

### SAFETY DATA SHEET SPR - HEAVY DUTY FLUX REMOVER - SUPRCLEAN, AEROSOL

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification	
Product identifier	
Product name	SPR - HEAVY DUTY FLUX REMOVER - SUPRCLEAN, AEROSOL
Product number	MCC-SPR, MCC-SPR19A, MCC-SPR12Y
Synonyms; trade names	"SPR - SUPRCLEAN Nonflammable Flux Remover"
Recommended use of the che	emical and restrictions on use
Application	Cleaning agent.
Uses advised against	No specific uses advised against are identified.
Details of the supplier of the s	afety data sheet
Supplier	MICROCARE CORPORATION
Manufacturer	MICROCARE CORPORATION 595 John Downey Drive New Britain, CT 06051 United States of America CAGE: OATV9 Tel: + 1 800 638 0125, +1 860-827-0626 Fax: +1 860-893-1930 techsupport@microcare.com
Emergency telephone numbe	<u>r</u>
Emergency telephone numbe Emergency telephone	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world)
	- CHEMTREC 1-800-424-9300 (within the U.S.)
Emergency telephone	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world)
Emergency telephone 2. Hazard(s) identification	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world)
Emergency telephone 2. Hazard(s) identification Classification of the substanc	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world) e or mixture
Emergency telephone 2. Hazard(s) identification Classification of the substanc OSHA Regulatory Status	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world) e or mixture This Product is Hazardous under the OSHA Hazard Communication Standard.
Emergency telephone 2. Hazard(s) identification Classification of the substanc OSHA Regulatory Status Physical hazards	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world) e or mixture This Product is Hazardous under the OSHA Hazard Communication Standard. Not Classified
Emergency telephone 2. Hazard(s) identification Classification of the substanc OSHA Regulatory Status Physical hazards Health hazards	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world) e or mixture This Product is Hazardous under the OSHA Hazard Communication Standard. Not Classified Repr. 1B - H360 Vapors are heavier than air and may travel along the floor and accumulate in the bottom of
Emergency telephone 2. Hazard(s) identification Classification of the substanc OSHA Regulatory Status Physical hazards Health hazards Physicochemical	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world) e or mixture This Product is Hazardous under the OSHA Hazard Communication Standard. Not Classified Repr. 1B - H360 Vapors are heavier than air and may travel along the floor and accumulate in the bottom of
Emergency telephone          2. Hazard(s) identification         Classification of the substance         OSHA Regulatory Status         Physical hazards         Health hazards         Physicochemical         Label elements	CHEMTREC 1-800-424-9300 (within the U.S.) +1 703-741-5970 (from anywhere in the world) e or mixture This Product is Hazardous under the OSHA Hazard Communication Standard. Not Classified Repr. 1B - H360 Vapors are heavier than air and may travel along the floor and accumulate in the bottom of

Hazard statements	H360 May damage fertility or the unborn child.
Precautionary statements	<ul> <li>P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.</li> <li>P211 Do not spray on an open flame or other ignition source.</li> <li>P251 Pressurized container: Do not pierce or burn, even after use</li> <li>P261 Avoid breathing vapor/ spray.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> <li>P314 Get medical advice/ attention if you feel unwell.</li> <li>P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C /122°F.</li> <li>P501 Dispose of contents/ container in accordance with national regulations.</li> </ul>
Supplemental label information	Safety data sheet available on request. For use in industrial installations only.
Contains	METHANOL

#### Other hazards

Harmful if inhaled

### 3. Composition/information on ingredients

#### Mixtures

trans-1,2-DICHLOROETHYLENE	30-60%
CAS number: 156-60-5	
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 4 - H332	
Not relevant.	
HFC-134a Tetrafluoroethane	10-30%
CAS number: 811-97-2	
Classification	
Press. Gas, Liquefied - H280	
1,1,1,2,2,3,4,5,5,5-decafluoropentane	10-30%
CAS number: 138495-42-8	
Classification	
Not relevant.	
ETHANOL	1-5%
	1-5 %
CAS number: 64-17-5	
Classification	
Flam. Liq. 2 - H225	

