



SAFETY DATA SHEET

ROYCO 27 MIL-G-23827C

Version: 1.6

Revision Date: 02/19/2018

Print Date: 04/06/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: ROYCO 27 MIL-G-23827C
INSTRUMENT & MULTI-PURPOSE GREASE

Product Use Description: Lubricant

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@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

Restrictions on use : For industrial use only.

SECTION 2. HAZARDS IDENTIFICATION

Form	paste
Colour	tan
Odour	mild oily

GHS Classification

Skin sensitisation : Category 1
Acute aquatic toxicity : Category 3
Chronic aquatic toxicity : Category 3

GHS label elements


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Signal word : **Warning**

Hazard pictograms : 

Hazard statements : H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Other hazards : None

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Self-ignitable : No data available

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 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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
lithium 12-hydroxystearate	7620-77-1	>= 10 - < 20 %



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Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 1 - < 5 %
tris(dipentyldithiocarbamate-S,S')antimony	15890-25-2	>= 1 - < 2.5 %
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	>= 1 - < 2.5 %
N-1-naphthylaniline	90-30-2	>= 0.25 - < 1 %
2,6-di-tert-butyl-p-cresol	128-37-0	>= 0.25 - < 1 %

SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.
If breathing is difficult, give oxygen.
If symptoms persist, call a physician.
- In case of skin contact : Wash off with warm water and soap.
If skin irritation persists, call a physician.
Cool skin rapidly with cold water after contact with molten material.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention immediately.
- If swallowed : Do NOT induce vomiting.
Obtain medical attention.
Never give anything by mouth to an unconscious person.
- 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 chemical
Dry sand
Water mist
Foam
- Unsuitable extinguishing media : Water spray jet
- Specific hazards during firefighting : Burning produces irritant fumes.
Exposure to decomposition products may be a hazard to health.



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- Specific extinguishing methods : Cool containers/tanks with water spray.
- Special protective equipment for firefighters : Self-contained breathing apparatus with full face-piece operated in positive pressure mode.
Body covering protective clothing, full "turn-out" gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.
Ensure adequate ventilation.
- Environmental precautions : Should not be released into the environment.
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 : Wear suitable protective equipment.
Avoid contact with skin, eyes and clothing.
Keep tightly closed.
Protect from contamination.
- Conditions for safe storage : Keep tightly closed in a dry, cool and well-ventilated place.
- Materials to avoid : Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
lithium 12-hydroxystearate	7620-77-1	TWA	10 mg/m ³	ACGIH
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	TWA (Mist)	5 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH



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		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
		TWA (Mist)	5 mg/m3	OSHA P0
		PEL (particulate)	5 mg/m3	CAL PEL
tris(dipentylidithiocarbamato-S,S')antimony	15890-25-2	TWA	0.5 mg/m3	OSHA Z-1
		TWA	0.5 mg/m3	ACGIH
		TWA	0.5 mg/m3	OSHA P0
		TWA	0.5 mg/m3	NIOSH REL
		PEL	0.5 mg/m3	CAL PEL
N-1-naphthylaniline	90-30-2	TWA	10 ml/m3	ACGIH
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
		PEL	10 mg/m3	CAL PEL

Engineering measures : Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection
Remarks : Neoprene gloves When handling hot material, use heat resistant gloves.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Impervious clothing

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: paste
Color	: tan
Odor	: mild oily
Odour Threshold	: No data available
pH	: No data available
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Evaporation rate	: No data available
Flash point	: > 202 °C Method: open cup
Auto-flammability	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: Not applicable
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.92 g/cm ³
<u>Solubility(ies)</u>	
Water solubility	: negligible
Solubility in other solvents	: partly soluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
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	: Contamination Heat, flames and sparks.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Sulphur oxides Carbon oxides Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate: 83.33 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

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

N-1-naphthylaniline:

Acute oral toxicity : LD50 (Rat): 1,625 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

2,6-di-tert-butyl-p-cresol:

Acute oral toxicity : LD50 (Rat, male and female): > 2,930 mg/kg
Method: OECD Test Guideline 401
GLP: yes



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Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

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

N-1-naphthylaniline:

Species: Rabbit
Method: Draize Test
Result: No skin irritation

2,6-di-tert-butyl-p-cresol:

Species: Rabbit
Result: No skin irritation

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

N-1-naphthylaniline:

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

2,6-di-tert-butyl-p-cresol:

Species: Rabbit
Result: No eye irritation

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

N-1-naphthylaniline:

Test Type: Maximisation Test
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.



