

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name

• **All-Star**

Synonyms

• Anti-Seize; Lubricant; Sealant; Thread Compound

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)

• Anti-Seize, Lubricant, Sealant, drill collars at maximum torque in severe drilling conditions

1.3 Details of the supplier of the safety data sheet

Manufacturer

• Topco Oilsite Products Ltd.
Bay 7, 3401 - 19th Street N.E.
Calgary, Alberta T2E 6S8
Canada
www.topcooilsite.com
msds@topcooilsite.com

Telephone (General) • 403-219-0255

1.4 Emergency telephone number

Manufacturer

• 403-219-0255

Poison & Drug Information Service (Alberta Health Services)

• 1-800-332-1414

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP

• Reproductive Toxicity 1A - H360FD
Effects on or via Lactation - H362

2.2 Label Elements

CLP

DANGER



Hazard statements • H360FD - May damage fertility. May damage the unborn child.
H362 - May cause harm to breast-fed children

Precautionary statements

Prevention • P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, vapours and/or spray.
P263 - Avoid contact during pregnancy/while nursing.

P264 - Wash thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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

Storage/Disposal • P405 - Store locked up.

P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

UN GHS Revision 4

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Fourth Revised Edition

2.1 Classification of the substance or mixture

UN GHS • Skin Mild Irritation 3
Reproductive Toxicity 1A
Specific Target Organ Toxicity Repeated Exposure 1
Hazardous to the aquatic environment Acute 3
Hazardous to the aquatic environment Chronic 1

2.2 Label elements

UN GHS

DANGER



Hazard statements • Causes mild skin irritation
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life
Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • If skin irritation occurs: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Collect spillage.

Storage/Disposal • Store locked up.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS • According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012
- Reproductive Toxicity 1A
Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention**
- Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

- Response**
- IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

- Storage/Disposal**
- Store locked up.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

- OSHA HCS 2012
- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS 2015

2.1 Classification of the substance or mixture

- WHMIS 2015
- Reproductive Toxicity 1A
Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

WHMIS 2015

DANGER



- Hazard statements**
- May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention** • Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe mist, vapours and/or spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection.

- Response** • IF exposed or concerned: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.

- Storage/Disposal** • Store locked up.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

- WHMIS 2015** • In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Lead, powder	CAS: 7439-92-1 EC Number: 231-100-4	55% TO 70%	NDA	EU CLP: Annex VI, Table 3.1: Repr. 1A, H360FD (Orl, Inhl); Lact., H362 UN GHS Revision 4: Repr. 1A (Orl); STOT RE 1 (CNS, GI / Orl) OSHA HCS 2012: Repr. 1A (Orl); STOT RE 1 (CNS, GI / Orl) WHMIS 2015: Repr. 1A (Orl); STOT RE 1 (CNS, GI / Orl)	NDA
Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	CAS: 64741-88-4 EC Number: 265-090-8 EU Index: 649-454-00-7	0% TO 38.7%	Ingestion/Oral-Rat LD50 • >5000 mg/kg Skin-Rabbit LD50 • >2000 mg/kg	EU CLP: Annex VI, Table 3.1: Carc. 1B, H350 UN GHS Revision 4: Skin Irrit. 3; Asp. Tox. 2 OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Talc	CAS: 14807-96-6 EC Number: 238-877-9	1% TO 10%	NDA	EU CLP: STOT RE 1 (Lungs / Inhl), H372 UN GHS Revision 4: Skin Irrit. 3; STOT RE 1 (Lungs / Inhl) OSHA HCS 2012: STOT RE 1 (Lungs / Inhl) WHMIS 2015: STOT RE 1 (Lungs / Inhl)	NDA
Graphite	CAS: 7782-42-5 EC Number: 231-955-3	1% TO 10%	NDA	EU CLP: STOT RE 1 (Lungs / Inhl), H372 UN GHS Revision 4: Comb. Dust; STOT RE 1 (Lungs / Inhl) OSHA HCS 2012: Comb. Dust; STOT RE 1 (Lungs / Inhl) WHMIS 2015: Comb. Dust; STOT RE 1 (Lungs / Inhl)	NDA
Carbon Black	CAS: 1333-86-4 EC	1% TO 10%	Ingestion/Oral-Rat LD50 • >15400 mg/kg	EU CLP: Carc. 2, H351; STOT RE 1, H372 UN GHS Revision 4: Carc. 2;	NDA

	Number: 215-609-9		Skin-Rabbit LD50 • >3 g/kg	STOT RE 1 (Lungs, Inhl) OSHA HCS 2012: Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust WHMIS 2015: Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust	
Calcium monocarbonate	CAS: 471-34-1 EC Number: 207-439-9	0% TO 4.3%	Ingestion/Oral-Rat LD50 • 6450 mg/kg	EU CLP: Skin Irrit. 2, H315; Eye Irrit. 2, H319 UN GHS Revision 4: Skin Irrit. 2; Eye Irrit. 2 OSHA HCS 2012: Skin Irrit. 2; Eye Irrit. 2 WHMIS 2015: Skin Irrit. 2; Eye Irrit. 2	NDA
Sulfonic acid, petroleum, calcium salt	CAS: 61789-86-4 EINECS: 263-093-9	0% TO 2.15%	NDA	EU CLP: Not Classified UN GHS Revision 4: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Benzenesulfonic acid, dodecyl-, calcium salt	CAS: 26264-06-2 EINECS: 247-557-8	0% TO 2.15%	Ingestion/Oral-Rat LD50 • 1300 mg/kg	EU CLP: Acute Tox. 4, H302 UN GHS Revision 4: Acute Tox. 4 (orl); Aquatic Acute 2 OSHA HCS 2012: Acute Tox. 4 (orl) WHMIS 2015: Acute Tox. 4 (orl)	NDA
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	CAS: 68584-23-6 EINECS: 271-529-4	0% TO 2.15%	NDA	EU CLP: Not Classified UN GHS Revision 4: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA

See Section 16 for full text of H-statements.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation** • Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.
- Skin** • In case of contact with substance, immediately flush skin with running water for at least 20 minutes.
- Eye** • In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
- Ingestion** • Do NOT induce vomiting. Obtain medical attention immediately if ingested.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician** • All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media** • LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
- Unsuitable Extinguishing Media** • No data available

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards** • None
- Hazardous Combustion Products** • No data available

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Ventilate the area. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

Emergency Procedures • Keep unauthorized personnel away. Stay upwind.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Stop leak if you can do it without risk.
 SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
 LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling • Use only with adequate ventilation. Keep away from heat and ignition sources. Use good safety and industrial hygiene practices. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist, vapours and/or spray. Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage • Keep container tightly closed. Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Argentina	Australia	Canada Alberta	Canada British Columbia
Calcium monocarbonate (471-34-1)	TWAs	Not established	Not established	10 mg/m ³ TWA (containing no asbestos and <1% crystalline silica, inhalable dust)	10 mg/m ³ TWA	Not established
Carbon Black (1333-86-4)	TWAs	3 mg/m ³ TWA (inhalable particulate matter)	3.5 mg/m ³ TWA [CMP]	3 mg/m ³ TWA	3.5 mg/m ³ TWA	3 mg/m ³ TWA (inhalable)
Talc (14807-96-6)	TWAs	2 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter)	2 mg/m ³ TWA [CMP] (respirable fraction, particulate matter containing no asbestos and less than 1% crystalline silica)	2.5 mg/m ³ TWA (containing no asbestos fibers)	2 mg/m ³ TWA (respirable particulate)	2 mg/m ³ TWA (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate)

Graphite	TWAs	2 mg/m3 TWA (all forms except graphite fibres, respirable particulate matter)	2 mg/m3 TWA [CMP] (all forms except fibres, respirable fraction)	3 mg/m3 TWA (containing no asbestos and <1% crystalline silica; all forms except fibres; natural and synthetic, respirable dust)	2 mg/m3 TWA (all forms except Graphite fibres, respirable)	2 mg/m3 TWA (all forms except Graphite fibres, respirable)
Lead, powder (7439-92-1)	TWAs	0.05 mg/m3 TWA	0.05 mg/m3 TWA [CMP]	0.15 mg/m3 TWA (dust and fume)	0.05 mg/m3 TWA	0.05 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut
Calcium mon carbonate (471-34-1)	STELs	Not established	Not established	20 mg/m3 STEL (listed under Limestone)	Not established	20 mg/m3 STEL (listed under Limestone)
	TWAs	Not established	Not established	10 mg/m3 TWA (listed under Limestone)	Not established	10 mg/m3 TWA (listed under Limestone)
Carbon Black (1333-86-4)	TWAs	3 mg/m3 TWA (inhalable particulate matter)	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3 mg/m3 TWA (inhalable particulate matter)	3.5 mg/m3 TWA
	STELs	Not established	Not established	7 mg/m3 STEL	Not established	7 mg/m3 STEL
Talc (14807-96-6)	TWAs	2 mg/m3 TWA (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate matter)	2 mg/m3 TWA (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)	2 mg/m3 TWA (respirable fraction)	2 mg/m3 TWA (particulate matter containing no Asbestos and <1% Crystalline silica, respirable particulate matter)	2 mg/m3 TWA (respirable fraction)
Graphite	TWAs	2 mg/m3 TWA (all forms except Graphite fibres, respirable particulate matter)	2 mg/m3 TWA (all forms except graphite fibres)	2 mg/m3 TWA (natural, all forms, except Graphite fibres, respirable fraction)	2 mg/m3 TWA (all forms except Graphite fibres, respirable particulate matter)	2 mg/m3 TWA (natural, all forms, except Graphite fibres, respirable fraction)
	STELs	Not established	Not established	4 mg/m3 STEL (natural, all forms, except Graphite fibres, respirable fraction)	Not established	4 mg/m3 STEL (natural, all forms, except Graphite fibres, respirable fraction)
Lead, powder (7439-92-1)	TWAs	0.05 mg/m3 TWA	0.05 mg/m3 TWA	0.05 mg/m3 TWA	0.05 mg/m3 TWA	0.05 mg/m3 TWA
	STELs	Not established	Not established	0.15 mg/m3 STEL	Not established	0.15 mg/m3 STEL
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	China
Calcium mon carbonate (471-34-1)	TWAs	Not established	10 mg/m3 TWAEV (total dust)	10 mg/m3 TWA (listed under Limestone)	30 mppcf TWA; 10 mg/m3 TWA	Not established
	STELs	Not established	Not established	20 mg/m3 STEL (listed under Limestone)	20 mg/m3 STEL	Not established
Carbon Black (1333-86-4)	STELs	Not established	Not established	7 mg/m3 STEL	7 mg/m3 STEL	8 mg/m3 STEL (total dust)
	TWAs	3 mg/m3 TWA (inhalable)	3.5 mg/m3 TWAEV	3.5 mg/m3 TWA	3.5 mg/m3 TWA	4 mg/m3 TWA (total dust)
Talc (14807-96-6)	STELs	Not established	Not established	Not established	Not established	6 mg/m3 STEL (free SiO2 <10%, total dust); 2 mg/m3 STEL (free SiO2 <10%, respirable dust)
	TWAs	2 mg/m3 TWA (containing no Asbestos and <1% Crystalline silica, respirable)	3 mg/m3 TWAEV (respirable dust)	2 mg/m3 TWA (respirable fraction)	20 mppcf TWA	3 mg/m3 TWA (free SiO2 <10%, total dust); 1 mg/m3 TWA (free SiO2 <10%, respirable dust)

