

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Caterpillar Hydraulic Hose
Version # 01
Issue date 08-17-2012
Revision date -
Supersedes date -
CAS # -
Product code -
Product use Industrial use.
Manufacturer information
Manufacturer Caterpillar Inc.
100 NE Adams Street
Peoria, IL 61629
Telephone number (309) 675-1000
Emergency telephone (800) 458-5924 in U.S. and Canada
(303) 893-1322 outside U.S. and Canada
Technical Information For technical information, contact your local Caterpillar dealer.
MSDS Information (309) 675-5182

2. Hazards Identification

Physical state Solid.
Appearance A black cylindrical solid hose, with a typical rubber odor.
Emergency overview This product is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard. In its manufactured and shipped state, this product is considered to present low hazard. Processing may generate hazardous fumes and dusts.
OSHA regulatory status Under some use conditions, this material may be considered to be hazardous in accordance with OSHA 29 CFR 1910.1200.
Potential health effects
Routes of exposure Eye contact. Skin contact. Inhalation.
Eyes Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eyes.
Skin Dust may irritate skin. The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals.
Inhalation Exposure to smoke or fumes evolved during cutting, machining, or grinding operations may cause sneezing or coughing, and irritate the nose, throat, and upper respiratory tract.
Ingestion Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.
Target organs Eyes. Lung.
Chronic effects Frequent inhalation of fume/dust over a long period of time increases the risk of developing lung diseases.
Signs and symptoms Mechanical irritation of skin, eyes and respiratory system. Dusts may irritate the respiratory tract, skin and eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
Potential environmental effects The product is not expected to be hazardous to the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Steel Wire	-	90
Polymerized Rubber	-	10

Constituents	CAS #	Percent
Steel Wire	*	100

Caterpillar Hydraulic Hose

CPH MSDS NA

907902 Version #: 01 Revision date: - Issue date: 08-17-2012

1 / 12

Constituents	CAS #	Percent
Iron	7439-89-6	>= 96
Molybdenum	7439-98-7	<= 1
Carbon	7440-44-0	<= 1
White phosphorus	7723-14-0	<= 1
Red phosphorus	7723-14-0	<= 1
Copper	7440-50-8	<= 1
Chromium	7440-47-3	<= 1
Silicon	7440-21-3	<= 1
Sulphur	7704-34-9	<= 1
Aluminium Powder	7429-90-5	0 - 1
Manganese	7439-96-5	0 - 1
Nickel	7440-02-0	0 - 1
Vanadium	7440-62-2	<= 0.5
Tin	7440-31-5	<= 0.5
Lead	7439-92-1	0 - 0.35

Monomer	CAS #	Percent
Polymerized Rubber	**	100
Carbon black	1333-86-4	30 - 60
Kaolin	1332-58-7	10 - 30
Paraffin waxes and Hydrocarbon waxes	8002-74-2	1 - 5
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	1 - 5
Zinc oxide	1314-13-2	1 - 5
Magnesium oxide	1309-48-4	1 - 5
Quartz	14808-60-7	0.1 - 1
Ethylene thiourea	96-45-7	0.1 - 1
Titanium dioxide	13463-67-7	0.1 - 1
Talc	14807-96-6	<= 0.5

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
All ingredients are bound in a cured polymer matrix and the potential for hazardous exposure as shipped is minimal. However, when performing cutting, machining, or grinding operations (end-user hose assembly fabrication) hazardous dust, smoke, and/or fumes may be released that require precautions.

4. First Aid Measures

First aid procedures

Eye contact

If exposed to fumes or smoke flush eyes with large amount of water for at least 15 minutes. Remove any contact lenses and open eyelids wide apart. Dust in the eyes: Do not rub eye. Flush thoroughly with water. If irritation occurs, get medical assistance.

Skin contact

Contact with dust: Wash contact areas with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area.

Inhalation

In case of inhalation of dust or fumes: Move injured person into fresh air and keep person calm under observation. For breathing difficulties, oxygen may be necessary. Get medical attention.

Ingestion

Not likely, due to the form of the product. However: Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.

Notes to physician

Treat symptomatically.

5. Fire Fighting Measures

Flammable properties

Will burn if involved in a fire.

Extinguishing media

Suitable extinguishing media Use extinguishing agent suitable for type of surrounding fire.

Unsuitable extinguishing media Water jet.

Protection of firefighters

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Fire fighting equipment/instructions

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

Hazardous combustion products

Decomposition of product during fire can generate dense black smoke, and may produce oxides of carbon, nitrogen, and complex aldehydes.

6. Accidental Release Measures

Personal precautions

Avoid generation and spreading of dust. Avoid inhalation of dust and fumes. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions

Avoid spreading dust or contaminated materials.