METHANOL	<"
CAS number: 67-56-1	
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
Eye Irrit. 2A - H319	
Repr. 1B - H360	
STOT SE 1 - H370	
ISOBUTYL METHYL KETC	)NE <
CAS number: 108-10-1	
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 4 - H332	
Eye Irrit. 2A - H319	
STOT SE 3 - H335	
ETHYL ACETATE	<
CAS number: 141-78-6	
Classification	
Flam. Liq. 2 - H225	
Eye Irrit. 2A - H319	
STOT SE 3 - H336	
The full text for all hazard sta	atements is displayed in Section 16.
Composition comments	TSCA: The ingredients of this product are on the TSCA Inventory. The exact percentage
•	(concentration) of composition has been withheld as a trade secret in accordance with
	paragraph (i) of CFR 1900.1200
Ingredient notes	Denaturants in Ethanol include Methanol, CAS# 67-56-1; MIBK, CAS# 108-10-1 and Ethyl
	acetate, CAS# 141-78-6
Composition	
4. First-aid measures	
Description of first aid meas	ures
General information	If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery
	position and ensure breathing can take place.

Skin Contact	Rinse with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.
Most important symptoms and	effects, both acute and delayed
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.
Ingestion	No specific symptoms known.
Skin contact	No specific symptoms known.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.
Indication of immediate medica	al attention and special treatment needed
Notes for the doctor	Treat symptomatically.
5. Fire-fighting measures	
Extinguishing media	
Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Special hazards arising from the	he substance or mixture
Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapors.
Advice for firefighters	
Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.
6. Accidental release measure	S

Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapors and spray/mists. Use suitable respiratory protection if ventilation is inadequate.	
Environmental precautions		
Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.	
Methods and material for conta	inment and cleaning up	
Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.	
Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.	
7. Handling and storage		
Precautions for safe handling		
Usage precautions	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.	
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.	
Conditions for safe storage, including any incompatibilities		
Storage precautions	Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.	
Storage class	Miscellaneous hazardous material storage.	
Specific end uses(s)		
Specific end use(s)	The identified uses for this product are detailed in Section 1.	
8. Exposure controls/Personal	protection	
Control parameters Occupational exposure limits trans-1,2-DICHLOROETHYLEI	NE	

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 793 mg/m<sup>3</sup>

#### HFC-134a Tetrafluoroethane

Long-term exposure limit (8-hour TWA): OES 4240 mg/m<sup>3</sup>

#### 1,1,1,2,2,3,4,5,5,5-decafluoropentane

No information available that would effect occupational exposure limit values.

#### ETHANOL

Short-term exposure limit (15-minute): ACGIH 1000 ppm 1880 mg/m<sup>3</sup> A3

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m<sup>3</sup>

#### METHANOL

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 262 mg/m<sup>3</sup> Short-term exposure limit (15-minute): ACGIH 250 ppm 328 mg/m<sup>3</sup> Sk

Long-term exposure limit (8-hour TWA): OSHA 200 ppm 260 mg/m<sup>3</sup>

#### ISOBUTYL METHYL KETONE

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm 82 mg/m<sup>3</sup> Short-term exposure limit (15-minute): ACGIH 75 ppm 307 mg/m<sup>3</sup> A3

Long-term exposure limit (8-hour TWA): OSHA 100 ppm 410 mg/m<sup>3</sup>

#### ETHYL ACETATE

Long-term exposure limit (8-hour TWA): ACGIH 400 ppm 1440 mg/m<sup>3</sup> Long-term exposure limit (8-hour TWA): OSHA 400 ppm 1400 mg/m<sup>3</sup> ACGIH = American Conference of Governmental Industrial Hygienists.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans. OSHA = Occupational Safety and Health Administration. Sk = Danger of cutaneous absorption.

### Additional Occupational

**Exposure Limits** 

#### ETHANOL (CAS: 64-17-5)

Ingredient comments

### METHANOL (CAS: 67-56-1)

WEL = Workplace Exposure Limits

Biological limit values 15 mg/l

#### Exposure controls

Protective equipment



Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	No specific hand protection recommended. Avoid contact with skin.
Other skin and body protection	Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### 9. Physical and chemical properties

