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SAFETY DATA SHEET

1. Identification

Product identifier: FSR20 FLEX SEAL LIQUID RUBBER SEALANT COATING

Other means of identification

SDS number: RE1000030030

Recommended restrictions

Product Use: Coating Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: SWIFT RESPONSE, LLC Address: 2690 WESTON RD.

WESTON, FL 33331

Telephone: 800-307-6201

Fax:

Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol Category 1
Gases under pressure Liquefied gas

Health Hazards

Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2A
Germ Cell Mutagenicity Category 1B
Carcinogenicity Category 1B
Toxic to reproduction Category 2
Specific Target Organ Toxicity - Category 3¹

Single Exposure

Specific Target Organ Toxicity - Category 2

Repeated Exposure

Aspiration Hazard Category 1

Target Organs

1. Narcotic effect.

Environmental Hazards

Acute hazards to the aquatic Category 2

environment

Label Elements

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Hazard Symbol:



Signal Word: Danger

Hazard Statement: Extremely flammable aerosol.

Causes skin irritation.

Causes serious eye irritation. May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

Toxic to aquatic life.

Contains gas under pressure; may explode if heated.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the

environment.

Response: IF INHALED: Remove person to fresh air and keep comfortable for

breathing. 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 ON SKIN: Wash with plenty of water If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Specific

treatment (see on this label). Take off contaminated clothing.

Storage: Protect from sunlight. Do not expose to temperatures exceeding

50°C/122°F. Store locked up. Store in a well-ventilated place. Keep

container tightly closed.

Disposal: Dispose of contents/container to an appropriate treatment and disposal

facility in accordance with applicable laws and regulations, and product

characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC):

None.

3. Composition/information on ingredients

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Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Benzene, methyl-	108-88-3	10 - <20%
Butane	106-97-8	10 - <20%
Naphtha (petroleum), heavy alkylate	64741-65-7	10 - <20%
Propane	74-98-6	5 - <10%
Distillates (petroleum), light distillate hydrotreating process, low-boiling	68410-97-9	1 - <5%
Limestone	1317-65-3	1 - <5%
Carbon black	1333-86-4	1 - <5%
Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-	5989-27-5	0.1 - <1%
Silica	7631-86-9	0.1 - <1%
Benzene, dimethyl-	1330-20-7	0.1 - <1%
White mineral oil (petroleum)	8042-47-5	0.1 - <1%
Aluminum oxide (Al2O3)	1344-28-1	0.1 - <1%
Acetic acid, butyl ester	123-86-4	0.1 - <1%
Stoddard solvent	8052-41-3	0.1 - <1%
Benzene, ethyl-	100-41-4	0.1 - <1%
Quartz (SiO2)	14808-60-7	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

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

Inhalation: Move to fresh air.

Skin Contact: Get medical attention. Destroy or thoroughly clean contaminated shoes.

Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction

develops, get medical attention.

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

remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: Use water spray to keep fire-exposed containers cool. Fight fire from a

protected location. Move containers from fire area if you can do so without

risk.

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Suitable (and unsuitable) extinguishing media

Suitable extinguishing

media:

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing

media:

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

the chemical:

Vapors may travel considerable distance to a source of ignition and flash

back.

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. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up:

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Notification Procedures:

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

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

Precautions for safe handling:

Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any

incompatibilities:

Store locked up. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 3

8. Exposure controls/personal protection

Control Parameters

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Occupational Exposure Limits

Chemical Identity	Туре	Exposure Lin	nit Values	Source
Benzene, methyl-	STEL	150 ppm	560 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	100 ppm	375 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	100 ppm	375 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	300 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	TWA	20 ppm		US. ÁCGIH Threshold Limit Values (2008)
	TWA	200 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	MAX. CONC	500 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	STEL	150 ppm	560 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Butane	REL	800 ppm	1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	1,000 ppm		US. ACGIH Threshold Limit Values (03 2018)
	TWA	800 ppm	1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Naphtha (petroleum), heavy alkylate	PEL	100 ppm	400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	100 ppm	400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	100 ppm	400 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Propane	REL	1,000 ppm	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm	1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm	1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Distillates (petroleum), light distillate hydrotreating process, low-boiling - Mist.	STEL		10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA		5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL		5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL		5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Limestone - Total	REL		10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Limestone - Respirable.	REL		5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Limestone - Respirable fraction.	PEL		5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Limestone - Total dust.	PEL		15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA		15 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Limestone - Respirable fraction.	TWA		5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Carbon black	REL		3.5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL		3.5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Carbon black - Inhalable fraction.	TWA		3 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Carbon black	TWA		3.5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Carbon black - as PAHs	REL		0.1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2016)
Silica	TWA		6 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA		20 millions of particles per	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
			cubic foot of air	(2000)