Graphite	STELs	Not established	Not established	4 mg/m ³ STEL (natural, except Graphite fibres, respirable fraction)	Not established	8 mg/m ³ STEL (total dust); 4 mg/m ³ STEL (respirable dust)
	TWAs	2 mg/m ³ TWA (except Graphite fibres, respirable)	2 mg/m ³ TWAEV (containing no Asbestos and <1% Crystalline silica, except Graphite fibres, respirable dust)	2 mg/m ³ TWA (natural, except Graphite fibres, respirable fraction)	20 mppcf TWA; 30 mppcf TWA (synthetic); 10 mg/m ³ TWA (synthetic)	4 mg/m ³ TWA (total dust); 2 mg/m ³ TWA (respirable dust)
Lead, powder (7439-92-1)	STELs	Not established	Not established	0.15 mg/m ³ STEL	0.45 mg/m ³ STEL (dust and fume)	0.15 mg/m ³ STEL (dust); 0.09 mg/m ³ STEL (fume)
	TWAs	0.05 mg/m ³ TWA (designated substances regulation); 0.05 mg/m ³ TWA (applies to workplaces to which the designated substances regulation does not apply)	0.05 mg/m ³ TWAEV	0.05 mg/m ³ TWA	0.15 mg/m ³ TWA (dust and fume)	0.05 mg/m ³ TWA (dust); 0.03 mg/m ³ TWA (fume)

Exposure Limits/Guidelines (Con't.)

	Result	China Highly Toxic Goods	France	Germany DFG	Germany TRGS	Indonesia
Calcium monocarbonate (471-34-1)	TWAs	Not established	10 mg/m ³ TWA [VME]	Not established	Not established	Not established
Sulfonic acid, petroleum, calcium salt (61789-86-4)	TWAs	Not established	Not established	Not established	5 mg/m ³ TWA AGW (respirable fraction, exposure factor 4)	Not established
	Ceilings	Not established	Not established	20 mg/m ³ Peak (respirable fraction)	Not established	Not established
	MAKs	Not established	Not established	5 mg/m ³ TWA MAK (respirable fraction)	Not established	Not established
Carbon Black (1333-86-4)	TWAs	Not established	3.5 mg/m ³ TWA [VME]	Not established	Not established	3.5 mg/m ³ TWA
Talc (14807-96-6)	TWAs	Not established	Not established	Not established	Not established	2 mg/m ³ TWA (not containing fiber Asbestos, use NAB asbestos for talc containing fiber asbestos, respirable particulate)
Graphite (7782-42-5)	TWAs	Not established	2 mg/m ³ TWA [VME] (alveolar fraction)	Not established	Not established	2 mg/m ³ TWA
	MAKs	Not established	Not established	1.5 mg/m ³ TWA MAK (respirable fraction); 4 mg/m ³ TWA MAK (inhalable fraction)	Not established	Not established
Lead, powder (7439-92-1)	TWAs	Not established	0.1 mg/m ³ TWA [VME] (restrictive limit)	Not established	Not established	0.05 mg/m ³ TWA
	Ceilings	0.05 mg/m ³ Ceiling (dust); 0.03 mg/m ³ Ceiling (fume)	Not established	Not established	Not established	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Israel	Italy	Japan	Malaysia	Mexico
Carbon Black (1333-86-4)	TWAs	3 mg/m ³ TWA (inhalable fraction)	Not established	4 mg/m ³ OEL (Class 2 Dust, total dust); 1 mg/m ³ OEL (Class 2 Dust, respirable dust)	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA VLE-PPT

	STELs	Not established	Not established	Not established	Not established	7 mg/m3 STEL [PPT-CT]
Talc (14807-96-6)	TWAs	4 mg/m3 TWA (airborne dust no otherwise classified); 2 mg/m3 TWA (particulate matter containing no Asbestos and <1% crystalline silica, respirable fraction)	Not established	0.5 mg/m3 OEL (Class 1 Dust, respirable dust); 2 mg/m3 OEL (Class 1 Dust, total dust)	2 mg/m3 TWA (respirable fraction of particulate matter)	2 mg/m3 TWA VLE-PPT (respirable fraction)
Graphite (7782-42-5)	TWAs	2 mg/m3 TWA (respirable fraction, all forms except graphite fibers)	Not established	2 mg/m3 OEL (Class 1 Dust, total dust); 0.5 mg/m3 OEL (Class 1 Dust, respirable dust)	2 mg/m3 TWA (all forms except Graphite fibres, respirable fraction)	2 mg/m3 TWA VLE-PPT (synthetic and natural)
Lead, powder (7439-92-1)	TWAs	0.05 mg/m3 TWA (women age 45 and over and all men)	0.075 mg/m3 TWA Media Ponderata nel Tempo	0.03 mg/m3 OEL (provisional)	0.05 mg/m3 TWA	0.15 mg/m3 TWA VLE-PPT (dust and fume, as Pb)

Exposure Limits/Guidelines (Con't.)