Information on basic physical and chemical properties		
Appearance	Clear liquid.	
Color	Colorless.	
Odor	Slight. Ether.	
Odor threshold	No information available.	
рН	No information available.	
Melting point	No information available.	
Initial boiling point and range	41°C/106°F @ 101.3 kPa	
Flash point	The product is not flammable.	
Evaporation rate	No information available.	
Evaporation factor	No information available.	
Flammability (solid, gas)	Not applicable.	
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 14.4 %(V) Lower flammable/explosive limit: 5.0 %(V)	
Other flammability	The product is not flammable.	
Vapor pressure	37.9 kPa @ 20°C	
Vapor density	3.4	
Relative density	1.26 g/cc	
Bulk density	No information available.	
Solubility(ies)	0.3 % water @ 20°C	
Partition coefficient	No information available.	
Auto-ignition temperature	No information available.	
Decomposition Temperature	No information available.	
Viscosity	0.48 cP @ 20°C	
Explosive properties	No information available.	
Oxidizing properties	Not known.	

Refractive index	No information available.
Particle size	No information available.
Molecular weight	Not applicable.
Volatility	100%
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	This product contains a maximum VOC content of 1080 g/l.
Flammability	The product is not flammable.
10. Stability and reactivity	
Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition	Does not decompose when used and stored as recommended. Thermal decomposition or
products	combustion products may include the following substances: Toxic gases or vapors.
products 11. Toxicological information	combustion products may include the following substances: Toxic gases or vapors.
11. Toxicological information	
11. Toxicological information Information on toxicological eff Acute toxicity - oral	fects
11. Toxicological information Information on toxicological eff Acute toxicity - oral Notes (oral LD <sub>50</sub> )	fects Based on available data the classification criteria are not met.
11. Toxicological information Information on toxicological eff Acute toxicity - oral Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg)	fects
11. Toxicological information Information on toxicological eff Acute toxicity - oral Notes (oral LD <sub>50</sub> )	fects Based on available data the classification criteria are not met.
11. Toxicological information Information on toxicological eff Acute toxicity - oral Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg) Acute toxicity - dermal	<b>fects</b> Based on available data the classification criteria are not met. 62,912.87
11. Toxicological information Information on toxicological eff Acute toxicity - oral Notes (oral LD <sub>50</sub> ) ATE oral (mg/kg) Acute toxicity - dermal Notes (dermal LD <sub>50</sub> )	fects Based on available data the classification criteria are not met. 62,912.87 Based on available data the classification criteria are not met.
11. Toxicological information         Information on toxicological eff         Acute toxicity - oral         Notes (oral LD <sub>50</sub> )         ATE oral (mg/kg)         Acute toxicity - dermal         Notes (dermal LD <sub>50</sub> )         ATE dermal (mg/kg)	fects Based on available data the classification criteria are not met. 62,912.87 Based on available data the classification criteria are not met.
11. Toxicological information         Information on toxicological eff         Acute toxicity - oral         Notes (oral LD <sub>50</sub> )         ATE oral (mg/kg)         Acute toxicity - dermal         Notes (dermal LD <sub>50</sub> )         ATE dermal (mg/kg)         Acute toxicity - inhalation	fects Based on available data the classification criteria are not met. 62,912.87 Based on available data the classification criteria are not met. 188,738.6
11. Toxicological information         Information on toxicological eff         Acute toxicity - oral         Notes (oral LD <sub>50</sub> )         ATE oral (mg/kg)         Acute toxicity - dermal         Notes (dermal LD <sub>50</sub> )         ATE dermal (mg/kg)         Acute toxicity - inhalation         Notes (inhalation LC <sub>50</sub> )	fects Based on available data the classification criteria are not met. 62,912.87 Based on available data the classification criteria are not met. 188,738.6 Acute Tox. 4 - H332 Harmful if inhaled.
11. Toxicological information         Information on toxicological eff         Acute toxicity - oral         Notes (oral LDso)         ATE oral (mg/kg)         Acute toxicity - dermal         Notes (dermal LDso)         ATE dermal (mg/kg)         Acute toxicity - inhalation         Notes (inhalation LCso)         ATE inhalation (dusts/mists	fects Based on available data the classification criteria are not met. 62,912.87 Based on available data the classification criteria are not met. 188,738.6 Acute Tox. 4 - H332 Harmful if inhaled. 21.41
11. Toxicological information         Information on toxicological eff         Acute toxicity - oral         Notes (oral LD <sub>50</sub> )         ATE oral (mg/kg)         Acute toxicity - dermal         Notes (dermal LD <sub>50</sub> )         ATE dermal (mg/kg)         Acute toxicity - inhalation         Notes (inhalation LC <sub>50</sub> )         ATE inhalation (vapours mg/l)         ATE inhalation (dusts/mists mg/l)         Skin corrosion/irritation	Fects         Based on available data the classification criteria are not met.         62,912.87         Based on available data the classification criteria are not met.         188,738.6         Acute Tox. 4 - H332 Harmful if inhaled.         21.41         314.56

