SAFETY DATA SHEET

1. Identification

Product identifier: SW821 - NO FRAY SPRAY

Other means of identification
SDS number: RE1000012054

Recommended restrictions
Product use: Coating
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name:	Superior Sewing Machine & Supply
Address:	502 Bedford Street Fall River, MA
Telephone:	1-212-691-5900
Fax:	

Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol	Category 1

Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1A
Toxic to reproduction	Category 2
Specific Target Organ Toxicity - Single Exposure	Category 3[1.]
Aspiration Hazard	Category 1

Target Organs
1. Narcotic effect.

Environmental Hazards

Acute hazards to the aquatic environment	Category 3

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
Extremely flammable aerosol.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

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. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. 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

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Ethene, 1,1,2-trichloro-	79-01-6	10 - <25%
Distillates (petroleum), light distillate hydrotreating process, low-boiling	68410-97-9	10 - <25%
Propane	74-98-6	10 - <20%
2-Propanone	67-64-1	10 - <20%
Butane	106-97-8	10 - <20%
Solvent naphtha (petroleum), light aliph.	64742-89-8	5 - <10%
Naphtha (petroleum), heavy alkylate	64741-65-7	1 - <5%
Benzene, dimethyl-	1330-20-7	1 - <5%
1-Butanol	71-36-3	0.1 - <1%
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	97-86-9	0.1 - <1%
Benzene, methyl-	108-88-3	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 physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. 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.

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:	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:	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. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid contact with skin.
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 2

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Ethene, 1,1,2-trichloro-	TWA	10 ppm	US. ACGIH Threshold Limit Values, as amended (2008)
	STEL	200 ppm 1,080 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	25 ppm	US. ACGIH Threshold Limit Values, as amended (2008)
	TWA	100 ppm	US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	MAX. CONC	300 ppm	US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	TWA	50 ppm 270 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)

	Ceiling	200 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	REL	25 ppm		US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	Ceil_Time	2 ppm		US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
Distillates (petroleum), light distillate hydrotreating process, low-boiling - Mist.	STEL		10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	TWA		5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	REL		5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL		5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Propane	REL	1,000 ppm	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL	1,000 ppm	1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	1,000 ppm	1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
2-Propanone	STEL	1,000 ppm	2,400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	PEL	1,000 ppm	2,400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	250 ppm		US. ACGIH Threshold Limit Values, as amended (03 2015)
	TWA	750 ppm	1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	500 ppm		US. ACGIH Threshold Limit Values, as amended (03 2015)
	REL	250 ppm	590 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
Butane	REL	800 ppm	1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	STEL	1,000 ppm		US. ACGIH Threshold Limit Values, as amended (03 2018)
	TWA	800 ppm	1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Solvent naphtha (petroleum), light aliph.	REL	100 ppm	400 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	TWA	100 ppm	400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	PEL	100 ppm	400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (03 2016)
Naphtha (petroleum), heavy alkylate	PEL	100 ppm	400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	100 ppm	400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	REL	100 ppm	400 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
Benzene, dimethyl-	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	100 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	STEL	150 ppm	655 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	150 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	STEL	150 ppm	655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016)
2-Pentanone, 4-hydroxy-4-methyl-	PEL	50 ppm	240 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	50 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	REL	50 ppm	240 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	TWA	50 ppm	240 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)

1-Butanol	Ceil_Time	50 ppm	150 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	Ceiling	50 ppm	150 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	20 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	100 ppm	300 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Ethanol	REL	1,000 ppm	1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL	1,000 ppm	1,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	1,000 ppm	1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	1,000 ppm		US. ACGIH Threshold Limit Values, as amended (2009)
Benzene, ethyl-	STEL	125 ppm	545 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	STEL	125 ppm	545 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	20 ppm		US. ACGIH Threshold Limit Values, as amended (12 2010)
Benzene, methyl-	STEL	150 ppm	560 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	REL	100 ppm	375 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	TWA	100 ppm	375 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	Ceiling	300 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	TWA	20 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	TWA	200 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	MAX. CONC	500 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	STEL	150 ppm	560 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
2-Propanol, 2-methyl-	STEL	150 ppm	450 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	TWA	100 ppm	300 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	PEL	100 ppm	300 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	100 ppm		US. ACGIH Threshold Limit Values, as amended (2008)
	STEL	150 ppm	450 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	REL	100 ppm	300 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Ethene, 1,1,2-trichloro- (Trichloroacetic acid: Sampling time: End of shift at end of work week.)	15 mg/l (Urine)	ACGIH BEL (03 2013)
Ethene, 1,1,2-trichloro- (Trichloroethanol, without hydrolysis: Sampling time: End of shift at end of work week.)	0.5 mg/l (Blood)	ACGIH BEL (03 2013)
2-Propanone (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	ACGIH BEL (03 2015)
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, 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)

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.
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. Avoid contact with eyes. 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.