	Result	Netherlands	NIOSH	OSHA	OSHA Vacated	Portugal
Calcium mon carbonate (471-34-1)	TWAs	Not established	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)	Not established	Not established	10 mg/m3 TWA [VLE-MP] (particulate matter containing no Asbestos and <1% Crystalline silica)
Carbon Black (1333-86-4)	TWAs	Not established	3.5 mg/m3 TWA; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH)	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 TWA [VLE-MP]
Talc (14807-96-6)	TWAs	0.25 mg/m3 TWA	2 mg/m3 TWA (containing no Asbestos and <1% Quartz, respirable dust)	Not established	2 mg/m3 TWA (<1% Crystalline silica, containing no Asbestos, respirable dust)	2 mg/m3 TWA [VLE-MP] (respirable fraction, particulate matter containing no Asbestos and <1% Crystalline silica)
Graphite	TWAs	Not established	2.5 mg/m3 TWA (natural, respirable dust)	15 mg/m3 TWA (synthetic, total dust); 5 mg/m3 TWA (synthetic, respirable fraction)	2.5 mg/m3 TWA (natural, respirable dust); 10 mg/m3 TWA (synthetic, total dust); 5 mg/m3 TWA (synthetic, respirable fraction)	2 mg/m3 TWA [VLE-MP] (all forms except Graphite fibers, respirable fraction)
Lead, powder (7439-92-1)	TWAs	0.15 mg/m3 TWA	0.050 mg/m3 TWA	50 µg/m3 TWA	Not established	0.15 mg/m3 TWA [VLE-MP] (mandatory indicative limit value)

Exposure Limits/Guidelines (Con't.)

	Result	Russia	Singapore	Thailand	United Kingdom	United States - California
Calcium mon carbonate (471-34-1)	TWAs	Not established	Not established	Not established	Not established	5 mg/m3 PEL (respirable fraction, listed under Particulates not otherwise regulated); 10 mg/m3 PEL (total dust, listed under Particulates not otherwise regulated)
Carbon Black (1333-86-4)	TWAs	Not established	3.5 mg/m3 PEL	Not established	3.5 mg/m3 TWA	3.5 mg/m3 PEL
	STELs	Not established	Not established	Not established	7 mg/m3 STEL	Not established
Talc (14807-96-6)	TWAs	Not established	2 mg/m3 PEL	Not established	1 mg/m3 TWA (respirable dust)	2 mg/m3 PEL (respirable dust, containing no

						Asbestos fibers, <1% Crystalline silica)
	STELs	Not established	Not established	Not established	3 mg/m3 STEL (calculated, respirable dust)	Not established
Graphite (7782-42-5)	TWAs	Not established	2 mg/m3 PEL (respirable dust)	Not established	10 mg/m3 TWA (inhalable dust); 4 mg/m3 TWA (respirable dust)	2.5 mg/m3 PEL (natural, respirable dust); 10 mg/m3 PEL (synthetic total dust); 5 mg/m3 PEL (synthetic respirable fraction)
	STELs	Not established	Not established	Not established	30 mg/m3 STEL (calculated, inhalable dust); 12 mg/m3 STEL (calculated, respirable dust)	Not established
Lead, powder (7439-92-1)	TWAs	0.05 mg/m3 TWA (aerosol)	0.15 mg/m3 PEL	0.2 mg/m3 TWA	0.15 mg/m3 TWA	0.05 mg/m3 PEL (dust and fume)
	STELs	Not established	Not established	Not established	0.45 mg/m3 STEL (calculated)	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Venezuela
Calcium monocarbonate (471-34-1)	TWAs	10 mg/m3 TWA [VTRE-L-8/40
Carbon Black (1333-86-4)	TWAs	3.5 mg/m3 TWA [VTRE-L-8/40
Talc (14807-96-6)	TWAs	2 mg/m3 TWA [VTRE-L-8/40 (respirable fraction; particulate containing no Asbestos and <1% Crystalline silica)
Graphite	TWAs	2 mg/m3 TWA [VTRE-L-8/40 (dust)
Lead, powder (7439-92-1)	TWAs	0.05 ppm TWA [VTRE-L-8/40 (protection of the health and safety of workers from risks related to this chemical agent at work)

Exposure Control Notations

Japan

- Lead, powder (7439-92-1): **Carcinogens:** (Group 2B - Possibly Carcinogenic to Humans)
- Carbon Black (1333-86-4): **Carcinogens:** (Group 2B - Possibly Carcinogenic to Humans)