Respiratory sensitization	<b>bn</b> Based on available data the classification criteria are not met.
Skin sensitization	
Skin sensitization	Based on available data the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	Contains a substance/a group of substances which may cause cancer. IARC Group 1 Carcinogenic to humans.
Reproductive toxicity	
Reproductive toxicity -	fertility Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
Specific target organ to	oxicity - single exposure
STOT - single exposur	
Specific target organ to	oxicity - repeated exposure
STOT - repeated expo	
Appiration bazard	
Aspiration hazard Aspiration hazard	Based on available data the classification criteria are not met.
	Dased on available data the classification citeria are not met.
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.
Ingestion	No specific symptoms known.
Skin Contact	No specific symptoms known.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.
Toxicological informati	on on ingredients.
	trans-1,2-DICHLOROETHYLENE
Others have	
	alth effects There is no evidence that the product can cause cancer.
	icity - inhalation
ATE inha mg/l)	lation (vapours 11.0
	HFC-134a Tetrafluoroethane
Other he:	alth effects There is no evidence that the product can cause cancer.
	icity - inhalation

Acute toxicity inhalation (LC₅ gases ppmV)	567,000.0
Species	Rat
ATE inhalation (gases ppm)	567,000.0
Inhalation	Vapors irritate the respiratory system. May cause coughing and difficulties in breathing.
Ingestion	May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.
Skin Contact	May cause allergic contact eczema. Contact with liquid form may cause frostbite.
Eye contact	May cause temporary eye irritation.
	1,1,1,2,2,3,4,5,5,5-decafluoropentane
Acute toxicity - oral	
Acute toxicity oral (LD₅₀ mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	5,000.0
Acute toxicity - dermal	
Acute toxicity dermal (LD₅₀ mg/kg)	5,000.0
Species	Rat
ATE dermal (mg/kg)	5,000.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC <sub>50</sub> vapours mg/l)	114.0
Species	Rat
ATE inhalation (vapours mg/l)	114.0
Skin corrosion/irritation	
Animal data	Not irritating. Rabbit
Human skin model test	Data lacking.
Extreme pH	Not applicable. Not corrosive to skin.
Serious eye damage/irritati	on
Serious eye damage/irritation	Not irritating. Rabbit
Respiratory sensitization	
Respiratory sensitization	Data lacking.

Skin sensitization	
Skin sensitization	Not sensitizing Guinea pig: Not sensitizing.
Germ cell mutagenicity	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.
Carcinogenicity	
Carcinogenicity	Does not contain any substances known to be carcinogenic.
IARC carcinogenicity	Not listed.
NTP carcinogenicity	Not listed.
OSHA Carcinogenicity	Not listed.
Reproductive toxicity	
Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies.
Skin Contact	Skin irritation should not occur when used as recommended. May cause defatting of the skin but is not an irritant.
Eye contact	May cause eye irritation.
Acute and chronic health hazards	There is no evidence that the product can cause cancer.
	ETHANOL
Acute toxicity - inhalation	
Acute toxicity inhalation (LC <sub>50</sub> vapours mg/l)	20,000.0
ATE inhalation (vapours mg/l)	20,000.0
Carcinogenicity	
IARC carcinogenicity	IARC Group 1 Carcinogenic to humans.
	METHANOL
Acute toxicity - oral	
Notes (oral LD₅₀)	Acute Tox. 3 - H301 Toxic if swallowed.
ATE oral (mg/kg)	100.0
Acute toxicity - dermal	
Notes (dermal LD₅₀)	Acute Tox. 3 - H311 Toxic in contact with skin.
ATE dermal (mg/kg)	300.0
Acute toxicity - inhalation	

