

BLACK JACK

Version Revision Date: SDS Number: Date of last issue: 06/22/2015 3.0 09/04/2015 119822-00003 Date of first issue: 05/18/2015

SECTION 1. IDENTIFICATION

Product name : BLACK JACK

SDS-Identcode : 419G

Manufacturer or supplier's details

Company name of supplier : Bestolife Corporation

Address : 2777 N. Stemmons Frwy Ste 1800

Dallas TX 75207,

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

Skin irritation : Category 2

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H315 Causes skin irritation.

H319 Causes serious eye irritation.



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Precautionary Statements : Prevention:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

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.

P332 + P313 If skin irritation occurs: Get medical advice/ atten-

tion.

P337 + P313 If eye irritation persists: Get medical advice/ atten-

tion.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated heavy naph-	64742-52-5	>= 50 - < 70
thenic		
Zinc oxide	1314-13-2	>= 10 - < 20
Talc	14807-96-6	>= 10 - < 20
Graphite	7782-42-5	>= 5 - < 10
12-Hydroxy lithium stearate	7620-77-1	>= 1 - < 5
Calcium oxide	1305-78-8	>= 1 - < 5
Lithium Hydroxide Monohydrate	1310-66-3	>= 1 - < 5
Stearic acid	57-11-4	>= 1 - < 5
Quartz	14808-60-7	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice 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.

In case of skin contact : In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.





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In case of eye contact : 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

: Causes skin irritation.

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.

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

: None known.

Specific hazards during fire

fighting

: Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-

ucts

: Carbon oxides Metal oxides

Fluorine compounds

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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 emer-

gency procedures

Personal precautions, protec- : Use personal protective equipment.

Follow safe handling advice and personal protective equip-

ment recommendations.

Environmental precautions : Discharge into the environment must be avoided.





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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.

Methods and materials for containment and cleaning up

: Sweep up or vacuum up spillage and collect in suitable con-

tainer 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 deter-

mine 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.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not swallow. Do not get in eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep away from water. Protect from moisture.

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

Ingredients	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
Distillates (petroleum),	64742-52-5	TWA (Mist)	5 mg/m3	OSHA Z-1
hydrotreated heavy naphthenic				
		TWA (Inhal-	5 mg/m3	ACGIH
II		able fraction)		
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
Zinc oxide	1314-13-2	TWA (Res-	2 mg/m3	ACGIH
		pirable frac-		



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I	I	tion)	I	I
		STEL (Respirable fraction)	10 mg/m3	ACGIH
		TWA (Dust)	5 mg/m3	NIOSH REL
		TWA (Fumes)	5 mg/m3	NIOSH REL
		ST (Fumes)	10 mg/m3	NIOSH REL
		C (Dust)	15 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Fumes)	5 mg/m3	OSHA Z-1
Talc	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	2 mg/m3	NIOSH REL
		TWA (Respirable fraction)	2 mg/m3	ACGIH
Graphite	7782-42-5	TWA (Respirable)	2.5 mg/m3	NIOSH REL
		TWA (Res- pirable frac- tion)	2 mg/m3	ACGIH
		TWA (Dust)	15 Million particles per cubic foot	OSHA Z-3
12-Hydroxy lithium stearate	7620-77-1	TWA	10 mg/m3	ACGIH
Calcium oxide	1305-78-8	TWA	2 mg/m3	ACGIH
		TWA	2 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA Z-1
Lithium Hydroxide Monohydrate	1310-66-3	CEIL	1 mg/m3	US WEEL
Stearic acid	57-11-4	TWA	10 mg/m3	ACGIH
Quartz	14808-60-7	TWA (total dust)	30 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA Z-3
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH
		TWA (Respirable dust)	0.05 mg/m3 (Silica)	NIOSH REL

Occupational exposure limits of decomposition products

Ingredients	CAS-No.	Value type (Form of	Control parame- ters / Permissible	Basis
		exposure)	concentration	



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Calcium hydroxide	1305-62-0	TWA	5 mg/m3	ACGIH
		TWA (total	15 mg/m3	OSHA Z-1
		dust)		
		TWA (respir-	5 mg/m3	OSHA Z-1
		able fraction)		
		TWA	5 mg/m3	NIOSH REL

Engineering measures

Processing may form hazardous compounds (see section

Ensure adequate ventilation, especially in confined areas.