Mexico

- Lead, powder (7439-92-1): **Carcinogens:** (A3 - Confirmed animal carcinogen)
- Talc (14807-96-6): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

Egypt

- Graphite (7782-42-5): **Nuisance Dusts:** (10 mg/m3 TWA (synthetic, containing <1% Quartz, total dust); 30 mppcf TWA (synthetic, containing <1% Quartz, total dust); 3 mg/m3 TWA (synthetic, containing <1% Quartz, total dust))
- Lead, powder (7439-92-1): **Carcinogens:** (Animal Carcinogen)
- Calcium monocarbonate (471-34-1): **Nuisance Dusts:** (10 mg/m3 TWA (containing <1% Quartz, total dust); 30 mppcf TWA (containing <1% Quartz, total dust); 3 mg/m3 TWA (containing <1% Quartz, inhalable dust))

Portugal

- Lead, powder (7439-92-1): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- Talc (14807-96-6): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Indonesia

- Lead, powder (7439-92-1): **Carcinogens:** (A3 - confirmed animal carcinogen)
- Talc (14807-96-6): **Carcinogens:** (A4 - not classifiable as a human carcinogen (not containing asbestos fiber))
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - not classifiable as a human carcinogen)

Argentina

- Lead, powder (7439-92-1): **Carcinogens:** (A3 - Confirmed animal carcinogen with unknown relevance to humans)
- Talc (14807-96-6): **Carcinogens:** (A1 - Confirmed human carcinogen)
- Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

Canada Alberta

- Lead, powder (7439-92-1): **Designated Substances:** (Designated substance - requires code of practice)

Canada British Columbia

- Lead, powder (7439-92-1): **Carcinogens:** (IARC Category 2B - Possible Human Carcinogen) | **Designated Substances:** (IARC Category 2B - Possible Human Carcinogen; Adverse reproductive effect) | **Substances with Reproductive Critical Effects:** (Adverse reproductive effect)

•Carbon Black (1333-86-4): **Carcinogens:** (IARC Category 2B - Possible Human Carcinogen) | **Designated Substances:** (IARC Category 2B - Possible Human Carcinogen)

Canada Manitoba

•Lead, powder (7439-92-1): **Carcinogens:** (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans)

•Talc (14807-96-6): **Carcinogens:** (A4 Not Classifiable as a Human Carcinogen (containing no Asbestos fibers))

•Carbon Black (1333-86-4): **Carcinogens:** (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans)

Canada New Brunswick

•Lead, powder (7439-92-1): **Carcinogens:** (A3 - Animal Carcinogen)

•Talc (14807-96-6): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

•Carbon Black (1333-86-4): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Canada Nova Scotia

•Lead, powder (7439-92-1): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)

•Talc (14807-96-6): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen (containing no Asbestos fibers))

•Carbon Black (1333-86-4): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)

Canada Ontario

•Lead, powder (7439-92-1): **Designated Substances:** (0.05 mg/m³ TWA)

Canada Quebec

•Lead, powder (7439-92-1): **Carcinogens:** (C3 carcinogen - effect detected in animals)

Canada Saskatchewan

•Lead, powder (7439-92-1): **Designated Substances:** (Present)

France

•Lead, powder (7439-92-1): **Carcinogens:** (Carcinogen categories 1A, 1B, 2) | **Reproductive Toxins:** (Reproductive Toxin categories 1A, 1B, 2)

Venezuela

•Lead, powder (7439-92-1): **Ceilings:** (Present)

•Talc (14807-96-6): **Ceilings:** (Present)

•Carbon Black (1333-86-4): **Ceilings:** (Present)

ACGIH

•Lead, powder (7439-92-1): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)

•Talc (14807-96-6): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers))

•Carbon Black (1333-86-4): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)

Germany TRGS

•Lead, powder (7439-92-1): **Developmental Toxins:** (Category 1A (bioavailable, metal)) | **Reproductive Toxins:** (Category 2 (bioavailable; metal))

Germany DFG

•Graphite (7782-42-5): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to (inhalable fraction; respirable fraction))

•Lead, powder (7439-92-1): **Carcinogens:** (Category 2 (considered to be carcinogenic for man))

•Talc (14807-96-6): **Carcinogens:** (Category 3B (could be carcinogenic for man; free of asbestos fibers))

•Carbon Black (1333-86-4): **Carcinogens:** (Category 3B (could be carcinogenic for man; inhalable fraction))

•Sulfonic acid, petroleum, calcium salt (61789-86-4): **Pregnancy:** (classification not yet possible (respirable fraction))

Exposure Limits Supplemental

Thailand

•Graphite (7782-42-5): **Mineral Dusts:** (15 mppcf TWA)

•Graphite as Particulates not otherwise classified (PNO): **Mineral Dusts:** (15 mppcf TWA (respirable dust); 15 mg/m³ TWA (total dust); 50 mppcf TWA (total dust); 5 mg/m³ TWA (respirable dust))

•Talc (14807-96-6): **Mineral Dusts:** (20 mppcf TWA)

Argentina

•Lead, powder (7439-92-1): **BEIs:** (30 µg/100 mL blood not critical Pb (Women of child bearing potential, whose blood Pb level exceeds 10 mg/dL, are at risk of delivering a child with blood Pb level over the current CDC guideline. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficiencies. The blood Pb of these children should be closely monitored and appropriate steps should be taken to minimize the child's exposure to environmental lead.))

