

SAFETY DATA SHEET



ROYCO 22MS MIL-G-81827A

Version 1.7	Revision Date: 09/12/2019	SDS Number: 400000001766	Date of last issue: 07/11/2018 Date of first issue: 12/05/2014
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SECTION 1. IDENTIFICATION

Product name: ROYCO 22MS MIL-G-81827A
HIGH LOAD AIRCRAFT GREASE

Product Use Description: Lubricant

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 : Lubricant

Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Skin sensitisation : Category 1

Carcinogenicity : Category 1B

Specific target organ toxicity : Category 2
- repeated exposure


Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 3

GHS label elements

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- Hazard pictograms : 
- Signal word : Danger
- Hazard statements : H317 May cause an allergic skin reaction.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H412 Harmful 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.
P260 Do not breathe 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/ protective clothing/ eye protection/ face protection.
- Response:**
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
- 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)
molybdenum disulphide	1317-33-5	>= 1 - < 5
Graphite	7782-42-5	>= 1 - < 5
sodium nitrite	7632-00-0	>= 2.5 - < 5
Benzenamine, N-phenyl-, reaction products	68411-46-1	>= 1 - < 2.5

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with 2,4,4-trimethylpentene		
pentaerythritol	115-77-5	$\geq 1 - < 5$
NJTS#: 46728100000-0002 - Proprietary amine		$\geq 1 - < 2.5$
(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine	110-25-8	$\geq 0.1 - < 0.25$

SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.
Aspiration may cause pulmonary oedema and pneumonitis.
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.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,
for at least 15 minutes.
Obtain medical attention.
- If swallowed : Obtain medical attention.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : None known.
- 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.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : (on small fires)
Carbon dioxide (CO₂)
Dry chemical
Dry sand
Extinguishing media - large fires
Foam
Water mist
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread
fire.
Burning produces irritant fumes.
Exposure to decomposition products may be a hazard to
health.

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Further information : Cool containers/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 : Wear suitable protective equipment.

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 : Scrape up. Pick up and transfer to properly labelled containers.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear suitable protective equipment. Keep tightly closed. Protect from contamination.

Conditions for safe storage : Keep tightly closed in a dry, cool and well-ventilated place. Protect from contamination.

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
pentaerythritol	115-77-5	TWA	10 mg/m ³	ACGIH
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Respirable)	5 mg/m ³	NIOSH REL
		TWA (total)	10 mg/m ³	NIOSH REL
		TWA (Total dust)	10 mg/m ³	OSHA P0
		TWA (respirable dust)	5 mg/m ³	OSHA P0

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		fraction)		
molybdenum disulphide	1317-33-5	TWA (total dust)	15 mg/m3 (Molybdenum)	OSHA Z-1
		TWA (Inhalable fraction)	10 mg/m3 (Molybdenum)	ACGIH
		TWA (Respirable fraction)	3 mg/m3 (Molybdenum)	ACGIH
		TWA (Total dust)	10 mg/m3 (Molybdenum)	OSHA P0
Graphite	7782-42-5	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Respirable fraction)	2 mg/m3	ACGIH
		TWA (Respirable)	2.5 mg/m3	NIOSH REL
		TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (respirable dust fraction)	2.5 mg/m3	OSHA P0
pentaerythritol	115-77-5	TWA	10 mg/m3	ACGIH
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
Quartz (SiO ₂)	14808-60-7	TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (respirable)	10 mg/m3 / %SiO ₂ +2	OSHA Z-3
		TWA (Respirable dust)	0.05 mg/m3	NIOSH REL
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH

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		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
molybdenum disulphide	1317-33-5	TWA (total dust)	15 mg/m3 (Molybdenum)	OSHA Z-1
		TWA (Inhalable fraction)	10 mg/m3 (Molybdenum)	ACGIH
		TWA (Respirable fraction)	3 mg/m3 (Molybdenum)	ACGIH
		TWA (Total dust)	10 mg/m3 (Molybdenum)	OSHA P0
Graphite	7782-42-5	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Respirable fraction)	2 mg/m3	ACGIH
		TWA (Respirable)	2.5 mg/m3	NIOSH REL
		TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (respirable dust fraction)	2.5 mg/m3	OSHA P0
pentaerythritol	115-77-5	TWA	10 mg/m3	ACGIH
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
N-1-naphthylaniline	90-30-2	TWA	10 ml/m3	ACGIH

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
 Respirator with combination filter for vapour/particulate (EN 141)

Hand protection

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Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields
or
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous liquid

Colour : black

Odour : mild, hydrocarbon-like

Odour Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

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 : Not applicable

Relative vapour density : No data available

Relative density : 0.8

Solubility(ies)
Water solubility : negligible

Solubility in other solvents : partly soluble

Partition coefficient: n- : No data available

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octanol/water

Auto-ignition temperature : not determined

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 : Contamination

Incompatible materials : Oxidizing agents

Hazardous decomposition products : Carbon oxides
Oxides of calcium
Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact
Skin Absorption

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Information given is based on data obtained from similar substances.