9. Physical and chemical properties

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:	Estimated 63.66 °C
Flash Point:	Estimated -104.4 °C
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	Estimated 9.5 %(V)
Flammability limit - lower (%):	Estimated 2.2 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	2,757 - 4,136 hPa (20 °C)
Vapor density:	No data available.
Density:	No data available.
Relative density:	No data available.
Solubility(ies)	

Solubility in water:	No data available.
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:	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.
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.

Specified substance(s):

Ethene, 1,1,2-trichloro-	LD Lo (Rat): 5,620 mg/kg LD 50: > 5,000 mg/kg
Distillates (petroleum), light distillate hydrotreating process, low-boiling	LD 50 (Rat): > 5,000 mg/kg

2-Propanone	LD 50 (Rat): 5,800 mg/kg
Solvent naphtha (petroleum), light aliph.	LD 50 (Rat): > 5,000 mg/kg
Naphtha (petroleum), heavy alkylate	LD 50: > 2,000 mg/kg
Benzene, dimethyl-	LD 50 (Rat): 3,523 mg/kg
1-Butanol	LD 50: 500 mg/kg
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	LD 50 (Rat): 9,590 mg/kg
Benzene, methyl-	LD 50 (Rat): 5,580 mg/kg

Dermal
Product: ATEmix: 122,879.67 mg/kg

Inhalation
Product: ATEmix: 1,646.09 mg/l

Repeated dose toxicity
Product: No data available.

Specified substance(s):

Ethene, 1,1,2-trichloro-	NOAEL (Rat(Male), Inhalation): 100 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Male), Oral, 52 Weeks): 50 mg/kg Oral Experimental result, Key study
Distillates (petroleum), light distillate hydrotreating process, low-boiling	NOAEL (Rat(Female, Male), Inhalation): 9,840 mg/m3 Inhalation Experimental result, Key study 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
Propane	NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study
2-Propanone	NOAEL (Rat(Male), Oral, 13 Weeks): 10,000 ppm(m) Oral Experimental result, Key study
Butane	LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study
Solvent naphtha (petroleum), light aliph.	NOAEL (Mouse, Rat(Female, Male), Inhalation, 107 - 113 Weeks): 1,402 mg/m3 Inhalation Experimental result, Key study NOAEL (Rat(Female, Male), Dermal, 5 - 28 d): 3,750 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Female, Male), Dermal, 28 d): > 375 mg/kg Dermal Experimental result, Supporting study
Benzene, dimethyl-	NOAEL (Rat(Female), Oral, 90 d): 150 mg/kg Oral Experimental result, Key study
1-Butanol	NOAEL (Rat(Female, Male), Inhalation): 2.35 mg/l Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study LOAEL (Rat(Female, Male), Oral, 6 - 13 Weeks): 500 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 6 - 13 Weeks): 125 mg/kg Oral Experimental result, Key study

2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	NOAEL (Rat(Female, Male), Oral, 3 Months): 120 mg/kg Oral Experimental result, Key study NOAEL (Rat(Male), Inhalation, 2 yr): 1,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female), Inhalation, 2 yr): 250 ppm(m) Inhalation Experimental result, Key study
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

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

2-Propanone	in vivo (Rabbit): Not irritant Experimental result, Supporting study
Benzene, dimethyl-	in vivo (Rabbit): Moderate irritant Experimental result, Weight of Evidence study estimated Irritating.
1-Butanol	in vivo (Rabbit): Category 2 Experimental result, Supporting study estimated Irritating.
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	in vivo (Rabbit): Not irritating Expert judgment
Benzene, methyl-	in vivo (Rabbit): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Distillates (petroleum), light distillate hydrotreating process, low-boiling	Rabbit, 24 - 72 hrs: Not irritating
2-Propanone	Irritating. Rabbit, 24 hrs: Minimum grade of severe eye irritant
Solvent naphtha (petroleum), light aliph.	Rabbit: Not irritating
Benzene, dimethyl-	Rabbit, 1 hrs: Slightly irritating (Not Classified)
1-Butanol	Rabbit, 24 - 72 hrs: Category 1 Corrosive
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	Rabbit, 24 - 72 hrs: Not irritating
Benzene, methyl-	Rabbit, 24 - 72 hrs: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Distillates (petroleum), light distillate hydrotreating process, low-boiling	Skin sensitization:, in vivo (Guinea pig): Non sensitising
2-Propanone	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Solvent naphtha (petroleum), light aliph.	Skin sensitization:, in vivo (Guinea pig): Non sensitising
1-Butanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	Skin sensitization:, in vivo (Guinea pig): Sensitising
Benzene, methyl-	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product: No data available.