Canada Yukon

•Lead, powder (7439-92-1): **Maximum Acceptable Body Burdens:** (80 µg/100 mL Medium: blood; 200 µg/L Medium: urine)

Israel

•Lead, powder (7439-92-1): **Action Levels:** (0.025 mg/m³ AL (as Pb)) | **Biological Markers of Occupational Exposure:** (30 µg/100 mL Medium: blood Parameter: Lead (Women age 45 and over and all men); 30 µg/100 mL Medium: blood Parameter: Lead (Women under age 45))

•Carbon Black (1333-86-4): **Action Levels:** (1.50 mg/m³ AL) | **Substances Requiring Environmental - Occu:** (Present)

Venezuela

•Lead, powder (7439-92-1): **Biological Exposure Indices:** (30 µg/100 mL blood not critical Lead (Note: Women of reproductive age, whose levels of blood Pb exceed 10 µg/dL are at risk of giving birth to children with Pb blood values exceeding said level, which was established by the Center of Disease Control in the United States. If Pb levels in said children remain elevated, they may be at an increased risk of cognitive deficits. The Pb in the blood of those children must be watched very closely and the children must be kept from being exposed to environmental lead.))

OSHA

•Graphite (7782-42-5): **Mineral Dusts:** (15 mppcf TWA (natural))

•Graphite as Particulates not otherwise classified (PNO): **Mineral Dusts:** (15 mppcf TWA (respirable fraction); 5 mg/m³ TWA (respirable fraction); 50 mppcf TWA (total dust); 15 mg/m³ TWA (total dust))

•Talc (14807-96-6): **Mineral Dusts:** (20 mppcf TWA (if 1% Quartz or more; use Quartz limit))

ACGIH

- Graphite (7782-42-5): **TLV Basis - Critical Effects:** (pneumoconiosis (all forms except graphite fibers))
- Lead, powder (7439-92-1): **BEIs:** (30 µg/100 mL Medium: blood Time: not critical Parameter: Lead (Note: Women of child bearing potential, whose blood Pb exceeds 10 µg/dL, are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 µg/dL. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficits. The blood Pb of these children should be closely monitored and appropriate steps should be taken to minimize the child's exposure to environmental lead.)) | **TLV Basis - Critical Effects:** (CNS and PNS impairment; hematologic effects) | **Notice of Intended Changes (BEIs):** (200 µg/L Medium: blood Time: not critical Parameter: lead)
- Talc (14807-96-6): **TLV Basis - Critical Effects:** (pulmonary fibrosis (containing no asbestos fibers); pulmonary function (containing no asbestos fibers))
- Carbon Black (1333-86-4): **TLV Basis - Critical Effects:** (bronchitis)

Germany TRGS

- Lead, powder (7439-92-1): **BELs:** (300 µg/L Medium: whole blood Time: no restriction Parameter: Lead (women age below 45 years); 400 µg/L Medium: whole blood Time: no restriction Parameter: Lead (women 45 years and older))

8.2 Exposure controls

Engineering

- Good general ventilation should be used. Ventilation rates should be matched to conditions.

Measures/Controls

- If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental

Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

BEI = Biological Exposure Indices

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

NIOSH = National Institute of Occupational Safety and Health

TWAEV = Time-Weighted Average Exposure Value

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Black semi-solid paste with mild petroleum odor.
Color	Black	Odor	Mild, petroleum.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			

Octanol/Water Partition coefficient	Data lacking		
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9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Keep away from heat, sparks and flame.

10.5 Incompatible materials

- Strong oxidising agents.

10.6 Hazardous decomposition products

- Carbon Monoxide, Carbon Dioxide, Oxides of Lead.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