Methods for cleaning up

Solid material: Not applicable. Dust: Collect dust using a vacuum cleaner equipped with HEPA filter. Collect in approved containers and seal securely. Containers must be labeled. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling

Use work methods which minimize dust production. If dust or fumes are generated during use, use local exhaust in combination with general ventilation as necessary to remove fumes/dust from the workers' breathing zone and to ensure exposures do not exceed applicable limits. Do not breathe fumes and dusts. Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Keep the workplace clean. Observe good industrial hygiene practices.

Storage

Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Constituents	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0.05 mg/m ³	
Aluminium Powder (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
Carbon (CAS 7440-44-0)	TWA	2 mg/m ³	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m ³	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m ³	
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m ³	Inhalable fraction.
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m ³	Respirable fraction.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m ³	Inhalable fraction.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Inhalable fraction.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	TWA	2 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Respirable fraction.
	TWA	2 mg/m ³	Respirable fraction.

US. ACGIH Threshold Limit Values

Monomer	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Constituents	Type	Value
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Constituents	Type	Value	Form
Aluminium Powder (CAS 7429-90-5)	PEL	5 mg/m3	Respirable dust.
Carbon (CAS 7440-44-0)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Chromium (CAS 7440-47-3)	PEL	1 mg/m3	
Manganese (CAS 7439-96-5)	Ceiling	5 mg/m3	Fume.
Nickel (CAS 7440-02-0)	PEL	1 mg/m3	
Monomer	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
Magnesium oxide (CAS 1309-48-4)	PEL	500 ppm	
		15 mg/m3	Total particulate.
Zinc oxide (CAS 1314-13-2)	PEL	5 mg/m3	Respirable fraction.
		5 mg/m3	Fume.
		15 mg/m3	Total dust.
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Constituents	Type	Value	Form
Carbon (CAS 7440-44-0)	TWA	15 mppcf	
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		20 mppcf	
		2.4 mppcf	Respirable.
Quartz (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Constituents	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Aluminium Powder (CAS 7429-90-5)	TWA	5 mg/m3	Pyrophoric powder.
		10 mg/m3	Dust.
Carbon (CAS 7440-44-0)	TWA	2 mg/m3	Respirable.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Constituents	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m3	
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m3	
Sulphur (CAS 7704-34-9)	TWA	10 mg/m3	
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable particles.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable particles.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Fume.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable.
	TWA	2 mg/m3	Respirable.
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m3	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Constituents	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	
Aluminium Powder (CAS 7429-90-5)	TWA	1 mg/m3	Respirable.
Carbon (CAS 7440-44-0)	TWA	2 mg/m3	Respirable.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m3	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m3	
Nickel (CAS 7440-02-0)	TWA	0.05 mg/m3	
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable.
Magnesium oxide (CAS 1309-48-4)	STEL	10 mg/m3	Respirable dust and/or fume.
	TWA	3 mg/m3	Respirable dust and/or fume.
		10 mg/m3	Inhalable fume.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable.
	TWA	2 mg/m3	Respirable.
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Constituents	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0.05 mg/m3	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Constituents	Type	Value	Form
Aluminium Powder (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.
Carbon (CAS 7440-44-0)	TWA	2 mg/m ³	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m ³	
Manganese (CAS 7439-96-5)	TWA	0.2 mg/m ³	
Nickel (CAS 7440-02-0)	TWA	1 mg/m ³	Inhalable
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	2 fibers/ml 2 mg/m ³	Respirable particles. Respirable.
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m ³	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m ³	Respirable fraction.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Inhalable fraction.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	TWA	2 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Respirable fraction.
	TWA	2 mg/m ³	Respirable fraction.
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Constituents	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0.05 mg/m ³	
Aluminium Powder (CAS 7429-90-5)	TWA	5 mg/m ³	Welding fume.
		10 mg/m ³	
Carbon (CAS 7440-44-0)	TWA	2 mg/m ³	Respirable dust.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m ³	
Manganese (CAS 7439-96-5)	STEL	3 mg/m ³	Fume.
	TWA	5 mg/m ³	Dust.
		1 mg/m ³	Fume.
Nickel (CAS 7440-02-0)	TWA	1 mg/m ³	
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	3 mg/m ³	Respirable dust.
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m ³	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	Total dust.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m ³	Respirable dust.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Fume.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	TWA	2 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Fume.
	TWA	5 mg/m ³	Fume.
		10 mg/m ³	Total dust.
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³	