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Result: May cause sensitisation by skin contact.

Test Type: Patch Test

Species: Human

Assessment: May cause sensitisation by skin contact.

Result: May cause sensitisation by skin contact.

2,6-di-tert-butyl-p-cresol:

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

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

Germ cell mutagenicity - : Not mutagenic in Ames Test

Assessment

N-1-naphthylaniline:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

: Test Type: Chinese Hamster Ovary (CHO)
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay
Species: Mouse (male)
Result: negative

Germ cell mutagenicity - : Animal testing did not show any mutagenic effects., Tests on
Assessment bacterial or mammalian cell cultures did not show mutagenic effects.

2,6-di-tert-butyl-p-cresol:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

: Test Type: Chromosome aberration test in vitro
Result: Conflicting results have been seen in different studies.

: Test Type: unscheduled DNA synthesis assay
Result: negative

: Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow



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Method: Mutagenicity (micronucleus test)
Result: negative

Test Type: in vivo assay
Species: Rat (male)
Cell type: Bone marrow
Application Route: Oral
Method: Mutagenicity (in vivo mammalian bone-marrow
cytogenetic test, chromosomal analysis)
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

N-1-naphthylaniline:

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

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 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.

Reproductive toxicity

Components:

2,6-di-tert-butyl-p-cresol:

Reproductive toxicity - Assessment : No toxicity to reproduction
No effects on or via lactation

STOT - repeated exposure

Components:

N-1-naphthylaniline:

Exposure routes: Oral
Target Organs: Liver, Kidney
Assessment: May cause damage to organs through prolonged or repeated exposure.

2,6-di-tert-butyl-p-cresol:

Exposure routes: Oral
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.



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Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: The product itself has not been tested.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

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

Toxicity to daphnia and other aquatic invertebrates

Benzenamine, N-phenyl-,
reaction products with 2,4,4-
trimethylpentene
(Component) : EC50: 51 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202

N-1-naphthylaniline
(Component) : EC50: 0.68 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
semi-static test Analytical monitoring: yes

Toxicity to algae

Benzenamine, N-phenyl-,
reaction products with 2,4,4-
trimethylpentene
(Component) : EbC50: > 100 mg/l
Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)
Method: OECD Test Guideline 201

Toxicity to bacteria

N-1-naphthylaniline
(Component) : EC50: 2 mg/l
Exposure time: 48 h
Species: Protozoa

EC50: > 10,000 mg/l
Exposure time: 3 h
Species: Bacteria



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
N-1-naphthylaniline : NOEC: 0.02 mg/l
(Component) Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes

Elimination information (persistence and degradability)

Bioaccumulation (Product) : Remarks:
No data available

Mobility (Product) : Remarks:
No data available

Biodegradability (Product) : Result: No data available

Ecotoxicology Assessment

Results of PBT assessment (Product)
This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
Additional ecological information (Product) : The product itself has not been tested.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of wastes in an approved waste disposal facility.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR



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Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not regulated as a dangerous good

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)
1-naphthylamine	134-32-7	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
aniline	62-53-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Respiratory or skin sensitisation

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
tris(dipentyl)dithiocarbamato-S,S')antimony 15890-25-2
tris[bis(2-ethylhexyl)dithiocarbamato-S,S']antimony 15991-76-1

US State Regulations



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California Prop 65

, which is/are known to the State of California to cause cancer.
For more information go to www.P65Warnings.ca.gov.

aniline	62-53-3
1-naphthylamine	134-32-7
2-naphthylamine	91-59-8

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	Not in compliance with the inventory
US.TSCA	On TSCA 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.