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

pentaerythritol:

Acute oral toxicity : LD50 (Rat): 10,000 mg/kg

Acute inhalation toxicity : LC0 (Rat): > 11 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist
Test substance: see user defined free text
Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit): 10,000 mg/kg

NJTS#: 46728100000-0002 - Proprietary amine:

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

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

pentaerythritol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : no
Remarks : Information given is based on data obtained from similar substances.

NJTS#: 46728100000-0002 - Proprietary amine:

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

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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

pentaerythritol:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
GLP : no
Remarks : Information given is based on data obtained from similar substances.

NJTS#: 46728100000-0002 - Proprietary amine:

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

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

NJTS#: 46728100000-0002 - Proprietary amine:

Test Type : Maximisation Test
Species : Guinea pig
Result : Probability or evidence of low to moderate skin sensitisation rate in humans

Test Type : Patch Test
Species : Humans
Result : Probability or evidence of low to moderate skin sensitisation rate in humans

Test Type : Maximisation Test
Species : Guinea pig
Result : Probability or evidence of low to moderate skin sensitisation rate in humans

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

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Germ cell mutagenicity - Assessment : Not mutagenic in Ames Test

pentaerythritol:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
GLP: no
Remarks: Information given is based on data obtained from similar substances.

Test Type: In Vitro mammalian Cell Gene Mutation Test
Metabolic activation: with and without metabolic activation
Result: negative
GLP: no
Remarks: Information given is based on data obtained from similar substances.

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

NJTS#: 46728100000-0002 - Proprietary amine:

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

Carcinogenicity**Components:****NJTS#: 46728100000-0002 - Proprietary amine:**

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.

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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:

pentaerythritol:

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - repeated exposure

Components:

molybdenum disulphide:

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

pentaerythritol:

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

NJTS#: 46728100000-0002 - Proprietary amine:

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

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

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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.

pentaerythritol:

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 600 mg/l
Exposure time: 48 h
- Toxicity to algae : EC50 (Algae): > 1,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1,000 mg/l
End point: Survival
Exposure time: 21 d

NJTS#: 4672810000-0002 - Proprietary amine:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.44 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.68 mg/l
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.02 mg/l
Exposure time: 21 d

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ic toxicity) Analytical monitoring: yes

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (Protozoa): 2 mg/l
Exposure time: 48 h

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

Persistence and degradability

Product:

Biodegradability : Remarks: 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

pentaerythritol:

Biodegradability : aerobic
Inoculum: activated sludge
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 0 %
Exposure time: 14 d

NJTS#: 46728100000-0002 - Proprietary amine:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

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

Partition coefficient: n- : log Pow: > 7

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octanol/water

pentaerythritol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 0.3 - 0.6
Exposure time: 42 d
Temperature: 68 °F / 20 °C
Concentration: 10 mg/l

Partition coefficient: n-octanol/water : log Pow: -1.69

NJTS#: 46728100000-0002 - Proprietary amine:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 427 - 2,730
Exposure time: 56 d
Temperature: 77 °F / 25 °C
Concentration: 0.1 mg/l

Partition coefficient: n-octanol/water : log Pow: 4.28

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 life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

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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)
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 : Respiratory or skin sensitisation
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

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

sodium nitrite 7632-00-0 1.375 %

California Prop. 65

WARNING: This product can expose you to chemicals including aniline, 1-naphthylamine, 2-naphthylamine, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

molybdenum disulphide 1317-33-5
Graphite 7782-42-5
sodium nitrite 7632-00-0

California Permissible Exposure Limits for Chemical Contaminants

molybdenum disulphide 1317-33-5
Graphite 7782-42-5
pentaerythritol 115-77-5

California Regulated Carcinogens

Quartz (SiO₂) 14808-60-7

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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 : This product contains the following components listed on the Canadian NDSL. All other components 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 : 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

Full text of other abbreviations

- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

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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
ACGIH / TWA : Time-Weighted Average Limit (TWA)
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

Revision Date : 09/12/2019

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

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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.

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