Mexico. Occupational Exposure Limit Values

Constituents	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0.15 mg/m ³	Dust and fume.
Aluminium Powder (CAS 7429-90-5)	TWA	5 mg/m ³	Welding fume.
		5 mg/m ³	Pyrophoric powder.
		10 mg/m ³	Dust.
Carbon (CAS 7440-44-0)	TWA	10 mg/m ³	
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m ³	
Manganese (CAS 7439-96-5)	STEL	3 mg/m ³	Fume.
	TWA	1 mg/m ³	Fume.
		0.2 mg/m ³	
Nickel (CAS 7440-02-0)	TWA	1 mg/m ³	
Monomer	Type	Value	Form
Talc (CAS 14807-96-6)	TWA	2 fibers/cm ³	
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m ³	
Titanium dioxide (CAS 13463-67-7)	STEL	20 mg/m ³	
	TWA	10 mg/m ³	
Kaolin (CAS 1332-58-7)	STEL	20 mg/m ³	
	TWA	10 mg/m ³	
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Fume.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	STEL	6 mg/m ³	Fume.
	TWA	2 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Fume.
	TWA	5 mg/m ³	Fume.
		10 mg/m ³	Dust.
Carbon black (CAS 1333-86-4)	STEL	7 mg/m ³	
	TWA	3.5 mg/m ³	

Engineering controls

Mechanical ventilation or local exhaust ventilation is required. Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust. Provide access to washing facilities including soap, skin cleanser and fatty cream.

Personal protective equipment

Eye / face protection

Use tight fitting goggles if dust is generated by machining operation.

Skin protection

Risk of contact: Wear suitable protective gloves to prevent cuts and abrasions.

Respiratory protection

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Occupational Exposure Limit. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Use a NIOSH-approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CFR 1910.134, respiratory protection standard).

General hygiene considerations

Always observe national occupational health and hygiene requirements including requirements for medical surveillance. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Appearance	A black cylindrical solid hose, with a typical rubber odor.
Physical state	Solid.
Form	A black cylindrical solid hose.
Color	Black.

Odor	Rubber.
Odor threshold	Not available.
pH	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Boiling point	Not applicable.
Melting point/Freezing point	Not applicable.
Solubility (water)	Insoluble.
Specific gravity	Not applicable
Flash point	Not applicable.
Flammability limits in air, upper, % by volume	Not applicable.
Flammability limits in air, lower, % by volume	Not applicable.
Auto-ignition temperature	Not applicable.
Evaporation rate	Not applicable.
Partition coefficient (n-octanol/water)	Not applicable.
Bulk density	Not applicable.
Other data	
Decomposition temperature	Not applicable.
Explosive properties	Not applicable.
Flammability (solid, gas)	Will burn if involved in a fire.
Oxidizing properties	Not applicable.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid dust formation.
Incompatible materials	Strong oxidizing agents. Acids.
Hazardous decomposition products	Decomposition of product during fire can generate dense black smoke, and may produce oxides of carbon, nitrogen, and complex aldehydes.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Sensitization	The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals.
Acute effects	Not relevant, due to the form of the product in its manufactured and shipped state.
Local effects	Exposure to smoke or fumes evolved during cutting, machining, or grinding operations may cause sneezing or coughing, and irritate the nose, throat, and upper respiratory tract. May cause irritation through mechanical abrasion. Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eyes.
Chronic effects	Frequent inhalation of fume/dust over a long period of time increases the risk of developing lung diseases.
Carcinogenicity	Due to the form of the product, exposure to the potentially carcinogenic components is not expected.

ACGIH Carcinogens

Carbon black (CAS 1333-86-4)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	A4 Not classifiable as a human carcinogen.
Kaolin (CAS 1332-58-7)	A4 Not classifiable as a human carcinogen.
Magnesium oxide (CAS 1309-48-4)	A4 Not classifiable as a human carcinogen.
Quartz (CAS 14808-60-7)	A2 Suspected human carcinogen.
Talc (CAS 14807-96-6)	A4 Not classifiable as a human carcinogen.

Titanium dioxide (CAS 13463-67-7)	A4 Not classifiable as a human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Ethylene thiourea (CAS 96-45-7)	3 Not classifiable as to carcinogenicity to humans.
Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.
Talc (CAS 14807-96-6)	2B Possibly carcinogenic to humans.
	3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.
US NTP Report on Carcinogens: Anticipated carcinogen	
Ethylene thiourea (CAS 96-45-7)	Reasonably Anticipated to be a Human Carcinogen.
US NTP Report on Carcinogens: Known carcinogen	
Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.

Mutagenicity	No data available.
Reproductive effects	Contains a substance which may have a reproductive effect.
Symptoms and target organs	Mechanical irritation of skin, eyes and respiratory system. Exposed individuals may experience eye tearing, redness, and discomfort.
Further information	Persons with a history of chronic lung disease may be at increased risk from exposure to excess quantities of any material in smoke or dust form.

