SAFETY DATA SHEET

1. Identification

Material name: Alumanation® 301
Material: 301050A

Recommended use and restriction on use

Recommended use: Coatings
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
Tremco U.S. Roofing
3735 Green Road
Beachwood OH 44122
US

Contact person:	EH&S Department
Telephone:	216-292-5000
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 3

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1B
Specific Target Organ Toxicity - Repeated Exposure	Category 1[1.]

Target Organs

1. Central nervous system

Unknown toxicity - Health

Acute toxicity, oral	28.85 %
Acute toxicity, dermal	29.83 %
Acute toxicity, inhalation, vapor	77.38 %
Acute toxicity, inhalation, dust or mist	82.62 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
Chronic hazards to the aquatic environment	Category 3

Unknown toxicity - Environment

Acute hazards to the aquatic environment	77.34 %
Chronic hazards to the aquatic environment	77.34 %

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement: Flammable liquid and vapor.
Causes serious eye irritation.
May cause genetic defects.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
Harmful 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin 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. Use personal protective equipment as required.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Stoddard solvent (Mineral Spirits)	8052-41-3	20 - <50%
Oxidized asphalt	64742-93-4	10 - <20%
Asphalt	8052-42-4	10 - <20%
Aluminum	7429-90-5	10 - <20%
Naphtha, petroleum, hydrodesulfurized heavy	64742-82-1	5 - <10%
Cellulose	9004-34-6	1 - <5%
Perlite	93763-70-3	1 - <5%
Nonane	111-84-2	1 - <5%
Mica	12001-26-2	1 - <5%
Amorphous silica	7631-86-9	1 - <5%
Trimethyl benzene (mixed isomers)	25551-13-7	0.1 - <1%
Clay	1332-58-7	0.1 - <1%
1,2,4-Trimethylbenzene	95-63-6	0.1 - <1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Description of necessary first-aid measures

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Ingestion: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Personal Protection for First-aid Responders: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Most important symptoms/effects, acute and delayed

Symptoms: Respiratory tract irritation.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards:	Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Specific hazards arising from the chemical:	Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
Accidental release measures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Safe handling advice: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges.Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Contact avoidance measures: No data available.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. When using do not smoke.

Storage

Safe storage conditions: Store locked up. Store in a well-ventilated place. Store in a cool place.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Stoddard solvent (Mineral Spirits)	TWA	100 ppm	US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	500 ppm 2,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Asphalt - Inhalable fume. - as benzene solubles	TWA	0.5 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2018)
Aluminum - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values, as amended (2011)
Aluminum - Total dust. - as Al	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Aluminum - Respirable fraction. - as Al	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (03 2016)
Aluminum - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Aluminum - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Naphtha, petroleum, hydrodesulfurized heavy	TWA	100 ppm	US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	500 ppm 2,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Cellulose	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (2011)
Cellulose - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air

			Contaminants (29 CFR 1910.1000), as amended (02 2006)
Cellulose - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Perlite - Respirable particles.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2016)
Perlite - Inhalable particles.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2016)
Perlite - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Perlite - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Perlite - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Perlite - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Nonane	TWA	200 ppm	US. ACGIH Threshold Limit Values, as amended (02 2012)
Mica - Respirable fraction.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (2011)
Mica	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)
Amorphous silica	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)
	TWA	0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)
Trimethyl benzene (mixed isomers)	TWA	25 ppm	US. ACGIH Threshold Limit Values, as amended (2011)
Clay - Respirable fraction.	TWA	2 mg/m3	US. ACGIH Threshold Limit Values, as amended (2011)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Clay - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Clay - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Clay - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
1,2,4-Trimethylbenzene	REL	25 ppm 125 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	TWA	25 ppm 125 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	25 ppm 125 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
	AN ESL	25 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)
	ST ESL	140 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (02 2013)

	ST ESL	700 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (02 2013)
	AN ESL	125 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)
	TWA PEL	25 ppm 125 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (08 2010)
	TWA	25 ppm	US. ACGIH Threshold Limit Values, as amended (2008)