ATE inhalation (dusts/mists mg/l)       0.5         Skin corrosion/irritation       Based on available data the classification criteria are not met.         Animal data       Based on available data the classification criteria are not met.         Serious eye damage/irritation       Based on available data the classification criteria are not met.         Respiratory sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Gern cell mutagenicity       Based on available data the classification criteria are not met.         Garcinogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         Reproductive toxicity -       Based on available data the classification criteria are not met.         Reproductive toxicity -       Based on available data the classification criteria are not met.         Reproductive toxicity -       Based on available data the classification criteria are not met.         Reproductive toxicity -       Based on available data the classification criteria are not met.         Specific target organt toxicit
Animal data       Based on available data the classification criteria are not met.         Serious eye       Based on available data the classification criteria are not met.         damage/irritation       Based on available data the classification criteria are not met.         Respiratory sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Gern cell mutagenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         IARC carcinogenicity       None of the ingredients are listed or exempt.         Reproductive toxicity       Based on available data the classification criteria are not met.         fertility       Based on available data the classification criteria are not met.         Reproductive toxicity -       Based on available data the classification criteria are not met.         fertility       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure
Serious eye damage/irritation       Based on available data the classification criteria are not met.         Respiratory sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Gern cell mutagenicity       Based on available data the classification criteria are not met.         Gernogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         IARC carcinogenicity       None of the ingredients are listed or exempt.         Reproductive toxicity       Based on available data the classification criteria are not met.         ferrility       Reproductive toxicity - forgan toxicity - forgan toxicity - forgine exposure         Specific target organ toxicity - single exposure       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       Stott SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       Stott SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       Stott SE 1 - H370 Causes damage to
Serious eye damage/imitation       Based on available data the classification criteria are not met.         Respiratory sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Skin sensitization       Based on available data the classification criteria are not met.         Gern cell mutagenicity       Based on available data the classification criteria are not met.         Gernogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         IARC carcinogenicity       None of the ingredients are listed or exempt.         Reproductive toxicity       Based on available data the classification criteria are not met.         fertility       Reproductive toxicity -         Reproductive toxicity -       Based on available data the classification criteria are not met.         fertility       Based on available data the classification criteria are not met.         Specific target organ toxicity - ingle exposure       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       StOT SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repe
damage/initiationRespiratory sensitizationRespiratory sensitizationSkin sensitizationSkin sensitizationSkin sensitizationBased on available data the classification criteria are not met.Germ cell mutagenicityGenotoxicity - in vitroBased on available data the classification criteria are not met.CarcinogenicityCarcinogenicityBased on available data the classification criteria are not met.CarcinogenicityReproductive toxicityReproductive toxicity -Reproductive toxicity -Based on available data the classification criteria are not met.IARC carcinogenicityNone of the ingredients are listed or exempt.Reproductive toxicity - fertilityReproductive toxicity - developmentSpecific target organ toxicity - single exposure STOT - single exposureSTOT - repeated exposureSTOT - repeated exposureSTOT - repeated exposureNot classified as a specific target organ toxicant after repeated exposure.Aspiration hazard
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Skin sensitization       Based on available data the classification criteria are not met.         Germ cell mutagenicity       Based on available data the classification criteria are not met.         Genotoxicity - in vitro       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         IARC carcinogenicity       None of the ingredients are listed or exempt.         Reproductive toxicity       Based on available data the classification criteria are not met.         fertility       Based on available data the classification criteria are not met.         Specific target organ toxicity - based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure         STOT - single exposure       STOT SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       Stot C - single exposure.         STOT - repeated exposure       Not classified as a specific target organ toxicant after repeated exposure.         Aspiration hazard       Vot classified as a specific target organ toxicant after repeated exposure.
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Genotoxicity - in vitro       Based on available data the classification criteria are not met.         Carcinogenicity       Based on available data the classification criteria are not met.         IARC carcinogenicity       None of the ingredients are listed or exempt.         Reproductive toxicity       Based on available data the classification criteria are not met.         Reproductive toxicity - fertility       Based on available data the classification criteria are not met.         Reproductive toxicity - fertility       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       STOT - single exposure       STOT SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       STOT - repeated exposure       Not classified as a specific target organ toxicant after repeated exposure.         Aspiration hazard       Vet classified as a specific target organ toxicant after repeated exposure.
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CarcinogenicityBased on available data the classification criteria are not met.IARC carcinogenicityNone of the ingredients are listed or exempt.Reproductive toxicityBased on available data the classification criteria are not met.Reproductive toxicity - fertilityBased on available data the classification criteria are not met.Reproductive toxicity - developmentBased on available data the classification criteria are not met.Specific target organ toxicity - single exposureSTOT - single exposureSTOT - single exposureSTOT SE 1 - H370 Causes damage to organs .Specific target organ toxicity - repeated exposureSTOT - repeated exposureSTOT - repeated exposureNot classified as a specific target organ toxicant after repeated exposure.Aspiration hazardListen and the classified as a specific target organ toxicant after repeated exposure.
IARC carcinogenicity       None of the ingredients are listed or exempt.         Reproductive toxicity       Based on available data the classification criteria are not met.         fertility       Based on available data the classification criteria are not met.         Reproductive toxicity - fertility       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       STOT - single exposure         STOT - single exposure       STOT SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         STOT - repeated exposure       Not classified as a specific target organ toxicant after repeated exposure.         Aspiration hazard       Vot classified as a specific target organ toxicant after repeated exposure.
Reproductive toxicity       Based on available data the classification criteria are not met.         fertility       Based on available data the classification criteria are not met.         Reproductive toxicity - development       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       STOT - single exposure       STOT SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       STOT - repeated exposure       Not classified as a specific target organ toxicant after repeated exposure.         Aspiration hazard       Not classified as a specific target organ toxicant after repeated exposure.
Reproductive toxicity -       Based on available data the classification criteria are not met.         fertility       Reproductive toxicity -       Based on available data the classification criteria are not met.         development       Based on available data the classification criteria are not met.         Specific target organ toxicity - single exposure       STOT - single exposure         STOT - single exposure       STOT SE 1 - H370 Causes damage to organs .         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         STOT - repeated exposure       Not classified as a specific target organ toxicant after repeated exposure.         Aspiration hazard       Aspiration hazard
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Specific target organ toxicity - repeated exposure         STOT - repeated exposure       Not classified as a specific target organ toxicant after repeated exposure.         Aspiration hazard
STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure. Aspiration hazard
Aspiration hazard
Aspiration hazard Based on available data the classification criteria are not met.
General informationThe severity of the symptoms described will vary dependent on the concentration and the length of exposure.
InhalationA single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo. Unconsciousness. High concentrations may be fatal.
Ingestion May cause stomach pain or vomiting. May cause severe internal injury.
<b>Skin Contact</b> A single exposure may cause the following adverse effects: Pain.
Eye contact No specific symptoms known.
Route of exposure Ingestion Inhalation Skin and/or eye contact

