

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

SECTION 1. IDENTIFICATION

Product name : COPPER ROCK

SDS-Identcode : 304G

Manufacturer or supplier's details

Company name of supplier : Bestolife Corporation
Address : 2126 Vanco Drive
Irving TX 75061,
Telephone : 855-243-9164/972-865-8961
Telefax : 214-631-3047
Emergency telephone : CHEMTREC U.S.: 800-424-9300, International 703-527-3887
(24-hours/7 days)
E-mail address : www.bestolife.com

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use
Thread Compound (Pipe Dope) and Jacking grease for use in
Offshore industries
Mining, (without offshore industries)
Restrictions on use : Do not use on oxygen lines or in oxygen enriched atmospheres.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Eye irritation : Category 2A

Skin sensitization : Category 1

GHS label elements

Hazard pictograms



Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust, fume, gas, mist, vapors or spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves, eye protection and face protection.

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P337 + P313 If eye irritation persists: Get medical attention.
P363 Wash contaminated clothing before reuse.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	>= 30 - < 50
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 20 - < 30
Graphite	7782-42-5	>= 10 - < 20
Copper metal powder	7440-50-8	>= 10 - < 20
Talc	14807-96-6	>= 10 - < 20
Dilithium azelate	38900-29-7	>= 5 - < 10
Calcium oxide	1305-78-8	>= 1 - < 5
Dolomite	16389-88-1	>= 1 - < 5
Tris[bis(2-ethylhexyl)dithiocarbamate-S,S']antimony	15991-76-1	>= 1 - < 5
Antimony, dialkyl dithiocarbamate	15890-25-2	>= 1 - < 5
Quartz	14808-60-7	>= 1 - < 5
2,5-Bis(octyldithio)-1,3,4-thiadiazole	13539-13-4	>= 0.1 - < 1
Benzenesulphonic acid, propenated, calcium salts, overbased	68610-84-4	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

- | | | |
|---|---|--|
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse. |
| In case of eye contact | : | Thoroughly clean shoes before reuse.
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention. |
| If swallowed | : | If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : | May cause an allergic skin reaction.
Causes serious eye irritation. |
| Protection of first-aiders | : | First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8). |
| Notes to physician | : | Treat symptomatically and supportively. |

SECTION 5. FIRE-FIGHTING MEASURES

- | | | |
|--|---|---|
| Suitable extinguishing media | : | Water spray
Alcohol-resistant foam
Carbon dioxide (CO ₂)
Dry chemical |
| Unsuitable extinguishing media | : | None known. |
| Specific hazards during fire fighting | : | Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products | : | Carbon oxides
Metal oxides
Nitrogen oxides (NO _x)
Sulfur oxides |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area. |
| Special protective equipment for fire-fighters | : | 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 | : | Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |
| Environmental precautions | : | Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained. |

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

II

Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Advice on safe handling : For outdoor use only
Do not get on skin or clothing.
Avoid breathing dust, fume, gas, mist, vapors or spray.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m ³	OSHA Z-1
		TWA (Mist)	5 mg/m ³	NIOSH REL
		ST (Mist)	10 mg/m ³	NIOSH REL
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	TWA (Mist)	5 mg/m ³	OSHA Z-1
		TWA (Inhalable particulate matter)	5 mg/m ³	ACGIH
		TWA (Mist)	5 mg/m ³	NIOSH REL
Graphite	7782-42-5	ST (Mist)	10 mg/m ³	NIOSH REL
		TWA (Respirable)	2.5 mg/m ³	NIOSH REL
		TWA (Respirable particulate matter)	2 mg/m ³	ACGIH

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

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		TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3
Copper metal powder	7440-50-8	TWA (Dust and mist)	1 mg/m ³ (Copper)	ACGIH
		TWA (Fumes)	0.2 mg/m ³ (Copper)	ACGIH
		TWA (Dust)	1 mg/m ³ (Copper)	NIOSH REL
		TWA (Mist)	1 mg/m ³ (Copper)	NIOSH REL
		TWA (dusts and mists)	1 mg/m ³ (Copper)	OSHA Z-1
		TWA (Fumes)	0.1 mg/m ³ (Copper)	OSHA Z-1
Talc	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	2 mg/m ³	NIOSH REL
		TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
Calcium oxide	1305-78-8	TWA	2 mg/m ³	ACGIH
		TWA	2 mg/m ³	NIOSH REL
		TWA	5 mg/m ³	OSHA Z-1
Dolomite	16389-88-1	TWA (Respirable)	5 mg/m ³ (Calcium carbonate)	NIOSH REL
		TWA (total)	10 mg/m ³ (Calcium carbonate)	NIOSH REL
Tris[bis(2-ethylhexyl)dithiocarbamate-S,S'] antimony	15991-76-1	TWA	0.5 mg/m ³ (antimony)	OSHA Z-1
		TWA	0.5 mg/m ³ (antimony)	ACGIH
		TWA	0.5 mg/m ³ (antimony)	NIOSH REL
Antimony, dialkyl dithiocarbamate	15890-25-2	TWA	0.5 mg/m ³ (antimony)	OSHA Z-1
		TWA	0.5 mg/m ³ (antimony)	ACGIH
		TWA	0.5 mg/m ³ (antimony)	NIOSH REL
Quartz	14808-60-7	TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

