



# Material Safety Data Sheet

## ROYCO 22MS

### 1. Product and company identification

<b>Product name</b>	: ROYCO 22MS
<b>Material uses</b>	: Lubricant.
<b>Supplier/Manufacturer</b>	: Chemtura Canada Co. / Cie 700 Third Line Oakville, ONT Canada L6J 5A3 Tel: (905) 827-9087 Fax: (905) 827-2862
<b>MSDS #</b>	: AC1082
<b>MILSPEC#</b>	: Mil-G-81827
<b>Validation date</b>	: 07/30/2007
<b>MSDS authored by:</b>	: Atrion Regulatory Services, Inc.
<b>In case of emergency</b>	: CHEMTREC: 800-424-9300 (United States) CANUTEC (613) 996-6666 (Canada)

### 2. Hazards identification

<b>Physical state</b>	: Semi-solid (grease).
<b>Hazard status</b>	: 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.
<b>Emergency overview</b>	: WARNING!  CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.  Irritating to eyes and skin. May cause sensitization by skin contact. Avoid exposure - obtain special instructions before use. Do not get on skin or clothing. Avoid contact with eyes. Contains material that can cause target organ damage. Wash thoroughly after handling.  Since the product is in paste form, the risk of exposure to a carcinogen dust is minimum, this is why the related hazard statements are not shown in this MSDS. If material is to be dried and sanded by users, the risk of inhalation of dust containing a carcinogen dust will be increased, together with the risk of cancer hazard.
<b>Routes of entry</b>	: Skin contact. Eye contact. Ingestion.
<b>Potential acute health effects</b>	
<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	: No known significant effects or critical hazards.
<b>Skin</b>	: Irritating to skin. May cause sensitization by skin contact.
<b>Eyes</b>	: Irritating to eyes.
<b>Potential chronic health effects</b>	
<b>Chronic effects</b>	: Contains material that can cause target organ damage.
<b>Carcinogenicity</b>	: See above.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.
<b>Over-exposure signs/symptoms</b>	

## 2. Hazards identification

<b>Inhalation</b>	: No specific data.
<b>Ingestion</b>	: No specific data.
<b>Skin</b>	: Adverse symptoms may include the following: irritation redness
<b>Eyes</b>	: Adverse symptoms may include the following: pain or irritation watering redness
<b>Medical conditions aggravated by over-exposure</b>	: Repeated skin exposure can produce local skin destruction or dermatitis. Repeated exposure of the eyes to a low level of dust can produce eye irritation.

See toxicological information (section 11)

## 3. Composition/information on ingredients

### United States

<b>Name</b>	<b>CAS number</b>	<b>%</b>
Molybdenum disulfide	1317-33-5	1 - 5
Graphite	7782-42-5	1 - 5
Sodium nitrite	7632-00-0	1 - 5
N-Phenyl-1-naphthylamine	90-30-2	0.1 - 1

### Canada

<b>Name</b>	<b>CAS number</b>	<b>%</b>
Molybdenum disulfide	1317-33-5	1 - 5
Graphite	7782-42-5	1 - 5
Sodium nitrite	7632-00-0	1 - 5
N-Phenyl-1-naphthylamine	90-30-2	0.1 - 1

### Mexico

<b>Name</b>	<b>UN number</b>	<b>IDLH</b>	<b>Classification</b>				<b>CAS number</b>	<b>%</b>
			<b>H</b>	<b>F</b>	<b>R</b>	<b>Special</b>		
Molybdenum disulfide	Not regulated.	5000 mg/m <sup>3</sup>	0	0	0		1317-33-5	1 - 5
Graphite	Not regulated.	1250 mg/m <sup>3</sup>	0	1	0		7782-42-5	1 - 5
Sodium nitrite	UN1500	-	2	0	2	OX	7632-00-0	1 - 5
N-Phenyl-1-naphthylamine	Not regulated.	-	1	1	0		90-30-2	0.1 - 1

### Brazil

<b>Name</b>	<b>CAS number</b>	<b>%</b>
Molybdenum disulfide	1317-33-5	1 - 5
Graphite	7782-42-5	1 - 5
Sodium nitrite	7632-00-0	1 - 5
N-Phenyl-1-naphthylamine	90-30-2	0.1 - 1

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.



