : In case of eye contact
Flush with plenty of water.
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 : Water



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- 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).

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

- Engineering measures** : Use with adequate ventilation. Local ventilation is needed in the presence of airborne mists. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment



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- Respiratory protection : not required under normal use
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- 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 : amber
- Odor : mild
- pH : No data available
- Melting point/range :
Not applicable
- Boiling point/boiling range : No data available
- Flash point : > 246 °C
Method: ASTM D92
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : No data available
- Relative density : 1.0
- Solubility(ies)
- Water solubility : slightly soluble
- Partition coefficient: n-octanol/water : No data available
- Auto-ignition temperature : not determined
- Viscosity
- Viscosity, kinematic : No data available



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SECTION 10. STABILITY AND REACTIVITY

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

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (Product)	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity NJTS-46728100000-0001 (Component)	: LD50: > 2,000 mg/kg Species: Rat
Skin irritation NJTS-46728100000-0001 (Component)	: Species: Rabbit Result: No skin irritation Method: OECD Test Guideline 404
Eye irritation NJTS-46728100000-0001 (Component)	: Species: Rabbit Result: No eye irritation Method: OECD Test Guideline 405
Sensitisation NJTS-46728100000-0001 (Component)	: Species: Guinea pig Classification: Did not cause sensitisation on laboratory animals. Method: OECD Test Guideline 406
Aspiration toxicity (Product)	: No aspiration toxicity classification

CMR effects



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- Fatty acids, C5-9, tetraesters with pentaerythritol (Component) : Mutagenicity: Animal testing did not show any mutagenic effects.
Teratogenicity: No effects on or via lactation
Reproductive toxicity: No toxicity to reproduction
- tris(methylphenyl) phosphate (Component) : Carcinogenicity: Animal testing did not show any carcinogenic effects.
Mutagenicity: In vitro tests did not show mutagenic effects
Teratogenicity: Did not show teratogenic effects in animal experiments.
Reproductive toxicity: Suspected of damaging fertility or the unborn child.
- NJTS-46728100000-0001 (Component) : Mutagenicity: Not mutagenic in Ames Test.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish

- tris(methylphenyl) phosphate (Component) : LC50: 0.75 mg/l
Exposure time: 96 h
- Species: Oncorhynchus mykiss (rainbow trout)
- LC50: > 100 mg/l
Exposure time: 96 h
- Species: Pimephales promelas (fathead minnow)
- LC50: 0.6 mg/l
Exposure time: 96 h
- Species: Oncorhynchus mykiss (rainbow trout)
- NJTS-46728100000-0001 (Component) : LC50: > 71 mg/l
Exposure time: 96 h
- Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

- tris(methylphenyl) phosphate (Component) : EC50: 0.146 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202
- EC50: 0.27 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
- NJTS-46728100000-0001 : EC50: 51 mg/l



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(Component) Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202

Toxicity to algae
NJTS-46728100000-0001 : EbC50: > 100 mg/l
(Component) Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)
Method: OECD Test Guideline 201

Toxicity to bacteria
tris(methylphenyl) phosphate : EC50: > 100 mg/l
(Component) Exposure time: 3 h
Species: activated sludge
Respiration inhibition

Elimination information (persistence and degradability)

Bioaccumulation (Product) : Remarks:
No data available

Mobility (Product) : Remarks:
No data available

Biodegradability
Fatty acids, C5-9, tetraesters : Result: According to the results of tests of biodegradability this
with pentaerythritol product is not readily biodegradable.
(Component) 47.1 %
Method: CO2 Evolution Test

Fatty acids, C5-9, hexaesters : Result: Readily biodegradable.
with dipentaerythritol 79 %
(Component)

NJTS-46728100000-0001 : Result: According to the results of tests of biodegradability this
(Component) product is not readily biodegradable.
Method: CO2 Evolution Test

Further information on ecology

Ecotoxicology Assessment

Results of PBT assessment (Product)

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

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

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods



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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

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
amitrole	61-82-5	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA304 Reportable Quantity

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

SARA 311/312 Hazards : Chronic Health Hazard

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



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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 contains a chemical known to the State of California to cause cancer.

amitrole 61-82-5

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	Not in compliance with the inventory
ENCS	Not in compliance with the inventory
KECI	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not 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.