	Target Organs	No specific target organs known.
		ISOBUTYL METHYL KETONE
	Acute toxicity - inhalation	
	ATE inhalation (vapours mg/l)	11.0
	ATE inhalation (dusts/mists mg/l)	1.5
	Carcinogenicity	
	IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.
12. Ecologi	cal information	
Ecological i	information on ingredients.	
		trans-1,2-DICHLOROETHYLENE
	Ecotoxicity	Low acute toxicity to aquatic organisms.
		1,1,1,2,2,3,4,5,5,5-decafluoropentane
	Ecotoxicity	It is unlikely that the substance will dissolve in water in amounts big enough to have a toxic effect on fish and daphnies.
		METHANOL
	Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Toxicity	Aquatic	Chronic 3 - H412 Harmful to aquatic life with long lasting effects.
Ecological i	information on ingredients.	
		trans-1,2-DICHLOROETHYLENE
	Acute aquatic toxicity	
	Acute toxicity - fish	LC₅₀, 96 hours: 1350 mg/l, Fish
	Acute toxicity - aquatic invertebrates	EC₅₀, 48 hours: 220 mg/l, Daphnia magna
		HFC-134a Tetrafluoroethane
	Acute aquatic toxicity	
	Acute toxicity - fish	LC₅₀, 96 hours: 450 mg/l, Fish
	Acute toxicity - aquatic invertebrates	EC₅₀, 48 hours: 980 mg/l, Daphnia magna
		1,1,1,2,2,3,4,5,5,5-decafluoropentane
	Acute aquatic toxicity	
	Acute toxicity - fish	LC₅₀, 96 hours: 13.9 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates	LC₅₀, 48 hours: 11.7 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC₅₀, 72 hours: >120 mg/l, Algae