Specified substance(s):

Ethene, 1,1,2-trichloro-	Potential cancer hazard.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Ethene, 1,1,2-trichloro-	Overall evaluation: 1. Carcinogenic to humans.
Benzene, ethyl-	Overall evaluation: 2B. Possibly carcinogenic to humans.

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

Ethene, 1,1,2-trichloro-	Known To Be Human Carcinogen.

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

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.

Specified substance(s):

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

Specific Target Organ Toxicity - Single Exposure

Product: Category 3 with narcotic effects.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s):

Benzene, methyl-	Category 2

Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard

Product: No data available.

Specified substance(s):

Distillates (petroleum), light distillate hydrotreating process, low-boiling	May be fatal if swallowed and enters airways.
Solvent naphtha (petroleum), light aliph.	May be fatal if swallowed and enters airways.
Naphtha (petroleum), heavy alkylate	May be fatal if swallowed and enters airways.
Benzene, methyl-	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):

Ethene, 1,1,2-trichloro-	LC 50 (Pimephales promelas, 96 h): 44.1 mg/l Experimental result, Supporting study
Distillates (petroleum), light distillate hydrotreating process, low-boiling	LL 50 (Pimephales promelas, 96 h): 8.2 mg/l Experimental result, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
2-Propanone	LC 50 (Oncorhynchus mykiss, 96 h): 5,540 mg/l Experimental result, Key study
Butane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
1-Butanol	LC 50 (Pimephales promelas, 96 h): 1,730 mg/l Experimental result, Supporting study
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	LC 50 (Oncorhynchus mykiss, 96 h): 20 mg/l Experimental result, Key study
Benzene, methyl-	LC 50 (Oncorhynchus kisutch, 96 h): 5.5 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Ethene, 1,1,2-trichloro-	IC 50 (Daphnia magna, 48 h): 20.8 mg/l Experimental result, 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
2-Propanone	LC 50 (Daphnia pulex, 48 h): 8,800 mg/l Experimental result, Key study
Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study

Solvent naphtha (petroleum), light aliph.	EC 50 (Daphnia magna, 48 h): 32 mg/l Experimental result, Supporting study
1-Butanol	EC 50 (Daphnia magna, 48 h): 1,760 mg/l Experimental result, Supporting study
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	NOAEL (Daphnia magna, 48 h): 22 mg/l Experimental result, Key study EC 50 (Daphnia magna, 48 h): > 29 mg/l Experimental result, Key study
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

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Ethene, 1,1,2-trichloro-	NOAEL (Jordanella floridae): 5.76 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
Benzene, methyl-	NOAEL (Oncorhynchus kisutch): 1.39 mg/l Experimental result, Key study LOAEL (Oncorhynchus kisutch): 2.77 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Distillates (petroleum), light distillate hydrotreating process, low-boiling	NOAEL (Daphnia magna): 2.6 mg/l Experimental result, Key study
2-Propanone	LOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study NOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study
Solvent naphtha (petroleum), light aliph.	EC 50 (Daphnia magna): > 40 mg/l Experimental result, Key study
1-Butanol	EC 50 (Daphnia magna): 18 mg/l Experimental result, Key study NOAEL (Daphnia magna): 4.1 mg/l Experimental result, Key study
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	EC 50 (Daphnia magna): 6.59 mg/l Experimental result, Weight of Evidence study NOAEL (Daphnia magna): 2.6 mg/l Experimental result, Weight of Evidence study
Benzene, methyl-	LOAEL (Ceriodaphnia dubia): 2.76 mg/l Experimental result, Key study NOAEL (Ceriodaphnia dubia): 0.74 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):

Ethene, 1,1,2-trichloro-	19 % (28 d) Detected in water. Experimental result, Key study
Distillates (petroleum), light distillate hydrotreating process, low-boiling	90.35 % (28 d) Detected in water. Experimental result, Supporting 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
2-Propanone	90.9 % (28 d) Detected in water. Experimental result, Key study
Butane	100 % (385.5 h) Detected in water. Experimental result, Key study
Solvent naphtha (petroleum), light aliph.	90.35 % (28 d) Detected in water. Experimental result, Supporting study
Benzene, dimethyl-	87.8 % Detected in water. Read-across from supporting substance (structural analogue or surrogate), Key study
1-Butanol	87 % Detected in water. Experimental result, Key study 68 % Detected in water. Experimental result, Key study 92 % Detected in water. Experimental result, Key study
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	74.3 % (28 d) Detected in water. Experimental result, Key study
Benzene, methyl-	100 % (14 d) Detected in water. Experimental result, Weight of Evidence study 86 % 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):