		Components
Lead, powder (55% TO 70%)	7439-92-1	Acute Toxicity: Ingestion/Oral-Woman TDLo • 450 mg/kg 6 Year(s); <i>Peripheral Nerve and Sensation:Flaccid paralysis without anesthesia (usually neuromuscular blockage)</i> ; <i>Behavioral:Hallucinations, distorted perceptions; Behavioral:Muscle weakness</i> ; Inhalation-Human TCLo • 10 µg/m ³ ; <i>Gastrointestinal:Gastritis; Liver:Other changes</i> ; Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 43.75 mg/kg 1 Week(s)-Continuous; <i>Blood:Other changes; Kidney, Ureter, and Bladder:Other changes in urine composition; Biochemical:Metabolism (intermediary):Porphyrin, including bile pigments</i> ; Inhalation-Human TCLo • 0.011 mg/m ³ 26 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes</i> ; Inhalation-Man TCLo • 0.03 mg/m ³ 5 Year(s)-Intermittent; <i>Endocrine:Androgenic</i> ; Inhalation-Man TCLo • 0.109 mg/m ³ 5 Year(s)-Intermittent; <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i> ; Mutagen: Cytogenetic analysis • Inhalation-Rat • 23 µg/m ³ 16 Week(s); Reproductive: Ingestion/Oral-Rat TDLo • 790 mg/kg (multigenerations); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; <i>Reproductive Effects:Effects on Embryo or Fetus:Fetal death</i> ; Inhalation-Rat TCLo • 10 mg/m ³ 24 Hour(s)(1-21D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; <i>Reproductive Effects:Specific Developmental Abnormalities:Blood and lymphatic system</i>
Talc (1% TO 10%)	14807-96-6	Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; Tumorigen / Carcinogen: Inhalation-Rat • 11 mg/m ³ 1 Year(s)-Intermittent; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</i> ; Inhalation-Rat TCLo • 18 mg/m ³ 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Bronchiogenic carcinoma; Endocrine:Tumors</i>
Carbon Black (1% TO 10%)	1333-86-4	Acute Toxicity: Ingestion/Oral-Rat LD50 • >15400 mg/kg; <i>Behavioral:Somnolence (general depressed activity)</i> ; Skin-Rabbit LD50 • >3 g/kg; Mutagen: DNA adduct • Inhalation-Mouse • 6200 µg/m ³ 16 Hour(s) 12 Week(s)-Intermittent; DNA damage • Inhalation-Rat • 50 µg/L 13 Week(s)-Intermittent; DNA damage • Inhalation-Rat • 50 g/L 13 Week(s); Tumorigen / Carcinogen: Inhalation-Rat TCLo • 11600 µg/m ³ 18 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</i>
Calcium monocarbonate (0% TO 4.3%)	471-34-1	Acute Toxicity: Ingestion/Oral-Rat LD50 • 6450 mg/kg; Irritation: Eye-Rabbit • 750 µg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Ingestion/Oral-Woman TDLo • 4.08 g/kg 30 Day(s)-Intermittent; <i>Vascular:BP elevation not characterized in autonomic section; Gastrointestinal:Changes in structure or function</i>

		of endocrine pancreas; Biochemical:Metabolism (intermediary):Effect on inflammation or mediation of inflammation
Benzenesulfonic acid, dodecyl-, calcium salt (0% TO 2.15%)	26264-06-2	Acute Toxicity: Ingestion/Oral-Rat LD50 • 1300 mg/kg
Sulfonic acid, petroleum, calcium salt (0% TO 2.15%)	61789-86-4	Acute Toxicity: Ingestion/Oral-Rat LD50 • >5 g/kg; <i>Gastrointestinal:Hypermotility, diarrhea</i> ; Skin-Rabbit LD50 • >5 g/kg

GHS Properties	Classification
Acute toxicity	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Skin corrosion/Irritation	EU/CLP•Data lacking UN GHS 4•Skin Mild Irritation 3 OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Serious eye damage/Irritation	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Skin sensitization	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Respiratory sensitization	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Aspiration Hazard	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Carcinogenicity	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Germ Cell Mutagenicity	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
Toxicity for Reproduction	EU/CLP•Effects on or via lactation; Toxic to Reproduction 1A UN GHS 4•Toxic to Reproduction 1A OSHA HCS 2012•Toxic to Reproduction 1A WHMIS 2015•Toxic to Reproduction 1A
STOT-SE	EU/CLP•Data lacking UN GHS 4•Data lacking OSHA HCS 2012•Data lacking WHMIS 2015•Data lacking
STOT-RE	EU/CLP•Data lacking UN GHS 4•Specific Target Organ Toxicity Repeated Exposure 1 OSHA HCS 2012•Specific Target Organ Toxicity Repeated Exposure 1 WHMIS 2015•Specific Target Organ Toxicity Repeated Exposure 1

Potential Health Effects

Inhalation

Acute (Immediate) • Under normal conditions of use, no health effects are expected.

Chronic (Delayed) • No data available

Skin

Acute (Immediate) • Causes mild skin irritation.

Chronic (Delayed) • No data available

Eye

Acute (Immediate) • Under normal conditions of use, no health effects are expected.

Chronic (Delayed) • No data available

Ingestion

Acute (Immediate) • No data available

Chronic (Delayed) • No data available

Other

Chronic (Delayed) • Repeated and prolonged exposure to lead may cause effects on the gastrointestinal tract and central nervous system.

Carcinogenic Effects • This material contains a component that may cause cancer, however based on regulatory criteria this material is not classified as a carcinogen.

Carcinogenic Effects			
	CAS	IARC	NTP
Carbon Black	1333-86-4	Group 2B-Possible Carcinogen	Not Listed
Lead, powder	7439-92-1	Group 2A-Probable Carcinogen	Reasonably Anticipated to be Human Carcinogen

Reproductive Effects • Repeated and prolonged exposure may cause reproductive effects. May cause harm to breast-fed children.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

Components		
Lead, powder (55% TO 70%)	7439-92-1	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Cyprinus carpio</i> (Common Carp) 0.4 mg/L Comments: Acute Toxicity of Heavy Metals to Common Carp (Cyprinus carpio) 28 Day(s) NOEC <i>Cyprinus carpio</i> (Common Carp) 0.00003 mg/L Comments: Bioaccumulation of Micropollutants and Biomarker Responses in Caged Carp (Cyprinus carpio) Aquatic Toxicity-Crustacea: 28 Day(s) NOEC <i>Hyalella azteca</i> (Scud) 0.006 mg/L Comments: Acute and Chronic Toxicity of Lead in Water and Diet to the Amphipod <i>Hyalella azteca</i> Aquatic Toxicity-Algae and Other Aquatic Plant(s): 72 Hour(s) EC50 <i>Chaetoceros sp.</i> (Diatom) 0.105 mg/L Comments: Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae

• Harmful to aquatic life. Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

• Material data lacking.

