



# Material Safety Data Sheet

## ROYCO 560

### 1 . Product and company identification

**Product name** : ROYCO 560  
**Material uses** : Lubricant.  
**Supplier/Manufacturer** : Anderol, Inc., a Chemtura Company  
 215 Merry Lane  
 East Hanover, NJ 07936  
 Tel: (973) 887-7410  
 Fax: (973) 887-8422  
**MSDS #** : EH1089  
**MILSPEC#** : MIL-PRF-23699 HTS  
**Validation date** : 08/31/2007  
**MSDS authored by:** : Atrion Regulatory Services, Inc.  
**In case of emergency** : CHEMTREC: 800-424-9300 (United States)  
 CANUTEC (613) 996-6666 (Canada)

### 2 . Hazards identification

**Physical state** : Liquid.  
**Hazard status** : This material is classified hazardous under OSHA regulations in the United States, the WHMIS Controlled Product Regulation in Canada, the NOM-018-STPS-2000 in Mexico and Brazil NBR 14725:2001.  
**Emergency overview** : WARNING !  
 MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.  
 Harmful in contact with skin and if swallowed. May cause sensitization by skin contact. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Contains material that can cause target organ damage. Wash thoroughly after handling.  
**Routes of entry** : Dermal contact. Eye contact. Inhalation. Ingestion.  
**Potential acute health effects**  
**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
**Ingestion** : May be harmful if swallowed.  
**Skin** : May cause sensitization by skin contact. May be harmful if absorbed through skin.  
**Eyes** : No known significant effects or critical hazards.  
**Potential chronic health effects**  
**Chronic effects** : Contains material that can cause target organ damage.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.  
**Target organs** : Contains material which causes damage to the following organs: digestive system, central nervous system (CNS), eye, lens or cornea.  
**Over-exposure signs/symptoms**  
**Inhalation** : No specific data.  
**Ingestion** : No specific data.

## 2 . Hazards identification

- Skin** : Adverse symptoms may include the following:  
irritation  
redness
- Eyes** : No specific data.
- Medical conditions aggravated by over-exposure** : Pre-existing skin and digestive disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

## 3 . Composition/information on ingredients

### United States

Name	CAS number	%
Tricresylphosphate	1330-78-5	1 - 5

### Canada

Name	CAS number	%
Tricresylphosphate	1330-78-5	1 - 5

### Mexico

Name	UN number	IDLH	Classification				CAS number	%
			H	F	R	Special		
Tricresylphosphate	UN2574	-	2	1	0		1330-78-5	1 - 5

### Brazil

Name	CAS number	%
Tricresylphosphate	1330-78-5	1 - 5

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## 4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if irritation occurs.
- Skin contact** : Wash with soap and water. Get medical attention if irritation occurs.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5 . Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
  - Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : The final products of combustion are carbon oxides and water. Nitrogen, sulfur and metal oxides may also be produced in some cases.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.



## 11 . Toxicological information

### Toxicity data

Product/ingredient name	Test / Route	Species	Result
Tricresylphosphate	LD50 Oral	Rat	3 g/kg

### Acute Effects

<b>Eyes</b>	: No known significant effects or critical hazards.
<b>Skin</b>	: May cause sensitization by skin contact. May be harmful if absorbed through skin.
<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: May be harmful if swallowed.
<b>Potential chronic health effects</b>	: Carcinogenic effects: Not applicable. Mutagenic effects: Not applicable. Teratogenic effects: Not applicable.
<b>Target organs</b>	: Contains material which causes damage to the following organs: digestive system, central nervous system (CNS), eye, lens or cornea.

## 12 . Ecological information

<b>Environmental effects</b>	: Water polluting material. May be harmful to the environment if released in large quantities.
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### Ecotoxicity data

Product/ingredient name	Species	Test	Exposure	Result
Tricresylphosphate	Daphnia	Intoxication	48 hours	Acute EC50 3.6 mg/L
	Daphnia	Intoxication	48 hours	Acute EC50 3.2 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.4 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.26 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.15 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.082 mg/L

<b>Other adverse effects</b>	: No known significant effects or critical hazards.
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## 13 . Disposal considerations






<b>Waste disposal</b>	: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14 . Transport information

NAERG : 171

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricresylphosphate). Marine pollutant (Tricresylphosphate)	9	III		<b>Marine pollutant</b> Severe marine pollutant (PP)
<b>TDG Classification</b>	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricresylphosphate). Marine pollutant (Tricresylphosphate)	9	III		<b>Marine pollutant</b> Severe marine pollutant (PP)
<b>Mexico Classification</b>	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricresylphosphate)	9	III		-
<b>IMDG Class</b>	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricresylphosphate). Marine pollutant (Tricresylphosphate)	9	III		<b>Marine pollutant</b> Severe marine pollutant (PP)
<b>IATA-DGR Class</b>	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricresylphosphate)	9	III		-

PG\* : Packing group

## 15 . Regulatory information

### United States

#### HCS Classification

- : Sensitizing material
- Target organ effects
- Harmful if absorbed through the skin.
- Harmful by inhalation.

#### U.S. Federal regulations

- : **United States inventory (TSCA 8b):** All components are listed or exempted.
- SARA 302/304/311/312 extremely hazardous substances:** No products were found.
- SARA 302/304 emergency planning and notification:** No products were found.
- SARA 302/304/311/312 hazardous chemicals:** Tricresylphosphate
- SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**  
Tricresylphosphate: Immediate (acute) health hazard, Delayed (chronic) health hazard
- Clean Water Act (CWA) 307:** No products were found.
- Clean Water Act (CWA) 311:** No products were found.
- Clean Air Act (CAA) 112 accidental release prevention:** No products were found.
- Clean Air Act (CAA) 112 regulated flammable substances:** No products were found.
- Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.



New Jersey Hazardous Substances -hDy hF #.y /hCAhDyD#0 fSy bp0#ygyx  
Michigan Critical Materials -hDy hF #.y /hCAhDyD#0 fSy bp0#ygyV  
Minnesota Hazardous Substances -hDy hF #.y /hCAhDyD#0 fSy bp0#ygyV

New York Acutely Hazardous Substances

x -hDy hF #.y /hCAhDyD#0 fSy bp0#ygyV

Special Canadian ARET  
Canadian NPRI  
Canadian lists : CEPA Toxic substances

Classification :

## 16 . Other information

**Label requirements** : MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

**Hazardous Material Information System (U.S.A.)** :

### HAZARD RATINGS

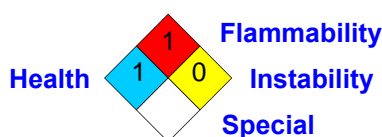
Health	*	1
Flammability		1
Physical hazards		0
Personal protection		B

4- Extreme  
3- Serious  
2- Moderate  
1- Slight  
0- Minimal

See section 8 for more detailed information on personal protection.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)** :



**References** : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005. - Official Mexican Standards NOM-018-STPS-2000 and NOM-004-SCT2-1994. Brazil NBR 14725:2001.

**Responsible name** : Mr. Max Naggar  
**Date of issue** : 08/31/2007  
**Date of previous issue** : 03/31/2006  
**Version** : 5

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To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.