		TWA (Respirable particulate matter)	0.025 mg/m ³ (Silica)	ACGIH
		TWA (Respirable dust)	0.05 mg/m ³ (Silica)	NIOSH REL
		PEL (respirable)	0.05 mg/m ³	OSHA CARC

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

II

Quartz

Engineering measures : Minimize workplace exposure concentrations. Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m³ - total dust, 5 mg/m³ - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m³ - respirable particles, 10 mg/m³ - inhalable particles.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective

SAFETY DATA SHEET



COPPER ROCK

Version 11.0	Revision Date: 11/04/2020	SDS Number: 120330-00016	Date of last issue: 05/06/2020 Date of first issue: 05/19/2015
-----------------	------------------------------	-----------------------------	---

Hygiene measures	: clothing (gloves, aprons, boots, etc). : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. : When using do not eat, drink or smoke. : Contaminated work clothing should not be allowed out of the workplace. : Wash contaminated clothing before re-use.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Viscous semi-solid
Color	: copper
Odor	: Petroleum
Odor Threshold	: No data available
pH	: Not applicable (not an aqueous solution)
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: $\geq 399^{\circ}\text{F}$ / $\geq 204^{\circ}\text{C}$ Method: ASTM D 92, Cleveland open cup Distillates (petroleum), hydrotreated heavy naphthenic
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: Not applicable
Relative vapor density	: Not applicable
Relative density	: 1.3
Density	: No data available
Solubility(ies) Water solubility	: negligible
Partition coefficient: n-octanol/water	: Not applicable
Autoignition temperature	: No data available

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : Not applicable

Flow time : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy naphthenic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Graphite:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Copper metal powder:

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.11 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

toxicity

Talc:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

Dilithium azelate:

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg
Method: OECD Test Guideline 420
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Calcium oxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Dolomite:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Tris[bis(2-ethylhexyl)dithiocarbamate-S,S'] antimony:

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Antimony, dialkyl dithiocarbamate:

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

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

Quartz:

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

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

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

Acute inhalation toxicity : LC50 (Rat): 3.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Benzenesulphonic acid, propenated, calcium salts, overbased:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 1.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Distillates (petroleum), hydrotreated heavy naphthenic:

Species	: Rabbit
Result	: No skin irritation
Remarks	: Based on data from similar materials

Graphite:

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

Copper metal powder:

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

Talc:

Species	: Rabbit
Result	: No skin irritation

Dilithium azelate:

Species	: reconstructed human epidermis (RhE)
Method	: OECD Test Guideline 439
Remarks	: Based on data from similar materials

Result	: No skin irritation
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Calcium oxide:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Skin irritation
Remarks	: Based on data from similar materials

Dolomite:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation
Remarks	: Based on data from similar materials

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Skin irritation

Benzenesulphonic acid, propenated, calcium salts, overbased:

Species	: Rabbit
Result	: No skin irritation
Remarks	: Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result : Irritation to eyes, reversing within 21 days

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Species	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405
Remarks	: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy naphthenic:

Species	: Rabbit
Result	: No eye irritation
Remarks	: Based on data from similar materials

Graphite:

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

Copper metal powder:

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

Talc:

Species	: Rabbit
Result	: No eye irritation

Dilithium azelate:

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

Calcium oxide:

Species	: Rabbit
Result	: Irreversible effects on the eye
Method	: OECD Test Guideline 405

Dolomite:

Species	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405
Remarks	: Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

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

Benzenesulphonic acid, propenated, calcium salts, overbased:

Species	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405
Remarks	: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Test Type	: Buehler Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: negative
Remarks	: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy naphthenic:

Test Type	: Buehler Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Result	: negative
Remarks	: Based on data from similar materials

Graphite:

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Result	: negative

Copper metal powder:

Test Type	: Maximization Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: negative

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Talc:

Routes of exposure	: Skin contact
Species	: Humans
Result	: negative

Dilithium azelate:

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

Calcium oxide:

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

Dolomite:

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Test Type	: Buehler Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: positive

Assessment	: Probability or evidence of high skin sensitization rate in humans
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Benzenesulphonic acid, propenated, calcium salts, overbased:

Test Type	: Human repeat insult patch test (HRIPT)
Routes of exposure	: Skin contact
Result	: positive
Remarks	: Based on data from similar materials

Assessment	: Probability or evidence of skin sensitization in humans
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Germ cell mutagenicity

Not classified based on available information.

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy naphthenic:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials

Graphite:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
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Copper metal powder:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Ingestion Method: Directive 67/548/EEC, Annex V, B.12. Result: negative Remarks: Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version 11.0	Revision Date: 11/04/2020	SDS Number: 120330-00016	Date of last issue: 05/06/2020 Date of first issue: 05/19/2015
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Talc:

- Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative
- Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro
Species: Rat
Application Route: Ingestion
Result: negative

Dilithium azelate:

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
- Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials
- Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Calcium oxide:

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
- Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials
- Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Dolomite:

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Antimony, dialkyl dithiocarbamate:

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

SAFETY DATA SHEET



COPPER ROCK

Version 11.0	Revision Date: 11/04/2020	SDS Number: 120330-00016	Date of last issue: 05/06/2020 Date of first issue: 05/19/2015
-----------------	------------------------------	-----------------------------	---

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: equivocal

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Benzenesulphonic acid, propenated, calcium salts, overbased:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity - Assessment : Petroleum distillates have been classified as not carcinogenic based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Species	: Mouse
Application Route	: Skin contact
Exposure time	: 78 weeks
Method	: OECD Test Guideline 451
Result	: negative
Remarks	: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy naphthenic:

Species	: Mouse
Application Route	: Skin contact
Exposure time	: 78 weeks
Method	: OECD Test Guideline 451
Result	: negative

Talc:

Species	: Mouse
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 2 Years
Result	: negative

Calcium oxide:

Species	: Rat
Application Route	: Ingestion
Exposure time	: 104 weeks
Result	: negative
Remarks	: Based on data from similar materials

Quartz:

Species	: Humans
Application Route	: inhalation (dust/mist/fume)
Result	: positive
Remarks	: These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment	: Positive evidence from human epidemiological studies (inhalation)
------------------------------	---

IARC	Group 1: Carcinogenic to humans Quartz (Silica dust, crystalline)	14808-60-7
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OSHA	OSHA specifically regulated carcinogen Quartz (crystalline silica)	14808-60-7
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NTP	Known to be human carcinogen Quartz	14808-60-7
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SAFETY DATA SHEET



COPPER ROCK

Version 11.0	Revision Date: 11/04/2020	SDS Number: 120330-00016	Date of last issue: 05/06/2020 Date of first issue: 05/19/2015
-----------------	------------------------------	-----------------------------	---

(Silica, Crystalline (Respirable Size))

Reproductive toxicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Graphite:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Copper metal powder:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Result: negative

Talc:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Application Route: Ingestion
Result: negative

Dilithium azelate:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials

Calcium oxide:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Dolomite:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Antimony, dialkyl dithiocarbamate:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Benzenesulphonic acid, propenated, calcium salts, overbased:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

Components:

Calcium oxide:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Components:

Quartz:

Routes of exposure : inhalation (dust/mist/fume)
Target Organs : Lungs
Assessment : Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Repeated dose toxicity

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Species	: Rabbit
NOAEL	: 1,000 mg/kg
Application Route	: Skin contact
Exposure time	: 4 Weeks
Method	: OECD Test Guideline 410
Remarks	: Based on data from similar materials

Species	: Rat
NOAEL	: > 980 mg/m ³
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 4 Weeks

Distillates (petroleum), hydrotreated heavy naphthenic:

Species	: Rat
NOAEL	: > 0.98 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 28 Days
Remarks	: Based on data from similar materials

Copper metal powder:

Species	: Rat
NOAEL	: >= 2 mg/m ³
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 28 Days

Dilithium azelate:

Species	: Rat
NOAEL	: 1,089.75 mg/kg
Application Route	: Skin contact
Exposure time	: 28 Days
Remarks	: Based on data from similar materials

Calcium oxide:

Species	: Rat
NOAEL	: >= 0.399 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 90 Days
Method	: OECD Test Guideline 413