**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.

## 8 . Exposure controls/personal protection

**United States**

Molybdenum disulfide

**ACGIH TLV (United States, 1/2006).**

TWA: 3 mg/m<sup>3</sup>, ((Mo)) 8 hour(s). Form: Insoluble

**OSHA PEL (United States, 11/2006).**

TWA: 15 mg/m<sup>3</sup>, ((Mo)) 8 hour(s). Form: Total dust

Graphite

**ACGIH TLV (United States, 1/2006).**

TWA: 2 mg/m<sup>3</sup> 8 hour(s). Form: Dust

**NIOSH REL (United States, 12/2001).**

TWA: 2.5 mg/m<sup>3</sup> 10 hour(s). Form: Respirable fraction

**OSHA PEL Z3 (United States, 9/2005).**

TWA: 15 MPPCF 8 hour(s).

**Canada**

Molybdenum disulfide

**ACGIH TLV (United States, 1/2006).**

TWA: 3 mg/m<sup>3</sup>, ((Mo)) 8 hour(s). Form: Insoluble

**OSHA PEL (United States, 11/2006).**

TWA: 15 mg/m<sup>3</sup>, ((Mo)) 8 hour(s). Form: Total dust

Graphite

**ACGIH TLV (United States, 1/2006).**

TWA: 2 mg/m<sup>3</sup> 8 hour(s). Form: Dust

**NIOSH REL (United States, 12/2001).**

TWA: 2.5 mg/m<sup>3</sup> 10 hour(s). Form: Respirable fraction

**OSHA PEL Z3 (United States, 9/2005).**

TWA: 15 MPPCF 8 hour(s).

**Mexico**

Molybdenum disulfide

**NOM-010-STPS (Mexico, 9/2000).**

LMPE-CT: 20 mg/m<sup>3</sup>, ((Mo)) 15 minute(s).

LMPE-PPT: 10 mg/m<sup>3</sup>, ((Mo)) 8 hour(s).

Graphite

**NOM-010-STPS (Mexico, 9/2000).**

LMPE-PPT: 2 mg/m<sup>3</sup> 8 hour(s).

**Brazil**

Molybdenum disulfide

**ACGIH TLV (United States, 1/2006).**

TWA: 3 mg/m<sup>3</sup>, ((Mo)) 8 hour(s). Form: Insoluble

**OSHA PEL (United States, 11/2006).**

TWA: 15 mg/m<sup>3</sup>, ((Mo)) 8 hour(s). Form: Total dust

Graphite

**ACGIH TLV (United States, 1/2006).**

TWA: 2 mg/m<sup>3</sup> 8 hour(s). Form: Dust

**NIOSH REL (United States, 12/2001).**

TWA: 2.5 mg/m<sup>3</sup> 10 hour(s). Form: Respirable fraction

**OSHA PEL Z3 (United States, 9/2005).**

TWA: 15 MPPCF 8 hour(s).

**Consult local authorities for acceptable exposure limits.**

**Recommended monitoring procedures**

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures**

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Personal protection**

- Eye protection** : Safety glasses with side shields.
- Skin protection/Body** : Not applicable.
- Respiratory protection** : Not applicable.
- Hand protection** : Natural rubber (latex).



- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Potential chronic health effects** : **CARCINOGENIC EFFECTS:** Classified 2A (Probable for human.) by IARC [Sodium nitrite].  
**MUTAGENIC EFFECTS:** Not applicable.  
**TERATOGENIC EFFECTS:** Not applicable.