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REL	REL					
Benzene, dimethyl-	Benzene, dimethyl- STEL 150 ppm 655 mg/m3 US, CSHA Table Z-1-A (2 (1989) US, CSHA Table Z-1-A (2 (1989) US, CSHA Table Z-1-A (2 (1989) US, ACGIH Threshold Lir (1989) US, NIOSH: Pocket Guid Hazards (2005) US, CSHA Table Z-1 Lim (1989) US, CSHA Table Z-1 Lim (1989) US, CSHA Table Z-1 Lim (1989) US, ACGIH Threshold Lir (1989) US, CSHA Table Z-1 Lim (1989) US, CSHA Table		TWA		0.8 mg/m3	
Benzene, dimethyl-	STEL 150 ppm 655 mg/m3 US, CSHA Table Z-1-A (1989)		REL		6 mg/m3	
TWA	TWA	Benzene, dimethyl-	STEL	150 ppm	655 mg/m3	
REL	REL		TWA	100 ppm	435 mg/m3	
PEL	PEL		TWA	100 ppm		US. ACGIH Threshold Limit Values (2008)
STEL 150 ppm STEL STEL	STEL 150 ppm US. ACGIH Threshold Line US. OSHA Table Z-1-1-1 (2016) US. OSHA Table Z-1-1 (2016) US. OSHA Table Z-1-1-1 (201		REL	100 ppm	435 mg/m3	
STEL	STEL		PEL	100 ppm	435 mg/m3	
Milet mineral oil (petroleum)	White mineral oil (petroleum)		STEL	150 ppm		US. ACGIH Threshold Limit Values (2008)
White mineral oil (petroleum)	White mineral oil (petroleum)		STEL	150 ppm	655 mg/m3	
PEL	PEL S mg/m3		REL		5 mg/m3	US. NIOSH: Pocket Guide to Chemical
Hazards (2005)	Hazards (2005)		PEL		5 mg/m3	US. OSHA Table Z-1 Limits for Air
White mineral oil (petroleum)	White mineral oil (petroleum) - Inhalable fraction.		STEL		10 mg/m3	US. NIOSH: Pocket Guide to Chemical
Inhalable fraction.	Inhalable fraction.		TWA		5 mg/m3	
Aluminum oxide (Al2O3) - Respirable fraction. PEL 15 mg/m3 US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) US. ACGIH Threshold Limit Values (2009) US. ACGIH Threshold Limit Values (2009) US. ACGIH Threshold Limit Values (2008) US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-1-A (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-1-A (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-1-A (29 CFR 1910.1000) (03 2016) US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. ACGIH Threshold Limit Values (30 2016) US. ACGIH Threshold Limit Values (40 2008) US. ACGIH Threshold Limit Values (40 2008) US. ACGIH	Aluminum oxide (Al2O3) - Respirable fraction.		TWA		•	US. ACGIH Threshold Limit Values (01 2010)
Aluminum oxide (Al2O3) - PEL 15 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) US. ACGIH Threshold Limit Values (2009) US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-3 (29 CFR 1910.1000) (1980) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1980) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1980) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (1989) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (2006) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (2006) US. OSHA Table Z-1 Limits for Air Contamin	Aluminum oxide (Al2O3) - TWA	Aluminum oxide (Al2O3) -	TWA		5 mg/m3	(1989)
Aluminum oxide (Al2O3) - Respirable fraction.	Aluminum oxide (Al2O3) - Respirable fraction.	Aluminum oxide (Al2O3) -	PEL		15 mg/m3	
Aluminum oxide (Al2O3) - TWA	Aluminum oxide (Al2O3) - TWA		TWA		1 mg/m3	
Respirable fraction.	Respirable fraction.	Aluminum oxide (Al2O3) -	TWA		10 mg/m3	
Aluminum oxide (Al2O3) - TWA	Aluminum oxide (Al2O3) - TWA		PEL		5 mg/m3	
Aluminum oxide (Al2O3) - Respirable fraction.	Aluminum oxide (Al2O3) - Respirable fraction.		TWA		particles per cubic foot of	
TWA	TWA		TWA		15 millions of particles per cubic foot of	
Aluminum oxide (Al2O3) - Total dust.	Aluminum oxide (Al2O3) - Total dust.		TWA			
Acetic acid, butyl ester	Acetic acid, butyl ester REL		TWA		15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03
TWA 150 ppm 710 mg/m3 US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) PEL 150 ppm 710 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) TWA 50 ppm US. ACGIH Threshold Limit Values (03 2016) STEL 200 ppm 950 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005) STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) STEL 150 ppm US. ACGIH Threshold Limit Values (03 2016) Stoddard solvent TWA 100 ppm US. ACGIH Threshold Limit Values (2008) REL 350 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guide to Chemical	TWA		REL	150 ppm	710 mg/m3	US. NIOSH: Pocket Guide to Chemical
PEL	PEL		TWA	150 ppm	710 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000)
TWA 50 ppm US. ACGIH Threshold Limit Values (03 2016) STEL 200 ppm 950 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005) STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) STEL 150 ppm US. ACGIH Threshold Limit Values (03 2016) Stoddard solvent TWA 100 ppm US. ACGIH Threshold Limit Values (2008) REL 350 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guide to Chemical	TWA 50 ppm US. ACGIH Threshold Lir STEL 200 ppm 950 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (2 (1989) STEL 150 ppm US. ACGIH Threshold Lir Stoddard solvent TWA 100 ppm US. ACGIH Threshold Lir REL 350 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Lim Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (2005) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) TWA 100 ppm 525 mg/m3 US. OSHA Table Z-1-A (2 (1989) Benzene, ethyl- STEL 125 ppm 545 mg/m3 US. NIOSH: Pocket Guid		PEL	150 ppm	710 mg/m3	US. OSHA Table Z-1 Limits for Air
Hazards (2005) STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) STEL 150 ppm US. ACGIH Threshold Limit Values (03 2016) Stoddard solvent TWA 100 ppm US. ACGIH Threshold Limit Values (2008) REL 350 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guide to Chemical	Hazards (2005) STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (2 (1989)) STEL 150 ppm US. ACGIH Threshold Lir Stoddard solvent TWA 100 ppm US. ACGIH Threshold Lir REL 350 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Lim Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (2005) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) TWA 100 ppm 525 mg/m3 US. OSHA Table Z-1-A (2 (1989)) Benzene, ethyl- STEL 125 ppm 545 mg/m3 US. NIOSH: Pocket Guid		TWA	50 ppm		
STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)	STEL 200 ppm 950 mg/m3 US. OSHA Table Z-1-A (2 (1989) STEL 150 ppm US. ACGIH Threshold Lir Stoddard solvent TWA 100 ppm US. ACGIH Threshold Lir REL 350 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Lim Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (2005) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) TWA 100 ppm 525 mg/m3 US. OSHA Table Z-1-A (2 (1989)) Benzene, ethyl- STEL 125 ppm 545 mg/m3 US. NIOSH: Pocket Guid				950 mg/m3	
STEL 150 ppm US. ACGIH Threshold Limit Values (03 2016) Stoddard solvent TWA 100 ppm US. ACGIH Threshold Limit Values (2008) REL 350 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guide to Chemical	STEL 150 ppm US. ACGIH Threshold Ling		STEL	200 ppm	950 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000)
Stoddard solvent	Stoddard solvent TWA 100 ppm US. ACGIH Threshold Lir REL 350 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Lim Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (29 CFR 1: Contaminants (2005) Ceil_Time 1,800 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) TWA 100 ppm 525 mg/m3 US. OSHA Table Z-1-A (2 (1989)) Benzene, ethyl- STEL 125 ppm 545 mg/m3 US. NIOSH: Pocket Guid		STEL	150 ppm		
REL 350 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards (2005)	REL 350 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) PEL 500 ppm 2,900 mg/m3 US. OSHA Table Z-1 Lim Contaminants (29 CFR 1:	Stoddard solvent	TWA	100 ppm		US. ACGIH Threshold Limit Values (2008)
Contaminants (29 CFR 1910.1000) (02 2006) Ceil_Time	Contaminants (29 CFR 19 1,800 mg/m3 US. NIOSH: Pocket Guid Hazards (2005) TWA 100 ppm 525 mg/m3 US. OSHA Table Z-1-A (2005) US. OSHA Table Z-1-A (2005) US. OSHA Table Z-1-A (2005) US. NIOSH: Pocket Guid (1989) US. NIOSH: Pocket Guid		REL			Hazards (2005)
	Hazards (2005) TWA			500 ppm		Contaminants (29 CFR 1910.1000) (02 2006)
	(1989) (1989)					US. NIOSH: Pocket Guide to Chemical Hazards (2005)
(1989)						(1989)
		Benzene, ethyl-			_	Hazards (2005)
		-	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical

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	DEI	100 nn==	12E m =/m 2	Hazards (2005)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	125 ppm	545 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	20 ppm		US. ACGIH Threshold Limit Values (12 2010)
Quartz (SiO2) - Respirable dust.	REL		0.05 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Quartz (SiO2) - Respirable.	TWA		2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA		0.1 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Quartz (SiO2) - Respirable fraction.	TWA		0.025 mg/m3	US. ACGIH Threshold Limit Values (2008)
Quartz (SiO2) - Respirable dust.	TWA		0.1 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Quartz (SiO2) - Respirable dust.	TWA		0.05 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
Quartz (SiO2) - Respirable dust.	PEL		0.05 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
Quartz (SiO2) - Respirable dust.	OSHA_AC T		0.025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
Benzene, (1-methylethyl)-	REL	50 ppm	245 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	50 ppm		US. ACGIH Threshold Limit Values (2008)
	PEL	50 ppm	245 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	50 ppm	245 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1 ppm		US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values (03 2018)
Benzene	REL	0.1 ppm		US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	1 ppm		US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	25 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	TWA	0.5 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	2.5 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	5 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	OSHA_AC T	0.5 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	TWA	10 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	MAX. CONC	50 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	STEL	5 ppm		US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	STEL	1 ppm		US. NIOSH: Pocket Guide to Chemical Hazards (2005)

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Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Benzene, methyl- (toluene: Sampling time: End of shift.)	0.03 mg/l (Urine)	ACGIH BEL (03 2013)
Benzene, methyl- (o-Cresol, with hydrolysis: Sampling time: End of shift.)	0.3 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)
Benzene, methyl- (toluene: Sampling time: Prior to last shift of work week.)	0.02 mg/l (Blood)	ACGIH BEL (03 2013)
Benzene, dimethyl- (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/g (Creatinine in urine)	ACGIH BEL (03 2013)
Benzene, ethyl- (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)	0.15 g/g (Creatinine in urine)	ACGIH BEL (02 2014)
Benzene (S- Phenylmercapturic acid: Sampling time: End of shift.)	25 μg/g (Creatinine in urine)	ACGIH BEL (03 2013)
Benzene (t,t-Muconic acid: Sampling time: End of shift.)	500 μg/g (Creatinine in urine)	ACGIH BEL (03 2013)

Appropriate Engineering Controls

No data available.