Dolomite:

Species	: Mouse
NOAEL	: 1,300 mg/kg
Application Route	: Ingestion
Exposure time	: 28 Days
Remarks	: Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Antimony, dialkyl dithiocarbamate:

Species	: Rat
NOAEL	: $\geq 1,000$ mg/kg
Application Route	: Ingestion
Exposure time	: 54 Days

Quartz:

Species	: Humans
NOAEL	: 0.053 mg/m^3
Application Route	: inhalation (dust/mist/fume)
Remarks	: These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Species	: Rat
NOAEL	: 330 mg/kg
Application Route	: Ingestion
Exposure time	: 54 Days
Method	: OECD Test Guideline 422

Benzenesulphonic acid, propenated, calcium salts, overbased:

Species	: Rat
NOAEL	: $> 300 \text{ mg/kg}$
Application Route	: Ingestion
Exposure time	: 29 Days
Method	: OECD Test Guideline 407
Remarks	: Based on data from similar materials

Species	: Rat
NOAEL	: $> 600 \text{ mg/kg}$
Application Route	: Skin contact
Exposure time	: 28 Days
Method	: OECD Test Guideline 410
Remarks	: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): $> 100 \text{ mg/l}$
	Exposure time: 96 h
	Method: OECD Test Guideline 203
	Remarks: Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

- | | |
|--|---|
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : NOEC: > 1.93 mg/l
Exposure time: 10 min
Method: DIN 38 412 Part 8
Remarks: Based on data from similar materials |

Distillates (petroleum), hydrotreated heavy naphthenic:

- | | |
|--|---|
| Toxicity to fish | : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : NOEC: > 1.93 mg/l
Exposure time: 10 min
Remarks: Based on data from similar materials |

Graphite:

- | | |
|---|--|
| Toxicity to fish | : LL50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction |

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50: > 1,012.5 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Copper metal powder:

Toxicity to fish : LC50: > 10 - 100 µg/l
Exposure time: 96 h

Toxicity to fish (Chronic toxicity) : NOEC: > 1 - 10 µg/l

Talc:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 100,000 mg/l
Exposure time: 24 h

Dilithium azelate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 10 - 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10 - 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

Calcium oxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

		Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
		EC10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Crangon crangon (shrimp)): > 1 mg/l Exposure time: 14 d Remarks: Based on data from similar materials
Toxicity to microorganisms	:	EC50: > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials
Dolomite:		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 16.6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: No toxicity at the limit of solubility. Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 16.6 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: No toxicity at the limit of solubility. Based on data from similar materials
Toxicity to algae/aquatic plants	:	NOEC (Desmodesmus subspicatus (green algae)): 14 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Tris[bis(2-ethylhexyl)dithiocarbamate-S,S'] antimony:		
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.02 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Antimony, dialkyl dithiocarbamate:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.02 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Quartz:

Ecotoxicology Assessment

Acute aquatic toxicity : No toxicity at the limit of solubility.

Chronic aquatic toxicity : No toxicity at the limit of solubility.

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 45 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : LL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 209

Benzenesulphonic acid, propenated, calcium salts, overbased:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

	Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials
	NOELR (Pseudokirchneriella subcapitata (green algae)): 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials
Toxicity to microorganisms	: EC50: > 100 mg/l Exposure time: 8 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

Persistence and degradability

Components:

Distillates (petroleum), hydrotreated heavy paraffinic:

Biodegradability	: Result: Not readily biodegradable. Biodegradation: 31 % Exposure time: 28 d Method: OECD Test Guideline 301F
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Distillates (petroleum), hydrotreated heavy naphthenic:

Biodegradability	: Result: Not readily biodegradable. Biodegradation: 2 - 4 % Exposure time: 28 d Method: OECD Test Guideline 301B
------------------	--

Dilithium azelate:

Biodegradability	: Result: Readily biodegradable. Biodegradation: 83 % Exposure time: 30 d Method: OECD Test Guideline 301D Remarks: Based on data from similar materials
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Tris[bis(2-ethylhexyl)dithiocarbamate-S,S'] antimony:

Biodegradability	: Result: Not readily biodegradable. Remarks: Based on data from similar materials
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SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

Antimony, dialkyl dithiocarbamate:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 20 %
Exposure time: 28 d

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Benzenesulphonic acid, propenated, calcium salts, overbased:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Dilithium azelate:

Partition coefficient: n-octanol/water : log Pow: -3.53

2,5-Bis(octyldithio)-1,3,4-thiadiazole:

Partition coefficient: n-octanol/water : log Pow: > 6.5
Method: OECD Test Guideline 117

Benzenesulphonic acid, propenated, calcium salts, overbased:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Expert judgment

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	: UN 3077
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony)
Class	: 9
Packing group	: III
Labels	: 9

IATA-DGR

UN/ID No.	: UN 3077
Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony)
Class	: 9
Packing group	: III
Labels	: Miscellaneous
Packing instruction (cargo aircraft)	: 956
Packing instruction (passenger aircraft)	: 956
Environmentally hazardous	: yes

IMDG-Code

UN number	: UN 3077
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony)
Class	: 9
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
Marine pollutant	: yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	: UN 3077
Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony)
Class	: 9
Packing group	: III
Labels	: CLASS 9
ERG Code	: 171
Marine pollutant	: yes(Copper metal powder, Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony)

SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

Remarks : Above applies only to containers over 119 gallons or 450 liters.

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Copper metal powder	7440-50-8	5000	38166

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

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

SARA 311/312 Hazards : Respiratory or skin sensitization
Serious eye damage or eye irritation

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

Copper metal powder	7440-50-8	>= 10 - < 20 %
Tris[bis(2-ethylhex-yl)dithiocarbamat o-S,S'] antimony	15991-76-1	>= 1 - < 5 %
Antimony, dialkyl dithiocarbamate	15890-25-2	>= 1 - < 5 %

US State Regulations

Pennsylvania Right To Know

Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5
Graphite	7782-42-5
Copper metal powder	7440-50-8
Talc	14807-96-6
Hydroxystearate sebacate lithium complexes	68815-49-6
Dilithium azelate	38900-29-7
Polybutene	9003-29-6
Isobutylene-butene copolymer	9044-17-1
Calcium oxide	1305-78-8
Water	7732-18-5
Tris[bis(2-ethylhexyl)dithiocarbamato-S,S'] antimony	15991-76-1

SAFETY DATA SHEET



COPPER ROCK

Version 11.0	Revision Date: 11/04/2020	SDS Number: 120330-00016	Date of last issue: 05/06/2020 Date of first issue: 05/19/2015
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	Antimony, dialkyl dithiocarbamate	15890-25-2
	Quartz	14808-60-7
	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3

California Prop. 65

WARNING: This product can expose you to chemicals including Quartz, 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

Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5
Graphite	7782-42-5
Copper metal powder	7440-50-8
Talc	14807-96-6
Calcium oxide	1305-78-8
Tris[bis(2-ethylhexyl)dithiocarbamate-S,S'] antimony	15991-76-1
Antimony, dialkyl dithiocarbamate	15890-25-2

California Permissible Exposure Limits for Chemical Contaminants

	Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7
	Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5
	Graphite	7782-42-5
	Copper metal powder	7440-50-8
	Talc	14807-96-6
	Calcium oxide	1305-78-8
	Tris[bis(2-ethylhexyl)dithiocarbamate-S,S'] antimony	15991-76-1
	Antimony, dialkyl dithiocarbamate	15890-25-2
	Quartz	14808-60-7

California Regulated Carcinogens

	Quartz	14808-60-7
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The ingredients of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
TSCA	: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
AICS	: All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION

Further information

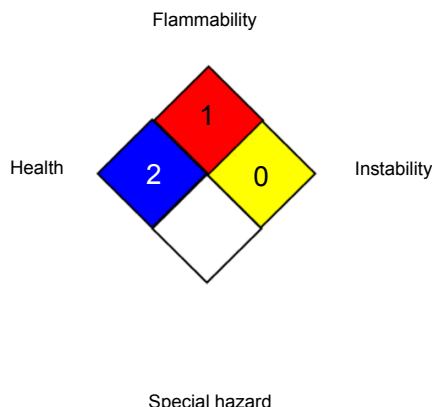
SAFETY DATA SHEET



COPPER ROCK

Version 11.0 Revision Date: 11/04/2020 SDS Number: 120330-00016 Date of last issue: 05/06/2020
Date of first issue: 05/19/2015

NFPA 704:



HMIS® IV:

HEALTH	/	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "***" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA CARC	: OSHA Specifically Regulated Chemicals/Carcinogens
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
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA CARC / PEL	: Permissible exposure limit (PEL)
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-3 / TWA	: 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; 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 Pre-

SAFETY DATA SHEET



COPPER ROCK

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2020
11.0	11/04/2020	120330-00016	Date of first issue: 05/19/2015

vention 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

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 11/04/2020

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8