Chemical name	**Type**	**Exposure Limit Values**	**Source**
Stoddard solvent (Mineral Spirits)	STEL	580 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	290 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Stoddard solvent (Mineral Spirits)	TWA	100 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm	525 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Asphalt - Aerosol, inhalable. - as benzene solubles	TWA		0.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Asphalt - Inhalable fraction. - as benzene solubles	TWA		0.5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Asphalt - Fume.	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum - Respirable.	TWA		1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Aluminum - Respirable fraction.	TWA		1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Aluminum	TWA		10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum - as Al	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum - Welding fume. - as Al	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Amorphous silica - Total	TWA		4 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable.	TWA		1.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable dust.	TWA		6 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Perlite - Total dust.	TWA		10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Perlite - Respirable fraction.	TWA		3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Perlite - Inhalable fraction.	TWA		10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Perlite - Respirable fraction.	TWA		3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Perlite - Total dust.	TWA		10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Cellulose - Respirable fraction.	TWA		3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Cellulose - Total dust.	TWA		10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Cellulose	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Cellulose - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Petroleum distillates	TWA	525 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
	TWA	200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Mica - Respirable.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Mica - Respirable fraction.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Mica - Respirable dust.	TWA	3 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
1,2,4-Trimethylbenzene	TWA	25 ppm 123 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
1,2,4-Trimethylbenzene	TWA	25 ppm 123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

Chemical name	**Type**	**Exposure Limit Values**	**Source**
Stoddard solvent (Mineral Spirits)	STEL	580 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	290 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Stoddard solvent (Mineral Spirits)	TWA	100 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm	525 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Asphalt - Aerosol, inhalable. - as benzene solubles	TWA		0.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Asphalt - Inhalable fraction. - as benzene solubles	TWA		0.5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Asphalt - Fume.	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum - Respirable.	TWA		1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Aluminum - Respirable fraction.	TWA		1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Aluminum	TWA		10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum - as Al	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum - Welding fume. - as Al	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Naphtha, petroleum, hydrodesulfurized heavy	STEL		580 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Naphtha, petroleum, hydrodesulfurized heavy	TWA		525 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (12 2007)
	TWA	100 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
	TWA		290 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Naphtha, petroleum, hydrodesulfurized heavy	TWA	100 ppm 525 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Cellulose - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Cellulose - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Cellulose	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Cellulose - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Perlite - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Perlite - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Perlite - Inhalable fraction.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Perlite - Respirable fraction.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Perlite - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Nonane	TWA	200 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Nonane	TWA	200 ppm 1,050 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (12 2008)
Nonane	TWA	200 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Mica - Respirable.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Mica - Respirable fraction.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Mica - Respirable dust.	TWA	3 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Amorphous silica - Total	TWA	4 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable.	TWA	1.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable dust.	TWA	6 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Trimethyl benzene (mixed isomers)	TWA	25 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation

				296/97, as amended) (07 2007)
Trimethyl benzene (mixed isomers)	TWA	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Trimethyl benzene (mixed isomers)	TWA	25 ppm	123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Clay - Respirable.	TWA		2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Clay - Respirable dust.	TWA		5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Clay - Respirable fraction.	TWA		2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (08 2017)
1,2,4-Trimethylbenzene	TWA	25 ppm	123 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)
1,2,4-Trimethylbenzene	TWA	25 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,2,4-Trimethylbenzene	TWA	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
1,2,4-Trimethylbenzene	TWA	25 ppm	123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Xylene	TWA	100 ppm	434 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)
	STEL	150 ppm	651 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)
Xylene	TWA	100 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	150 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Xylene	TWA	100 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
	STEL	150 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Xylene	STEL	150 ppm	651 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	TWA	100 ppm	434 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Naphthalene	STEL	15 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Naphthalene	TWA	10 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Naphthalene	TWA	10 ppm	52 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	STEL	15 ppm	79 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Ethylbenzene	TWA	20 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)
Ethylbenzene	TWA	20 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Ethylbenzene	STEL	125 ppm	543 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	TWA	100 ppm	434 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA		0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA		0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA		0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Butylated hydroxytoluene - Vapor and aerosol, inhalable.	TWA		2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Butylated hydroxytoluene - Inhalable fraction and vapor.	TWA		2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Butylated hydroxytoluene	TWA		10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information:

Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. 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. Use explosion-proof ventilation equipment.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection:

Use suitable protective gloves if risk of skin contact.