12. Ecological Information

Ecotoxicological data

Constituents	Species		Test Results
Steel Wire (CAS *)			
Aquatic			
Crustacea	EC50	Daphnia	93.3333 mg/l, 48 hours, estimated
Fish	LC50	Fish	291.138 mg/l, 96 hours, estimated
Ecotoxicity	The product is not expected to be hazardous to the environment. Zinc in form of particles or dust is very toxic to aquatic organisms and may cause long-term adverse effects in the environment.		
Persistence and degradability	Not relevant.		
Bioaccumulation / Accumulation	Not relevant.		
Partition coefficient	Not applicable.		
Ethylene thiourea			-0.66
Mobility in environmental media	Not relevant, due to the form of the product.		

13. Disposal Considerations

Waste codes	Not regulated.
Disposal instructions	Dispose of waste and residues in accordance with local authority requirements. Waste must be kept in sealed and labeled containers. Recover and reclaim or recycle, if practical.
Waste from residues / unused products	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
Contaminated packaging	Dispose product packaging in accordance with local authority requirements taking into account characteristics of the packaging material.

14. Transport Information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations Under some use conditions, this material may be considered to be hazardous in accordance with OSHA 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethylene thiourea (CAS 96-45-7)

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ethylene thiourea (CAS 96-45-7) 0.1 %

0.1 %

Zinc oxide (CAS 1314-13-2) 1.0 % N982

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethylene thiourea (CAS 96-45-7) Listed.

Listed.

Zinc oxide (CAS 1314-13-2) N982 Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A) No

Section 311/312 (40 CFR 370) No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15) Not controlled

Canadian regulations This product is not classified according to WHMIS classification criteria.

WHMIS status Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

State regulations

US - California Hazardous Substances (Director's): Listed substance

Carbon black (CAS 1333-86-4) Listed.

Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Listed.

Ethylene thiourea (CAS 96-45-7) Listed.

Listed.

Magnesium oxide (CAS 1309-48-4) Listed.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2) Listed.
Talc (CAS 14807-96-6) Listed.
Zinc oxide (CAS 1314-13-2) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Carbon black (CAS 1333-86-4) Listed.
Ethylene thiourea (CAS 96-45-7) Listed.
Quartz (CAS 14808-60-7) Listed.
Titanium dioxide (CAS 13463-67-7) Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon black (CAS 1333-86-4) Listed: February 21, 2003 Carcinogenic.
Ethylene thiourea (CAS 96-45-7) Listed: January 1, 1988 Carcinogenic.
Quartz (CAS 14808-60-7) Listed: January 1, 1988 Carcinogenic.
Titanium dioxide (CAS 13463-67-7) Listed: October 1, 1988 Carcinogenic.
Titanium dioxide (CAS 13463-67-7) Listed: September 2, 2011 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene thiourea (CAS 96-45-7) Listed: January 1, 1993 Developmental toxin.
Listed: January 1, 1993 Developmental toxin.

US - New Jersey RTK - Substances: Listed substance

Carbon black (CAS 1333-86-4) Listed.
Ethylene thiourea (CAS 96-45-7) Listed.
Kaolin (CAS 1332-58-7) Listed.
Magnesium oxide (CAS 1309-48-4) Listed.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2) Listed.
Quartz (CAS 14808-60-7) Listed.
Talc (CAS 14807-96-6) Listed.
Titanium dioxide (CAS 13463-67-7) Listed.
Zinc oxide (CAS 1314-13-2) Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Ethylene thiourea (CAS 96-45-7) Special hazard.
Special hazard.

US. Massachusetts RTK - Substance List

Carbon black (CAS 1333-86-4) Listed.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Listed.
Ethylene thiourea (CAS 96-45-7) Listed.
Kaolin (CAS 1332-58-7) Listed.
Magnesium oxide (CAS 1309-48-4) Listed.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2) Listed.
Quartz (CAS 14808-60-7) Listed.
Talc (CAS 14807-96-6) Listed.
Titanium dioxide (CAS 13463-67-7) Listed.
Zinc oxide (CAS 1314-13-2) Listed.

US. New Jersey Worker and Community Right-to-Know Act

Ethylene thiourea (CAS 96-45-7) 500 LBS
500 LBS
Zinc oxide (CAS 1314-13-2) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

Carbon black (CAS 1333-86-4) Listed.
Ethylene thiourea (CAS 96-45-7) Listed.
Kaolin (CAS 1332-58-7) Listed.
Magnesium oxide (CAS 1309-48-4) Listed.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2) Listed.
Quartz (CAS 14808-60-7) Listed.
Talc (CAS 14807-96-6) Listed.
Titanium dioxide (CAS 13463-67-7) Listed.
Zinc oxide (CAS 1314-13-2) Listed.

Mexico regulations

Under some use conditions, this material may be considered to be hazardous in accordance with Mexican regulations.

16. Other Information

Further information

HMIS® is a registered trade and service mark of the NPCA.
B - Safety Glasses, Gloves

HMIS® ratings

Health: 1*
Flammability: 0
Physical hazard: 0
Personal protection: B

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.