12.3 Bioaccumulative potential

• Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN3077	Environmentally hazardous substance, solid, n.o.s. (Lead)	9	III	NDA
TDG	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead)	9	III	NDA
IMO/IMDG	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead)	9	III	NDA
IATA/ICAO	UN3077	Environmentally hazardous substance, solid, n.o.s. (Lead)	9	III	NDA

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- None

State Right To Know		
Component	CAS	PA
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	No
Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Yes
Calcium mon carbonate	471-34-1	No
Carbon Black	1333-86-4	Yes
Graphite	7782-42-5	Yes
Lead, powder	7439-92-1	Yes
Mineral oil, petroleum distillates, solvent-	64741-88-4	No

refined (mild) heavy paraffinic		
Sulfonic acid, petroleum, calcium salt	61789-86-4	No
Talc	14807-96-6	Yes

Inventory						
Component	CAS	Australia AICS	Canada DSL	Canada NDSL	China	EU EINECS
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Yes	Yes	No	Yes	Yes
Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Yes	Yes	No	Yes	Yes
Calcium monocarbonate	471-34-1	Yes	Yes	No	Yes	Yes
Carbon Black	1333-86-4	Yes	Yes	No	Yes	Yes
Graphite	7782-42-5	Yes	Yes	No	Yes	Yes
Lead, powder	7439-92-1	Yes	Yes	No	Yes	Yes
Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Yes	Yes	No	Yes	Yes
Sulfonic acid, petroleum, calcium salt	61789-86-4	Yes	Yes	No	Yes	Yes
Talc	14807-96-6	Yes	Yes	No	Yes	Yes

Inventory (Con't.)				
Component	CAS	EU ELNICS	Japan ENCS	TSCA
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	No	No	Yes
Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	No	Yes	Yes
Calcium monocarbonate	471-34-1	No	Yes	Yes
Carbon Black	1333-86-4	Yes	Yes	Yes
Graphite	7782-42-5	No	No	Yes
Lead, powder	7439-92-1	No	Yes	Yes
Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	No	No	Yes
Sulfonic acid, petroleum, calcium salt	61789-86-4	No	Yes	Yes
Talc	14807-96-6	No	Yes	Yes

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

•Sulfonic acid, petroleum, calcium salt

61789-86-4 Not Listed
carcinogen, 2/21/2003
1333-86-4 (airborne, unbound particles of respirable size)

•Carbon Black

7439-92-1 carcinogen, 10/1/1992

•Lead, powder

14807-96-6 Not Listed

•Talc

471-34-1 Not Listed

•Calcium monocarbonate

7782-42-5 Not Listed

•Graphite

•Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Not Listed
•Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Not Listed
•Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
•Sulfonic acid, petroleum, calcium salt	61789-86-4	Not Listed
•Carbon Black	1333-86-4	Not Listed
•Lead, powder	7439-92-1	developmental toxicity, 2/27/1987
•Talc	14807-96-6	Not Listed
•Calcium monocarbonate	471-34-1	Not Listed
•Graphite	7782-42-5	Not Listed
•Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Not Listed
•Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Not Listed
•Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
•Sulfonic acid, petroleum, calcium salt	61789-86-4	Not Listed
•Carbon Black	1333-86-4	Not Listed
•Lead, powder	7439-92-1	0.5 µg/day MADL
•Talc	14807-96-6	Not Listed
•Calcium monocarbonate	471-34-1	Not Listed
•Graphite	7782-42-5	Not Listed
•Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Not Listed
•Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Not Listed
•Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
•Sulfonic acid, petroleum, calcium salt	61789-86-4	Not Listed
•Carbon Black	1333-86-4	Not Listed
•Lead, powder	7439-92-1	15 µg/day NSRL (oral)
•Talc	14807-96-6	Not Listed
•Calcium monocarbonate	471-34-1	Not Listed
•Graphite	7782-42-5	Not Listed
•Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Not Listed
•Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Not Listed
•Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
•Sulfonic acid, petroleum, calcium salt	61789-86-4	Not Listed
•Carbon Black	1333-86-4	Not Listed
•Lead, powder	7439-92-1	female reproductive toxicity 2/27/87
•Talc	14807-96-6	Not Listed
•Calcium monocarbonate	471-34-1	Not Listed
•Graphite	7782-42-5	Not Listed
•Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Not Listed
•Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Not Listed
•Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
•Sulfonic acid, petroleum, calcium salt	61789-86-4	Not Listed
•Carbon Black	1333-86-4	Not Listed
•Lead, powder	7439-92-1	male reproductive toxicity, 2/27/87
•Talc	14807-96-6	Not Listed
•Calcium monocarbonate	471-34-1	Not Listed
•Graphite	7782-42-5	Not Listed
•Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	Not Listed
•Benzenesulfonic acid, dodecyl-, calcium salt	26264-06-2	Not Listed
•Mineral oil, petroleum distillates, solvent-refined (mild) heavy paraffinic	64741-88-4	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- **WARNING:** This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H350 - May cause cancer.
- H351 - Suspected of causing cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.

Revision Date

- 18/April/2018

Last Revision Date

- 26/June/2017

Preparation Date

- 26/June/2017

Disclaimer/Statement of Liability

- The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key to abbreviations

NDA = No Data Available