Other:

Wear suitable protective clothing.

Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. When using do not smoke.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	Viscous Liquid
Color:	Gray
Odor:	Mild petroleum/solvent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	155 °C 311 °F
Flash Point:	41 °C 105 °F(Tag closed cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	7 %(V)
Flammability limit - lower (%):	0.90 %(V)
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.001
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.

Conditions to avoid:	Heat, sparks, flames.
Incompatible Materials:	Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates).
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	May be harmful in contact with skin. Causes mild skin irritation.
Eye contact:	Causes serious eye irritation.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product:

Specified substance(s):

Oxidized asphalt	LD 50 (Rat): > 5,000 mg/kg
Asphalt	LD 50 (Rat): > 5,000 mg/kg
Naphtha, petroleum, hydrodesulfurized heavy	LD 50 (Rat): > 5,000 mg/kg
Cellulose	LD 50 (Rat): 5,001 mg/kg
Perlite	LD 50 (Rat): 5,001 mg/kg
Nonane	LD 50 (Rat): > 5,000 mg/kg
Trimethyl benzene (mixed isomers)	LD 50 (Rat): 8,970 mg/kg
Clay	LD 50 (Rat): > 5,000 mg/kg
1,2,4-Trimethylbenzene	LD 50 (Rat): 3,280 mg/kg

Dermal
Product: ATEmix: 3,165.07 mg/kg

Inhalation
Product: ATEmix: 32.36 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):

Oxidized asphalt	in vivo (Rabbit): Not irritant , 24 - 72 h
Asphalt	in vivo (Rabbit): Not irritant , 24 - 72 h
Naphtha, petroleum, hydrodesulfurized heavy	in vivo (Rabbit): Irritating , 24 h
Nonane	in vivo (Rabbit): Irritating , 72 h
Amorphous silica	in vivo (Rabbit): Not irritant , 24 h
1,2,4-Trimethylbenzene	in vivo (Rabbit): Irritating , 24 - 72 h

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Oxidized asphalt	Rabbit, 24 hrs: Not irritating
Asphalt	Rabbit, 24 hrs: Not irritating
Naphtha, petroleum, hydrodesulfurized heavy	Rabbit, 24 - 72 hrs: Not irritating
Nonane	Rabbit, 24 - 72 hrs: Not irritating
1,2,4-Trimethylbenzene	Rabbit, 30 min: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: May cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Oxidized asphalt	Overall evaluation: Probably carcinogenic to humans.
Asphalt	Overall evaluation: Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Target Organs
Specific Target Organ Toxicity - Repeated Exposure: Central nervous system

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):

1,2,4-Trimethylbenzene	LC 50 (Pimephales promelas, 96 h): 7.72 mg/l Experimental result, Key study

Aquatic Invertebrates
Product: No data available.

Specified substance(s):

Stoddard solvent (Mineral Spirits)	LC 50 (Daphnia magna, 48 h): 0.42 - 2.3 mg/l
Naphtha, petroleum, hydrodesulfurized heavy	EC 50 (Daphnia magna, 48 h): 4.5 mg/l Experimental result, Key study