## 12 . Ecological information

**Environmental effects** : No known significant effects or critical hazards.

### Ecotoxicity data

Product/ingredient name	Species	Test	Exposure	Result
Sodium nitrite	Fish	Mortality	96 hours	Acute LC50 0.19 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.18 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.17 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.15 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.14 mg/L
	Fish	Mortality	96 hours	Acute LC50 0.11 mg/L

**Other adverse effects** : No known significant effects or critical hazards.

## 13 . Disposal considerations

**Waste disposal** : 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.

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** : Not applicable.

### Regulatory information

**UN/ IMDG/ IATA DOT/ TDG** : Not regulated.

## 15 . Regulatory information

### United States

**HCS Classification** : Irritating material  
Sensitizing material

**U.S. Federal regulations** : TSCA 8(b) inventory: All components listed.

**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:** Sodium nitrite; Graphite, natural.; Acetic acid, calcium salt

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**  
Sodium nitrite: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Graphite, natural.: Immediate (acute) health hazard; Acetic acid, calcium salt: Delayed (chronic) health hazard

**Clean Water Act (CWA) 307:** No products were found.

**Clean Water Act (CWA) 311:** Sodium nitrite

**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.

### SARA 313

	Product name	CAS number	Concentration
<b>Form R - Reporting requirements</b>	: Sodium nitrite	7632-00-0	1 - 5
<b>Supplier notification</b>	: Sodium nitrite	7632-00-0	1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

- State regulations** :
- Connecticut Carcinogen Reporting:** None of the components are listed.
  - Connecticut Hazardous Material Survey:** None of the components are listed.
  - Florida substances:** None of the components are listed.
  - Illinois Chemical Safety Act:** None of the components are listed.
  - Illinois Toxic Substances Disclosure to Employee Act:** None of the components are listed.
  - Louisiana Reporting:** None of the components are listed.
  - Louisiana Spill:** None of the components are listed.
  - Massachusetts Spill:** None of the components are listed.
  - Massachusetts Substances:** The following components are listed: Molybdenum disulfide; Graphite, natural.;Sodium nitrite
  - Michigan Critical Material:** None of the components are listed.
  - Minnesota Hazardous Substances:** None of the components are listed.
  - New Jersey Hazardous Substances:** The following components are listed: Molybdenum disulfide;Sodium nitrite
  - New Jersey Spill:** None of the components are listed.
  - New Jersey Toxic Catastrophe Prevention Act:** None of the components are listed.
  - New York Acutely Hazardous Substances:** The following components are listed: Sodium nitrite
  - New York Toxic Chemical Release Reporting:** None of the components are listed.
  - Pennsylvania RTK Hazardous Substances:** The following components are listed: Graphite, natural.;Sodium nitrite
  - Rhode Island Hazardous Substances:** None of the components are listed.

**California Prop. 65** :

**WARNING:** This product contains a chemical known to the State of California to cause cancer. In the form used in this product, however, the risk to the end user through normal use of this product is minimal.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Silica crystalline, quartz	Yes.	No.	No.	No.

**Canada**

**WHMIS (Canada)** : Class D-2B: Material causing other toxic effects (Toxic).



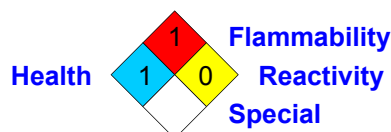
**Canadian lists** : CEPA DSL: All components listed.

**DSL ; NDSL** : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Mexico**

**Classification** :



- HAZARD RATINGS**
- 4- Extreme
  - 3- Serious
  - 2- Moderate
  - 1- Slight
  - 0- Minimal

This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

**The Restriction of Hazardous Substances in Electrical and Electronic Equipment (ROHS) Directive (2002/95/EC)**

: In compliance.

**16 . Other information**

**Label requirements** : CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

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

Health	1
Flammability	1
Physical hazards	0
Personal protection	B

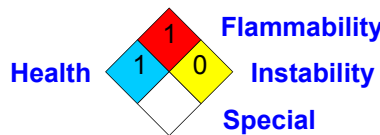
**HAZARD RATINGS**

- 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** : 07/30/2007  
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