Ethene, 1,1,2-trichloro-	Lepomis macrochirus, Bioconcentration Factor (BCF): 17 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
2-Propanone	Haddock, adult, Bioconcentration Factor (BCF): 0.69 Aquatic sediment Experimental result, Not specified
Solvent naphtha (petroleum), light aliph.	Bioconcentration Factor (BCF): 10 - 2,500 Aquatic sediment Estimated by calculation, Key study
Benzene, dimethyl-	Oncorhynchus mykiss, Bioconcentration Factor (BCF): > 7.6 - < 21.6 Aquatic sediment Experimental result, Key study
1-Butanol	Rainbow trout,donaldson trout (Oncorhynchus mykiss), Bioconcentration Factor (BCF): 0.38 (Static)

2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	Fish, Bioconcentration Factor (BCF): 64 Aquatic sediment Estimated by calculation, Supporting study
Benzene, methyl-	Leuciscus idus, Bioconcentration Factor (BCF): 90 Aquatic sediment Experimental result, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

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

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Ethene, 1,1,2-trichloro-	No data available.
Distillates (petroleum), light distillate hydrotreating process, low-boiling	No data available.
Propane	No data available.
2-Propanone	No data available.
Butane	No data available.
Solvent naphtha (petroleum), light aliph.	No data available.
Naphtha (petroleum), heavy alkylate	No data available.
Benzene, dimethyl-	No data available.
1-Butanol	No data available.
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester	No data available.
Benzene, methyl-	No data available.

Other adverse effects: Harmful 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:	II
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.:	
Packing Group:	–
Environmental Hazards:	Yes
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)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Ethene, 1,1,2-trichloro-	lbs. 100
Propane	lbs. 100
2-Propanone	lbs. 5000
Butane	lbs. 100
Benzene, dimethyl-	lbs. 100
1-Butanol	lbs. 5000
Ethanol	lbs. 100
Benzene, ethyl-	lbs. 1000
Benzene, methyl-	lbs. 1000
2-Propanol, 2-methyl-	lbs. 100

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)

Skin Corrosion or Irritation
Serious eye damage or eye irritation
Germ Cell Mutagenicity
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration Hazard

SARA 302 Extremely Hazardous Substance

Chemical Identity	Reportable quantity	Threshold Planning Quantity
2-Propanone		

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Ethene, 1,1,2-trichloro-	lbs	lbs.
Benzene, dimethyl-	lbs	lbs.
Benzene, ethyl-	lbs	lbs.

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

US. California Proposition 65

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

Ethene, 1,1,2-trichloro-	Carcinogenic. 05 2011
Ethene, 1,1,2-trichloro-	Male reproductive toxin. 04 2014
Ethene, 1,1,2-trichloro-	Developmental toxin. 04 2014
Benzene, ethyl-	Carcinogenic. 05 2011
Benzene, methyl-	Developmental toxin. 03 2008

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

Chemical Identity
Ethene, 1,1,2-trichloro-
Distillates (petroleum), light distillate hydrotreating process, low-boiling
Propane
2-Propanone
Butane
Solvent naphtha (petroleum), light aliph.
Naphtha (petroleum), heavy alkylate
Benzene, dimethyl-
Ethanol
Benzene, ethyl-

US. Massachusetts RTK - Substance List

Chemical Identity
Ethene, 1,1,2-trichloro-

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Ethene, 1,1,2-trichloro-
Distillates (petroleum), light distillate hydrotreating process, low-boiling
Propane
2-Propanone
Butane
Solvent naphtha (petroleum), light aliph.
Naphtha (petroleum), heavy alkylate
Benzene, dimethyl-

US. Rhode Island RTK

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

International regulations

Montreal protocol

2-Propanone

Stockholm convention

2-Propanone

Rotterdam convention

2-Propanone

Kyoto protocol

Inventory Status:

Australia AICS:	Not in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Ontario Inventory:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Japan (ENCS) List:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.
Mexico INSQ:	Not in compliance with the inventory.
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Philippines PICCS:	Not in compliance with the inventory.
Taiwan Chemical Substance Inventory:	Not in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	Not in compliance with the inventory.

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

Issue Date:	06/16/2020
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.