Trimethyl benzene (mixed isomers)	LC 50 (Daggerblade grass shrimp (Palaemonetes pugio), 24 h): 7 mg/l Mortality
1,2,4-Trimethylbenzene	LC 50 (Daphnia magna, 48 h): 3.6 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Oxidized asphalt	LL 50 (Oncorhynchus mykiss, 28 d): > 1,000 mg/l QSAR QSAR, Key study NOAEL (Oncorhynchus mykiss, 28 d): >= 1,000 mg/l QSAR QSAR, Key study
Asphalt	NOAEL (Oncorhynchus mykiss, 28 d): >= 1,000 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study LL 50 (Oncorhynchus mykiss, 28 d): > 1,000 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study
Naphtha, petroleum, hydrodesulfurized heavy	NOAEL (Daphnia magna): 2.6 mg/l Other, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Naphtha, petroleum, hydrodesulfurized heavy	NOAEL (Daphnia magna): 2.6 mg/l Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Naphtha, petroleum, hydrodesulfurized heavy	79.22 % Detected in water. Experimental result, Supporting study 94 % (25 d) Detected in water. Experimental result, Supporting study 1.39 % Detected in water. Experimental result, Supporting study 90.35 % (28 d) Detected in water. Experimental result, Supporting study 74.76 % Detected in water. Experimental result, Supporting study
1,2,4-Trimethylbenzene	100 % (28 d) Detected in water. Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study 96 % (13 d) Detected in water. Experimental result, Weight of Evidence study 50 % (4.39 d) Detected in water. QSAR, Weight of Evidence study 87.8 % Detected in water. Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study 34.7 % Detected in water. Experimental result, Weight of Evidence study

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Naphtha, petroleum, hydrodesulfurized heavy	Bioconcentration Factor (BCF): 10 - 2,500 Aquatic sediment Estimated by calculation, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Nonane	Log Kow: 5.65
1,2,4-Trimethylbenzene	Log Kow: 3.78

Mobility in soil: No data available.

Other adverse effects: Harmful to aquatic life with long lasting effects.

13. Disposal considerations

Disposal methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

UN1999, TARS, LIQUID, 3, PG III

CFR / DOT:

UN1999, Tars, liquid, 3, PG III

IMDG:

UN1999, TARS, LIQUID, 3, PG III

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

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

Chemical Identity	Reportable quantity
Nonane	De minimis concentration: TSCA 4% One-Time Export Notification only.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

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

Chemical Identity	OSHA hazard(s)
Crystalline Silica (Quartz)/ Silica Sand	kidney effects lung effects immune system effects Cancer

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Asphalt	100 lbs.
Nonane	100 lbs.
Xylene	100 lbs.
Naphthalene	100 lbs.
Ethylbenzene	1000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Germ Cell Mutagenicity
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)
Hazards Not Otherwise Classified (HNOC)

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity

SARA 313 (TRI Reporting)

Chemical Identity
Aluminum

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Chemical Identity	Reportable quantity
Xylene	Reportable quantity: lbs.

US State Regulations

US. California Proposition 65

WARNING
Cancer - www.P65Warnings.ca.gov

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

Chemical Identity
Stoddard solvent (Mineral Spirits)
Oxidized asphalt
Asphalt
Aluminum
Naphtha, petroleum, hydrodesulfurized heavy
Cellulose
Perlite
Nonane
Mica
Amorphous silica

US. Massachusetts RTK - Substance List

Chemical Identity
Stoddard solvent (Mineral Spirits)
Asphalt
Naphtha, petroleum, hydrodesulfurized heavy
Cellulose
Perlite
Nonane
Mica
Amorphous silica
Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Stoddard solvent (Mineral Spirits)
Oxidized asphalt
Asphalt
Aluminum
Naphtha, petroleum, hydrodesulfurized heavy
Cellulose
Perlite
Nonane
Mica
Amorphous silica

US. Rhode Island RTK

Chemical Identity
Stoddard solvent (Mineral Spirits)
Asphalt
Naphtha, petroleum, hydrodesulfurized heavy
Cellulose
Perlite
Nonane
Mica

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

VOC:

Regulatory VOC (less water and exempt solvent)	:	295 g/l
VOC Method 310	:	29.44 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Ontario Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Mexico INSQ:	One or more components in this product are not listed on or exempt from the Inventory.
Taiwan Chemical Substance Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	05/17/2021
Version #:	1.1
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.