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. If exposure limits have not been established, maintain airborne levels

to an acceptable level.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: No data available.

Other: Wear suitable protective clothing. Wear chemical-resistant gloves, footwear,

and protective clothing appropriate for the risk of exposure. Contact health

and safety professional or manufacturer for specific information.

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. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed

out of the workplace.

9. Physical and chemical properties

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Appearance

Physical state: liquid

Form: Spray Aerosol Color: No data available. Odor: No data available. **Odor threshold:** No data available. pH: No data available. Melting point/freezing point: No data available. Initial boiling point and boiling range: No data available. Flash Point: Estimated -104.4 °C **Evaporation rate:** No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): Estimated 7 %(V)
Flammability limit - lower (%): Estimated 1 %(V)
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.

Vapor pressure: Estimated 2,757 hPa (21 °C)

No data available.

Vapor density:No data available.Density:No data available.Relative density:No data available.

Solubility(ies)

Flammability (solid, gas):

Solubility in water:

Solubility (other):

No data available.

No data available.

No data available.

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: Avoid heat or contamination.

Incompatible Materials: No data available.

Hazardous Decomposition

Products:

No data available.

11. Toxicological information

Information on likely routes of exposure

Inhalation: No data available.

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Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

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: Not classified for acute toxicity based on available data.

Revision Date: 10/25/2019

Specified substance(s):

Benzene, methyl-LD 50 (Rat): 5,580 mg/kg

Naphtha (petroleum), heavy alkylate

LD 50: > 2,000 mg/kg

Distillates (petroleum), light distillate

LD 50 (Rat): > 5,000 mg/kg

hydrotreating process,

low-boiling

Limestone LD 50: > 2,000 mg/kg

Carbon black LD 50 (Rat): > 8,000 mg/kg

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-

LD 50 (Rat): > 2,000 mg/kg

Silica LD 50 (Rat): > 5,000 mg/kg

Benzene, dimethyl-LD 50 (Rat): 3,523 mg/kg

White mineral oil

(petroleum)

LD 50 (Rat): > 5,000 mg/kg

Aluminum oxide (Al2O3) LD 50 (Rat): > 10,000 mg/kg

Acetic acid, butyl ester LD 50 (Rat): 14,130 mg/kg

Stoddard solvent LD 50: > 2,000 mg/kg

Benzene, ethyl-LD 50 (Rat): 3,500 mg/kg

Quartz (SiO2) LD 50: > 5,000 mg/kg

Dermal

Product: Not classified for acute toxicity based on available data.

Revision Date: 10/25/2019

Specified substance(s):

Benzene, methyl-LD 50 (Rabbit): > 5,000 mg/kg

Naphtha (petroleum),

heavy alkylate

LD 50: > 2,000 mg/kg

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling

LD 50 (Rabbit): > 2,000 mg/kg

Limestone LD 50: > 2,000 mg/kg

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-

LD 50 (Rabbit): > 5,000 mg/kg

Silica LD 50 (Rabbit): > 5,000 mg/kg

Benzene, dimethyl-LD 50 (Rabbit): 12,126 mg/kg

LD 50: 2,000 mg/kg

White mineral oil

(petroleum)

LD 50 (Rabbit): > 2,000 mg/kg

Acetic acid, butyl ester LD 50 (Rabbit): > 5,000 mg/kg

Stoddard solvent LD 50: > 2,000 mg/kg

Benzene, ethyl-ATE: > 2,000 mg/kg

Quartz (SiO2) LD 50: > 5,000 mg/kg

Inhalation

Product: Not classified for acute toxicity based on available data.

Revision Date: 10/25/2019

Specified substance(s):

Benzene, methyl- LC 50 (Rat): 28.1 mg/l

LC 50: > 100 mg/l

Butane LC 50: > 100 mg/l

LC 50: > 100 mg/l

Naphtha (petroleum),

heavy alkylate

LD 50: > 5 mg/l

Propane LC 50: > 100 mg/l

LC 50: > 100 mg/l

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling

LC 50 (Rat): > 7,630 mg/m3

Limestone LC 50: > 5 mg/l

LC 50: > 20 mg/l

Carbon black LOAEL (Rat): > 4.6 mg/m3

Cyclohexene, 1-methyl-4-

(1-methylethenyl)-, (4R)-

LC 50: > 20 mg/l LC 50: > 5 mg/l

Silica LC 50 (Rat): > 58.8 mg/l

Benzene, dimethyl- LC 50: 20 mg/l

LC 50: 10 mg/l

White mineral oil

(petroleum)

LC 50 (Rat): > 5 mg/l LC 50: > 20 mg/l

Aluminum oxide (Al2O3) LC 50 (Rat): 7.6 mg/l

LC 50 (Rat): > 2.3 mg/l

Acetic acid, butyl ester LC 50 (Rat): > 23.4 mg/l

LC 50 (Rat): > 21 mg/l

Stoddard solvent LC 50: > 5 mg/l

LC 50: > 20 mg/l

Benzene, ethyl- LC 50: 11 mg/l

Quartz (SiO2) LD 50: > 5 mg/l

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Repeated dose toxicity

Product: No data available.

