

SAFETY DATA SHEET



ROYCO 22CF MIL-PRF-81322G

Version 1.8 Revision Date: 09/12/2019 SDS Number: 400000001765 Date of last issue: 04/26/2019
Date of first issue: 12/05/2014

SECTION 1. IDENTIFICATION

Product name: ROYCO 22CF MIL-PRF-81322G
CHROMATE FREE MULTI-FUNCTION & PURPOSE GREASE

Product Use Description: Grease

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

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

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 : Grease

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Carcinogenicity : Category 1B

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

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Hazard pictograms



Signal word

: Danger

Hazard statements

: H350 May cause cancer.
H411 Toxic to aquatic life with long lasting effects.

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.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
sodium nitrite	7632-00-0	>= 2.5 - < 5
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	>= 2.5 - < 5
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	95-38-5	>= 0.25 - < 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),

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- give oxygen as quickly as possible.
Get medical attention.
- 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
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 : irritant effects
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : For specialist advice physicians should contact the Poisons Information Service.
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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO₂)
Dry powder
Foam
Alcohol-resistant foam
Water mist
- Unsuitable extinguishing media : Water
- Specific hazards during fire-fighting : Burning produces noxious and toxic fumes.
- Further information : 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.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Remove all sources of ignition.
Clean contaminated surface thoroughly.
Material can create slippery conditions.

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- Environmental precautions : Do not contaminate water.
Do not flush into surface water or sanitary sewer system.
Discharge into the environment must be avoided.
- Methods and materials for containment and cleaning up : Shovel into suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Keep container closed when not in use.
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.
- Further information on storage stability : Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Contains no substances with occupational exposure limit values.				
Quartz (SiO ₂)	14808-60-7	TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (Respirable dust)	0.05 mg/m ³	NIOSH REL
		TWA (respirable dust fraction)	0.1 mg/m ³	OSHA P0
		TWA (Respirable fraction)	0.025 mg/m ³ (Silica)	ACGIH
		TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1

Contains no substances with occupational exposure limit values.

- 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

- Respiratory protection : not required under normal use
In the case of dust or aerosol formation use respirator with an approved filter.

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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 : paste, to, solid

Colour : dark brown

Odour : slight

Odour Threshold : No data available

pH : Not applicable

Melting point/range : No data available

Boiling point/boiling range : Not applicable

Flash point : > 446 °F / 230 °C

Method: open cup

Evaporation rate : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 0.88

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n- : No data available

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octanol/water

- Auto-ignition temperature : Not applicable
- Decomposition temperature : No data available
- Self-Accelerating decomposition temperature (SADT) : Method: No information available.
- Viscosity
 - Viscosity, dynamic : No data available
 - Viscosity, kinematic : No data available
- Oxidizing potential : No information available.
- Molecular weight : No data available

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

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact
Skin Absorption

Acute toxicity

Product:

- Acute oral toxicity : Acute toxicity estimate: 3,166 mg/kg
Method: Calculation method
- Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

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Components:**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

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

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Acute oral toxicity : LD50 (Rat): 500 - 5,000 mg/kg

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

Skin corrosion/irritation**Components:****Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species : Rabbit
Exposure time : 4 h
Method : Draize Test
Result : Corrosive

Serious eye damage/eye irritation**Components:****Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species : Rabbit
Result : Corrosive
Method : Draize Test

Respiratory or skin sensitisation**Components:****Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Species : Guinea pig
Assessment : Did not cause sensitisation on laboratory animals.
Method : OECD Test Guideline 406

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2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Germ cell mutagenicity - Assessment : Not mutagenic in Ames Test

Carcinogenicity

Components:

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

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

IARC Group 2A: Probably carcinogenic to humans
sodium nitrite 7632-00-0
(nitrite (ingested) under conditions that result in endogenous nitrosation)

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.

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks : No data is available on the product itself.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: No data available

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

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Components:**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 71 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 51 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae : EbC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Ecotoxicology Assessment

- Chronic aquatic toxicity : No toxicity at the limit of solubility, This product has no known ecotoxicological effects.

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

- Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 0.030 mg/l
Test Type: static test
Method: OECD Test Guideline 201
- M-Factor (Chronic aquatic toxicity) : 10

Persistence and degradability**Product:**

- Biodegradability : Result: No data available

Components:**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

- Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Method: CO2 Evolution Test

Bioaccumulative potential**Product:**

- Bioaccumulation : Remarks: No data available

Components:**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

- Partition coefficient: n-octanol/water : log Pow: > 7

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2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Partition coefficient: n-octanol/water : log Pow: > 6

Mobility in soil**Product:**

Mobility : Remarks: No data available

Other adverse effects**Product:**

Results of PBT and vPvB assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : There is no data available for this product. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of waste material in compliance with all federal, state, and local regulations.

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

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : UN 3077
 Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)
 Class : 9
 Packing group : III
 Labels : Miscellaneous

Environmentally hazardous : yes

IMDG-Code

UN number : UN 3077
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)

Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F

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Marine pollutant : yes

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

UN/ID/NA number : UN 3077
Proper shipping name : Environmentally hazardous substances, solid, n.o.s.
(2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)
Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171
Marine pollutant : yes(2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol)
Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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)
sodium nitrite	7632-00-0	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
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SARA 311/312 Hazards : Carcinogenicity

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

sodium nitrite 7632-00-0 1.65 %

California Prop. 65

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

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California List of Hazardous Substances

sodium nitrite 7632-00-0

California Regulated Carcinogens

Quartz (SiO₂) 14808-60-7

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 : Not 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 : On the inventory, or in compliance with the inventory
US.TSCA : All substances listed as active on the TSCA inventory

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:
sodium nitrite 7632-00-0

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
sodium nitrite 7632-00-0

SECTION 16. OTHER INFORMATION

Further information

Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 11 3197 5891
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+52 55 5004 8763

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Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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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 guid-

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ance 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.

US / EN