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 Impervious 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

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).



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Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Viscous semi-solid

Color : black

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 : No data available

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 1.4

Density : No data available

Solubility(ies)

Water solubility : negligible

Partition coefficient: n-

octanol/water

: No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available



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Viscosity, kinematic : No data available

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

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

: Can react with strong oxidizing agents.

Hazardous decomposition products will be formed upon

contact with water or humid air.

Conditions to avoid : Exposure to moisture.

Incompatible materials : Oxidizing agents

Water

Hazardous decomposition products

Contact with water or hu-

mid air

: Calcium hydroxide

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

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Ingredients:

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



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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 inhala-

tion 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

Zinc oxide:

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

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5.7 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Talc:

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

Remarks: Based on data from similar materials

Graphite:

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

Method: OECD Test Guideline 401

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

12-Hydroxy lithium stearate:

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

Assessment: The substance or mixture has no acute oral tox-

icity

Calcium oxide:

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

Method: OECD Test Guideline 425

Assessment: The substance or mixture has no acute oral tox-

icity

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity



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Remarks: Based on data from similar materials

Lithium Hydroxide Monohydrate:

Acute oral toxicity : LD50 (Rat): 368 mg/kg

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 6.15 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

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

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Stearic acid:

Acute oral toxicity : LD50: > 2,000 mg/kg

Method: OECD Test Guideline 401

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 0.1621 mg/l

Exposure time: 4 h
Test atmosphere: vapor

Remarks: Based on data from similar materials

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

Assessment: The substance or mixture has no acute dermal

toxicity

Quartz:

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

Skin corrosion/irritation

Causes skin irritation.

Ingredients:

Distillates (petroleum), hydrotreated heavy naphthenic:

Species: Rabbit

Result: No skin irritation

Remarks: Based on data from similar materials

Zinc oxide:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

Talc:

Species: Rabbit

Result: No skin irritation

Graphite:

Species: Rabbit

Method: OECD Test Guideline 404



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Result: No skin irritation

12-Hydroxy lithium stearate:

Species: Rabbit

Result: No skin irritation

Remarks: Based on data from similar materials

Calcium oxide:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

Remarks: Based on data from similar materials

Lithium Hydroxide Monohydrate:

Result: Corrosive after 3 minutes to 1 hour of exposure

Stearic acid:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:

Distillates (petroleum), hydrotreated heavy naphthenic:

Species: Rabbit

Result: No eye irritation

Remarks: Based on data from similar materials

Zinc oxide:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

Talc:

Species: Rabbit

Result: No eye irritation

Graphite:

Species: Rabbit

Result: No eye irritation

12-Hydroxy lithium stearate:

Species: Rabbit

Result: No eye irritation

Remarks: Based on data from similar materials

Calcium oxide:

Species: Rabbit

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

Lithium Hydroxide Monohydrate:

Result: Irreversible effects on the eye Remarks: Based on skin corrosivity.



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Stearic acid:

Species: Rabbit Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Ingredients:

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

Zinc oxide:

Test Type: Maximization Test Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Talc:

Routes of exposure: Skin contact

Species: Humans Result: negative

Graphite:

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse Result: negative

12-Hydroxy lithium stearate:

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Lithium Hydroxide Monohydrate:

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

Stearic acid:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig Result: negative



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Germ cell mutagenicity

Not classified based on available information.

Ingredients:

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

Zinc oxide:

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: Rat

Application Route: Inhalation Method: OECD Test Guideline 474

Result: negative

Talc:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro

Species: Rat

Application Route: Ingestion

Result: negative

Graphite:

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

Result: negative

Calcium oxide:

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

Method: OECD Test Guideline 471

Result: negative

Lithium Hydroxide Monohydrate:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Stearic acid:



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Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity - Assess-

ment

: Petroleum distillates have been classified as not carcinogenic based on DMSO extract content < 3% (Regulation (EC)

1272/2008, Annex VI, Part 3, Note L).