Specified substance(s):

Benzene, methyl-LOAEL (Rat(Female, Male), Oral, 13 Weeks): 1,250 mg/kg (Target

> Organ(s): Liver, Kidney) Oral Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 625 ppm(m) Inhalation

Experimental result, Key study

NOAEL (Rat(Female, Male), Inhalation - vapor): 2,355 mg/l Inhalation

Experimental result. Key study

LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Butane

Experimental result, Key study

NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation

Experimental result, Key study

NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Propane

Experimental result, Key study

LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation

Experimental result, Key study

Distillates (petroleum),

light distillate

NOAEL (Rat(Female, Male), Inhalation): 9,840 mg/m3 Inhalation

Experimental result, Key study

hydrotreating process.

low-boiling

NOAEL (Rat(Female, Male), Dermal, 5 - 28 d): 3,750 mg/kg Dermal

Experimental result. Key study

NOAEL (Rat(Male), Oral, 28 d): < 500 mg/kg Oral Experimental result,

Supporting study

NOAEL (Rat(Female), Oral, 52 - 104 Weeks): 52 mg/kg Oral Experimental Carbon black

result, Key study

NOAEL (Rat(Male), Inhalation): 1.1 mg/m3 Inhalation Experimental result,

NOAEL (Rat(Male), Oral, 13 Weeks): 600 mg/kg Oral Experimental result,

NOAEL (Rat(Female, Male), Inhalation): 1.3 mg/m3 Inhalation Experimental

Kev study

Cyclohexene, 1-methyl-4-

(1-methylethenyl)-, (4R)-

Silica

Key study

NOAEL (Rat(Female, Male), Oral, 13 Weeks): 4,000 mg/kg Oral

Experimental result, Key study

result, Key study

NOAEL (Rat(Female), Oral, 90 d): 150 mg/kg Oral Experimental result, Key Benzene, dimethyl-

study

White mineral oil

(petroleum)

NOAEL (Rat(Female, Male), Oral, 90 d): >= 20,000 ppm(m) Oral

Experimental result, Key study

NOAEL (Rabbit(Female, Male), Dermal): 1,000 mg/kg Dermal Read-across from supporting substance (structural analogue or surrogate). Key study LOAEL (Rat(Female, Male), Inhalation): 210 mg/m3 Inhalation Experimental

result. Kev study

NOAEL (Rat, Inhalation, 6 - 12 Months): 70 mg/m3 Inhalation Experimental Aluminum oxide (Al2O3)

result. Kev study

LOAEL (Rat(Female, Male), Oral, 28 - 53 d): 1,000 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Weight of

Evidence study

NOAEL (Rat(Female, Male), Inhalation, 13 Weeks): 500 ppm(m) Inhalation Acetic acid, butyl ester

Experimental result, Key study

NOAEL (Rat, Inhalation - vapor): 1.9 mg/l (Target Organ(s): Nervous Stoddard solvent

System)

NOAEL (Mouse(Female, Male), Inhalation, 104 Weeks): 75 ppm(m) Benzene, ethyl-

Inhalation Experimental result, Key study

NOAEL (Rat(Female, Male), Oral, 28 d): 75 mg/kg Oral Experimental result,

Key study

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Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Benzene, methylin vivo (Rabbit): Irritating Experimental result, Key study

Carbon black in vivo (Rabbit): Not irritant Experimental result, Key study

Cyclohexene, 1-methyl-

4-(1-methylethenyl)-,

(4R)-

Silica in vivo (Rabbit): Not irritant Experimental result, Key study

Benzene, dimethylin vivo (Rabbit): Irritating. Experimental result, Weight of Evidence study

White mineral oil (petroleum)

in vivo (Rabbit): Not irritant Experimental result, Key study

in vivo (Rabbit): Not irritant Experimental result, Key study

Aluminum oxide

(Al2O3)

in vivo (Rabbit): Not irritant Experimental result, Key study

Acetic acid, butyl ester in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Benzene, methyl-Rabbit, 24 - 72 hrs: Not irritating

Distillates (petroleum), light distillate

hydrotreating process,

low-boiling

Carbon black Rabbit, 24 - 72 hrs: Not irritating

Cyclohexene, 1-methyl-

4-(1-methylethenyl)-,

(4R)-

Rabbit, 24 - 72 hrs: Not irritating

Rabbit, 24 - 72 hrs: Not irritating

Silica Rabbit, 24 - 72 hrs: Not irritating

Benzene, dimethyl-Rabbit, 1 hrs: Slightly irritating (Not Classified)

White mineral oil

(petroleum)

Rabbit, 24 - 72 hrs: Not irritating

Aluminum oxide

(Al2O3)

Rabbit, 48 - 72 hrs: Not irritating

Acetic acid, butyl ester Rabbit, 24 - 72 hrs: Not irritating

Benzene, ethyl-Rabbit, 7 d: Slightly irritating

Respiratory or Skin Sensitization

Product: No data available.

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Specified substance(s):

Benzene, methyl-Distillates (petroleum), Skin sensitization:, in vivo (Guinea pig): Non sensitising Skin sensitization:, in vivo (Guinea pig): Non sensitising

light distillate

hydrotreating process,

low-boiling

Carbon black

Skin sensitization:, in vivo (Guinea pig): Non sensitising

White mineral oil

Skin sensitization:, in vivo (Guinea pig): Non sensitising

(petroleum)

Aluminum oxide Skin sensitization:, in vivo (Guinea pig): Non sensitising

(Al2O3)

Acetic acid, butyl ester Skin sensitization:, in vivo (Guinea pig): Non sensitising Skin sensitization:, in vivo (Human): Non sensitising

Carcinogenicity

Product: No data available.

Specified substance(s):

Stoddard solvent Potential cancer hazard.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Carbon black Overall evaluation: 2B. Possibly carcinogenic to humans.

Benzene, ethyl- Overall evaluation: 2B. Possibly carcinogenic to humans.

Quartz (SiO2) Overall evaluation: 1. Carcinogenic to humans.

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

Quartz (SiO2) Known To Be Human Carcinogen.

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

Quartz (SiO2)

Cancer

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s):

Benzene, methyl- Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: Inhalation - dust and mist: Narcotic effect. - Category 3 with narcotic effects.

Specific Target Organ Toxicity - Repeated Exposure

Product: Category 2

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Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard

Product: No data available.

Specified substance(s):

Benzene, methylNaphtha (petroleum),
May be fatal if swallowed and enters airways.
May be fatal if swallowed and enters airways.

heavy alkylate

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling White mineral oil (petroleum)

Stoddard solvent

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Benzene, methyl- LC 50 (Oncorhynchus kisutch, 96 h): 5.5 mg/l Experimental result, Key study

Butane LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Propane LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling

LL 50 (Pimephales promelas, 96 h): 8.2 mg/l Experimental result, Key study

Carbon black LC 0 (Danio rerio, 96 h): 1,000 mg/l Experimental result, Key study

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)- EC 50 (Pimephales promelas, 96 h): 688 μg/l Experimental result, Key study

Silica LL 0 (Danio rerio, 96 h): 10,000 mg/l Experimental result, Key study

Benzene, dimethyl- LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 96 h): 6.702 -

10.032 mg/l Mortality

White mineral oil

(petroleum)

NOAEL (Oncorhynchus mykiss, 96 h): >= 100 mg/l Experimental result, Key

study

LL 50 (Oncorhynchus mykiss, 96 h): > 100 mg/l Experimental result, Key

study

Aluminum oxide (Al2O3) LC 50 (Oncorhynchus mykiss, 96 h): 6.17 mg/l Other, Weight of Evidence

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study

Acetic acid, butyl ester LC 50 (Pimephales promelas, 96 h): 18 mg/l Experimental result, Key study

Benzene, ethyl- LC 50 (Fathead minnow (Pimephales promelas), 96 h): 38.9 - 62.83 mg/l

Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Benzene, methyl- LC 50 (Water flea (Daphnia magna), 48 h): 54.6 - 174.7 mg/l Mortality

LC 50 (Ceriodaphnia dubia, 2 d): 3.78 mg/l Experimental result, Key study

Butane LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study

Distillates (petroleum),

light distillate hydrotreating process,

low-boiling

EC 50 (Daphnia magna, 48 h): 4.5 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 0.5 mg/l Experimental result, Key study

Carbon black EC 50 (Daphnia magna, 24 h): > 5,600 mg/l Experimental result, Key study

Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)- EC 50 (Daphnia magna, 48 h): 0.36 mg/l Experimental result, Key study NOAEL (Daphnia magna, 48 h): 0.074 mg/l Experimental result, Key study

Silica EC 50 (Daphnia magna, 24 h): > 1,000 mg/l Experimental result, Key study

Benzene, dimethyl- LC 50 (Water flea (Daphnia magna), 24 h): 150 mg/l Mortality

White mineral oil (petroleum)

NOAEL (Daphnia magna, 48 h): >= 100 mg/l Experimental result, Key study

Aluminum oxide (Al2O3) LC 50 (Daphnia magna, 48 h): 38.2 mg/l Experimental result, Weight of

Evidence study

Acetic acid, butyl ester EC 50 (Daphnia sp., 48 h): 44 mg/l Experimental result, Key study

Benzene, ethyl- LC 50 (Water flea (Daphnia magna), 24 h): 57 - 100 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Benzene, methyl- NOAEL (Oncorhynchus kisutch): 1.39 mg/l Experimental result, Key study

LOAEL (Oncorhynchus kisutch): 2.77 mg/l Experimental result, Key study

Distillates (petroleum), light distillate

hydrotreating process,

low-boiling

NOAEL (Pimephales promelas): 2.6 mg/l Experimental result, Supporting study

Carbon black NOAEL (Salmo sp.): 17 mg/l QSAR QSAR, Key study

Benzene, dimethyl- NOAEL (Oncorhynchus mykiss): > 1.3 mg/l Experimental result, Key study

White mineral oil (petroleum)

NOAEL (Oncorhynchus mykiss): >= 1,000 mg/l QSAR QSAR, Supporting

study

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Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Benzene, methyl- LOAEL (Ceriodaphnia dubia): 2.76 mg/l Experimental result, Key study