Ingredients:

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: IARC (International Agency for Research on Cancer)

The substance is inextricably bound in the product and therefore does not contribute to a dust

inhalation hazard.

Carcinogenicity - Assess-

ment

: Positive evidence from human epidemiological studies (inhala-

tion)

IARC Group 1: Carcinogenic to humans

Quartz 14808-60-7

OSHANo ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

NTP Known to be human carcinogen



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Quartz 14808-60-7

Reproductive toxicity

Not classified based on available information.

Ingredients:

Zinc oxide:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 416

Result: negative

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

Species: Hamster

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Talc:

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

Species: Rat

Application Route: Ingestion

Result: negative

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

Calcium oxide:

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

Species: Mouse

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

Lithium Hydroxide Monohydrate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion
Method: OECD Test Guideline 416

Result: negative



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

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

Remarks: Based on data from similar materials

Stearic acid:

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

STOT-single exposure

Not classified based on available information.

Ingredients:

Calcium oxide:

Assessment: May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Zinc oxide:

Routes of exposure: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

12-Hydroxy lithium stearate:

Routes of exposure: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

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.

Repeated dose toxicity

Ingredients:



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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

Zinc oxide:

Species: Rat NOAEL: 1.5 mg/m3

Application Route: inhalation (dust/mist/fume)

Exposure time: 3 Months

Method: OECD Test Guideline 413

Graphite:

Species: Rat NOAEL: 12 mg/m3

Application Route: inhalation (dust/mist/fume)

Exposure time: 28 Days

Method: OECD Test Guideline 412

12-Hydroxy lithium stearate:

Species: Rat

NOAEL: > 88 mg/kg

Application Route: Ingestion Exposure time: 90 Days

Lithium Hydroxide Monohydrate:

Species: Rat

NOAEL: 84 mg/kg

Application Route: Ingestion

Exposure time: 2 yr

Remarks: Based on data from similar materials

Stearic acid:

Species: Rat

NOAEL: 1,000 mg/kg Application Route: Ingestion Exposure time: 42 Days

Method: OECD Test Guideline 422

Quartz:

Species: Humans LOAEL: 0.053 mg/m3

Application Route: inhalation (dust/mist/fume)

Remarks: The substance is inextricably bound in the product and therefore does not contribute

to a dust inhalation hazard.

Aspiration toxicity

Not classified based on available information.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Distillates (petroleum), hydrotreated heavy naphthenic:

: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Toxicity to fish

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

: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 Toxicity to algae

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

: NOEC (Daphnia magna (Water flea)): 10 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

Toxicity to bacteria : NOEC: > 1.93 mg/l

Exposure time: 10 min

Remarks: Based on data from similar materials

Zinc oxide:

: LC50 (Oncorhynchus mykiss (rainbow trout)): 330 - 780 μg/l Toxicity to fish

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 6.9 - 16.2 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 136 μg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Selenastrum capricornutum (green algae)): 24 µg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox-

Toxicity to fish (Chronic tox-

icity)

: NOEC (Oncorhynchus mykiss (rainbow trout)): 199 μg/l Exposure time: 30 d

Remarks: Based on data from similar materials

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 37 μg/l



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aquatic invertebrates (Chron-

ic toxicity)

Exposure time: 21 d

Remarks: Based on data from similar materials

M-Factor (Chronic aquatic

toxicity)

: 1

Toxicity to bacteria : EC50: 5.2 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Talc:

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

Exposure time: 24 h

Graphite:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100

ma/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to bacteria : EC50: > 1,012.5 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

12-Hydroxy lithium stearate:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other

aquatic invertebrates

: EL50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : NOELR (Pseudokirchneriella subcapitata (green algae)): >

100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Calcium oxide:

Toxicity to fish : LC50 (Gasterosteus aculeatus (threespine stickleback)): 457

mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates

: LC50: 158 mg/l Exposure time: 96 h



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Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 184.57

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 48

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 (Chron-

ic toxicity)

: NOEC: 32 mg/l Exposure time: 12 d

Remarks: Based on data from similar materials

Toxicity to bacteria : EC50: 300.4 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Lithium Hydroxide Monohydrate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 109 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 33.5 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 153.44

ma/

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox-

icity)

: NOEC (Danio rerio (zebra fish)): 17.35 mg/l

Exposure time: 34 d

Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 4 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Toxicity to bacteria : EC50: 180.8 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Stearic acid:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l

Exposure time: 48 h

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 4.8 mg/l

Exposure time: 48 h



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Method: OECD Test Guideline 202

Remarks: No toxicity at the limit of solubility.

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.9

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

: NOEC (Daphnia magna (Water flea)): > 0.22 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Remarks: No toxicity at the limit of solubility.

Toxicity to bacteria : EC10 (Pseudomonas putida): 883 mg/l

Exposure time: 16 h

Quartz:

Ecotoxicology Assessment

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

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

Persistence and degradability

Ingredients:

Distillates (petroleum), hydrotreated heavy naphthenic:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 2 - 4 % Exposure time: 28 d

Method: OECD Test Guideline 301B

12-Hydroxy lithium stearate:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 78 % Exposure time: 28 d

Method: OECD Test Guideline 301C

Stearic acid:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 93 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Bioaccumulative potential

Ingredients:

Zinc oxide:

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 177

Stearic acid:

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 238 - 288



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Remarks: Based on data from similar materials

Partition coefficient: n-

octanol/water

: log Pow: > 5

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

: Dispose of in accordance with local regulations. Waste from residues

Contaminated packaging Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number : UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

> N.O.S. (Zinc oxide)

Class : 9 Packing group Ш

Labels : 9

IATA-DGR

: UN 3077 UN/ID No.

Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

(Zinc oxide)

: 9 Class Ш Packing group

Labels Miscellaneous

Packing instruction (cargo

aircraft)

956

Packing instruction (passen-

ger aircraft)

: 956

IMDG-Code

UN number : UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Zinc oxide)

Class : 9



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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.

(Zinc oxide)

Class : 9 Packing group : III

Labels : CLASS 9 ERG Code : 171

Marine pollutant : yes (Zinc oxide)

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

liters., Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard

classification to facilitate multi-modal transport involving ICAO

(IATA) or IMO.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Cadmium	7440-43-9	10	*
Lead	7439-92-1	10	*
Propionic acid	79-09-4	5000	*

^{*:} 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 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting

requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels

established by SARA Title III, Section 313:

Zinc oxide 1314-13-2 14.7155 %



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US State Regulations

Pennsylvania Right To Know

64742-52-5	50 - 70 %
1314-13-2	10 - 20 %
14807-96-6	10 - 20 %
7782-42-5	5 - 10 %
9002-84-0	1 - 5 %
1305-78-8	1 - 5 %
64742-65-0	0 - 0.1 %
64742-54-7	0 - 0.1 %
64741-89-5	0 - 0.1 %
	1314-13-2 14807-96-6 7782-42-5 9002-84-0 1305-78-8 64742-65-0 64742-54-7

New Jersey Right To Know

Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	50 - 70 %
Zinc oxide	1314-13-2	10 - 20 %
Talc	14807-96-6	10 - 20 %
Graphite	7782-42-5	5 - 10 %
Polytetrafluoroethylene	9002-84-0	1 - 5 %
Calcium oxide	1305-78-8	1 - 5 %
Lithium Hydroxide Monohydrate	1310-66-3	1 - 5 %
Quartz	14808-60-7	0.1 - 1 %

California Prop. 65 WARNING! This product contains a chemical known in the

State of California to cause cancer.

 Quartz
 14808-60-7

 Cadmium
 7440-43-9

 Lead
 7439-92-1

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive

harm.

 Cadmium
 7440-43-9

 Lead
 7439-92-1

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 material are included on or

exempted from listing on the TSCA Inventory of Chemical

Substances.

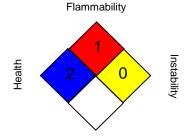


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SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

HMIS III:



0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Full text of other abbreviations

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

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Min-

eral Dusts

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit

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

NIOSH REL / C : Ceiling value not be exceeded at any time.

OSHA Z-1 / TWA : 8-hour time weighted average OSHA Z-3 / TWA : 8-hour time weighted average

US WEEL / CEIL : Ceiling

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Of-



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fice of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

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 Agen-

cy, http://echa.europa.eu/

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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