NOAEL (Ceriodaphnia dubia): 0.74 mg/l Experimental result, Key study

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling

NOAEL (Daphnia magna): 2.6 mg/l Experimental result, Key study

Carbon black EC 50 (Daphnia sp.): 4.9 mg/l QSAR QSAR, Key study

Cyclohexene, 1-methyl-4-

(1-methylethenyl)-, (4R)-

NOAEL (Freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex): 0.115 mg/l QSAR QSAR, Weight of Evidence

study

Benzene, dimethyl- NOAEL (Ceriodaphnia dubia): 1.17 mg/l Read-across from supporting

substance (structural analogue or surrogate), Key study

White mineral oil

(petroleum)

NOAEL (Daphnia magna): >= 1,000 mg/l QSAR QSAR, Supporting study

Aluminum oxide (Al2O3) NOAEL (Daphnia magna): 1.89 mg/l Experimental result, Weight of

Evidence study

Acetic acid, butyl ester EC 50 (Daphnia magna): 34 mg/l Read-across from supporting substance

(structural analogue or surrogate), Key study

NOAEL (Daphnia magna): 23 mg/l Read-across from supporting substance

(structural analogue or surrogate), Key study

Benzene, ethyl- LC 50 (Ceriodaphnia dubia): 3.2 mg/l Other, Key study

NOAEL (Ceriodaphnia dubia): 1 mg/l Other, Key study

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Benzene, methyl- 100 % (14 d) Detected in water. Experimental result, Weight of Evidence

study

86 % Detected in water. Experimental result, Weight of Evidence study

Butane 100 % (385.5 h) Detected in water. Experimental result, Key study

Propane 100 % (385.5 h) Detected in water. Experimental result, Key study

50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling

90.35 % (28 d) Detected in water. Experimental result, Supporting study

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Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)-

80 % (28 d) Detected in water. Read-across from supporting substance

(structural analogue or surrogate), Key study

Benzene, dimethyl-87.8 % Detected in water. Read-across from supporting substance

(structural analogue or surrogate). Key study

White mineral oil

(petroleum)

31 % (28 d) Detected in water. Read-across from supporting substance

(structural analogue or surrogate), Supporting study

Acetic acid, butyl ester 83 % Detected in water. Experimental result, Not specified

2.7 % Detected in water. Other, Supporting study Benzene, ethyl-

70 - 80 % (28 d) Detected in water. Experimental result, Key study

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Benzene, methyl-Leuciscus idus, Bioconcentration Factor (BCF): 90 Aquatic sediment

Experimental result. Key study

Distillates (petroleum),

light distillate

hydrotreating process,

low-boiling

Bioconcentration Factor (BCF): 10 - 2,500 Aquatic sediment Estimated by

calculation, Key study

Cyclohexene, 1-methyl-4-

(1-methylethenyl)-, (4R)-

Bioconcentration Factor (BCF): 864.8 Aquatic sediment QSAR, Key study

Benzene, dimethyl-Oncorhynchus mykiss, Bioconcentration Factor (BCF): > 7.6 - < 21.6 Aquatic

sediment Experimental result, Key study

Acetic acid, butyl ester Bioconcentration Factor (BCF): 15.3 Aquatic sediment Estimated by

calculation, Supporting study

Benzene, ethyl-Carassius auratus, Bioconcentration Factor (BCF): 15.5 Aquatic sediment

Other, Supporting study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Cyclohexene, 1-methyl-4-Log Kow: 4.34 - 4.46 25 °C No Experimental result, Supporting study

(1-methylethenyl)-, (4R)-

Benzene, dimethyl-Log Kow: 2.77 - 3.15 No Not specified, Not specified

Benzene, ethyl-Log Kow: 3.13 - 3.14 No Other, Supporting study

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

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Benzene, methylButane
No data available.
Naphtha (petroleum), heavy
No data available.

alkylate

Propane No data available.

Distillates (petroleum), light No data available.

distillate hydrotreating process, low-boiling

Limestone No data available.
Carbon black No data available.
Cyclohexene, 1-methyl-4- No data available.

(1-methylethenyl)-, (4R)-

Silica No data available.
Benzene, dimethyl- No data available.
White mineral oil No data available.

(petroleum)

Aluminum oxide (Al2O3)
Acetic acid, butyl ester
Stoddard solvent
Benzene, ethylQuartz (SiO2)

No data available.
No data available.
No data available.
No data available.

Other adverse effects: Toxic to aquatic organisms.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local

laws.

Contaminated Packaging: No data available.

14. Transport information

DOT

UN Number: UN 1950

UN Proper Shipping Name: Aerosols, flammable

Transport Hazard Class(es)

Class: 2.1 Label(s): -

Packing Group: Not applicable

Marine Pollutant: No

Environmental Hazards: No Marine Pollutant No

Special precautions for user: Not regulated.

IMDG

UN Number: UN 1950

UN Proper Shipping Name: Aerosols, flammable

Transport Hazard Class(es)

Class: 2 Label(s): –

EmS No.: F-D, S-U

Packing Group: -

Environmental Hazards: Yes

Revision Date: 10/25/2019

Marine Pollutant No

Special precautions for user: Not regulated.

IATA

UN Number: UN 1950

Proper Shipping Name: Aerosols, flammable

Transport Hazard Class(es):

Class: 2.1
Label(s): –

Packing Group: –

Environmental Hazards: Yes Marine Pollutant No

Special precautions for user: Not regulated.

Cargo aircraft only: Allowed.

15. Regulatory information

US Federal Regulations

Restrictions on use: Not known.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Chemical IdentityOSHA hazard(s)Quartz (SiO2)lung effects

immune system effects

Cancer kidney effects

Benzene Flammability

Cancer Aspiration Eye Blood Skin

respiratory tract irritation Central nervous system

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Benzene, methyl-	lbs. 1000
Butane	lbs. 100
Propane	lbs. 100
Benzene, dimethyl-	lbs. 100
Acetic acid, butyl ester	lbs. 5000
Benzene, ethyl-	lbs. 1000
Benzene, (1-methylethyl)-	lbs. 5000
Benzene	lbs. 10

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard

Revision Date: 10/25/2019

Immediate (Acute) Health Hazards Delayed (Chronic) Health Hazard

Flammable aerosol

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Germ Cell Mutagenicity

Carcinogenicity

Toxic to reproduction

Specific Target Organ Toxicity - Single Exposure

Specific Target Organ Toxicity - Repeated Exposure

Aspiration Hazard

SARA 302 Extremely Hazardous Substance

Reportable

<u>Chemical Identity</u> <u>quantity</u> <u>Threshold Planning Quantity</u>

Stoddard solvent

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Benzene, methyl-	lbs. 1000
Butane	lbs. 100
Propane	lbs. 100
Benzene, dimethyl-	lbs. 100
Acetic acid, butyl ester	lbs. 5000
Stoddard solvent	
Benzene, ethyl-	lbs. 1000
Benzene, (1-methylethyl)-	lbs. 5000
Benzene	lbs. 10

Revision Date: 10/25/2019

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Plan	ning Quantity
Benzene, methyl-	10000 lbs	
Butane	10000 lbs	
Naphtha (petroleum),	10000 lbs	
heavy alkylate		
Propane	10000 lbs	
Distillates (petroleum),	10000 lbs	
light distillate hydrotreating		
process, low-boiling		
Limestone	10000 lbs	
Carbon black	10000 lbs	
Cyclohexene, 1-methyl-4-	10000 lbs	
(1-methylethenyl)-, (4R)-		
Silica	10000 lbs	
Benzene, dimethyl-	10000 lbs	
White mineral oil	10000 lbs	
(petroleum)		
Aluminum oxide (Al2O3)	10000 lbs	
Acetic acid, butyl ester	10000 lbs	
Stoddard solvent	10000 lbs	
Benzene, ethyl-	10000 lbs	
Quartz (SiO2)	10000 lbs	
Benzene, (1-methylethyl)-	10000 lbs	
Benzene	10000 lbs	
SARA 313 (TRI Reporting)		
	<u>Reporting</u>	Reporting threshold for
	threshold for	manufacturing and

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3) US State Regulations

other users

lbs

lbs

US. California Proposition 65

Chemical Identity

Benzene, methyl-

Benzene, ethyl-

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

processing

lbs.

lbs.

Benzene, methylCarbon black
Carcinogenic. 05 2011
Benzene, ethylQuartz (SiO2)
Benzene, (1-methylethyl)Benzene
Benzene
Carcinogenic. 05 2011
Carcinogenic. 05 2011
Carcinogenic. 05 2011
Carcinogenic. 05 2011
Developmental toxin. 03 2008
Carcinogenic. 05 2011

Benzene Male reproductive toxin. 03 2008

Revision Date: 10/25/2019

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

Chemical Identity

Benzene, methyl-

Butane

Naphtha (petroleum), heavy alkylate

Propane

Distillates (petroleum), light distillate hydrotreating process, low-boiling

Limestone

Carbon black

White mineral oil (petroleum)

Benzene, ethyl-

Quartz (SiO2)

US. Massachusetts RTK - Substance List

Chemical Identity

Quartz (SiO2)

Benzene

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Benzene, methyl-

Butane

Naphtha (petroleum), heavy alkylate

Propane

Distillates (petroleum), light distillate hydrotreating process, low-boiling

Limestone

Carbon black

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

Stoddard solvent

Stockholm convention

Stoddard solvent -

Rotterdam convention

Stoddard solvent -

Kyoto protocol

Revision Date: 10/25/2019

Inventory Status:

Australia AICS: On or in compliance with the inventory

Canada DSL Inventory List: On or in compliance with the inventory

EINECS, ELINCS or NLP: Not in compliance with the inventory.

Japan (ENCS) List: Not in compliance with the inventory.

China Inv. Existing Chemical Substances: Not in compliance with the inventory.

Korea Existing Chemicals Inv. (KECI): Not in compliance with the inventory.

Canada NDSL Inventory: Not in compliance with the inventory.

Philippines PICCS: On or in compliance with the inventory

US TSCA Inventory: On or in compliance with the inventory

New Zealand Inventory of Chemicals:

On or in compliance with the inventory

Japan ISHL Listing: Not in compliance with the inventory.

Japan Pharmacopoeia Listing: Not in compliance with the inventory.

Mexico INSQ: Not in compliance with the inventory.

Ontario Inventory: Not in compliance with the inventory.

Taiwan Chemical Substance Inventory:

On or in compliance with the inventory

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

Issue Date: 10/25/2019

Revision Information: No data available.

Version #: 1.0

Further Information: No data available.

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.