### ETHANOL

Acute aquatic toxicity		
Acute toxicity - fish	LC₅₀, 96 hours: >10,000 mg/l, Fish	
Acute toxicity - aquatic invertebrates	EC₅₀, 48 hours: 7,800 mg/l, Daphnia magna	
Acute toxicity - aquatic plants	, 96 hours: 1000 mg/l, Freshwater algae	

#### METHANOL

Toxicity	Based on available data the classification criteria are not met.
Acute aquatic toxicity	
Acute toxicity - fish	$LC_{50}$ , 96 hours: >100 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC₅₀, 48 hours: >10000 mg/l, Daphnia magna

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

#### ETHANOL

Persistence and degradability	The product is expected to be biodegradable.
	METHANOL
Persistence and degradability	The degradability of the product is not known.

**Bioaccumulative potential** 

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

#### trans-1,2-DICHLOROETHYLENE

**Bio-Accumulative Potential** Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

### HFC-134a Tetrafluoroethane

Partition coefficient

Pow: 1.06

1,1,1,2,2,3,4,5,5,5-decafluoropentane

	Bio-Accumulative I	ential Bioaccumulation is this product.	unlikely to be significant because of the low water-solubility of
	Partition coefficien	Pow: 2.7	
			ETHANIO
			ETHANOL
	Bio-Accumulative	ential Bioaccumulation is	unlikely.
	Partition coefficien	No information ava	ilable.
			METHANOL
	Bio-Accumulative	ential No data available o	on bioaccumulation.
	Partition coefficien	: -0.77	
Mobility in so	il		
Mobility		data available.	
Ecological inf	ormation on ingred	ts.	
		trans-1,	2-DICHLOROETHYLENE
	Mobility	The product has po	por water-solubility.
			ETHANOL
	Mobility	The product is solu	ble in water.
			METHANOL
	Mobility	No data available.	
Other adverse	e effects		
Other adverse	Other adverse effects None known.		
Ecological information on ingredients.			
			METHANOL
Other adverse effects None known.			
13. Disposal	considerations		
Waste treatm	ent methods		
General infor		ducts wherever possible. When handling waste, the considered. Care should be roughly cleaned or rinsed dues and hence be poter	
Disposal met		To not empty into drains. Dispose of surplus products and those that cannot be recycled via a censed waste disposal contractor. Waste, residues, empty containers, discarded work lothes and contaminated cleaning materials should be collected in designated containers, abeled with their contents. Incineration or landfill should only be considered when recycling is ot feasible.	

14. Transport information		
UN Number		
UN No. (IMDG)	1950	
UN No. (ICAO)	1950	
UN proper shipping name		
Proper shipping name (TDG)	LIMITED QUANTITY	
Proper shipping name (IMDG)	UN1950 AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY	
Proper shipping name (ICAO)	UN1950 AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY	
Proper shipping name (DOT)	LIMITED QUANTITY	
Transport hazard class(es)		
IMDG Class	2.2 LIMITED QUANTITY	
ICAO class/division	2.2 LIMITED QUANTITY	
ICAO subsidiary risk	N/A	
Packing group		
Packing group (International)	No information required.	
TDG Packing Group	N/A	
IMDG packing group	N/A	
ICAO packing group	N/A	
DOT packing group	N/A	
Environmental hazards		
Environmentally Hazardous Substance No.		
Special precautions for user		
Not applicable. No information required.		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable. No information required.	

#### 15. Regulatory information

#### **US Federal Regulations**

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities None of the ingredients are listed or exempt.

#### CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE Final CERCLA RQ: 5000(2270) pounds (Kilograms)

ETHYL ACETATE Final CERCLA RQ: 5000(2270) pounds (Kilograms)

#### METHANOL

Final CERCLA RQ: 5000(2270) pounds (Kilograms) *trans-1,2-DICHLOROETHYLENE* Final CERCLA RQ: 1000(454) pounds (Kilograms)

#### SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

#### SARA 313 Emission Reporting

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE 1.0 % METHANOL

1.0 %

CAA Accidental Release Prevention None of the ingredients are listed or exempt.

**FDA - Essential Chemical** None of the ingredients are listed or exempt.

**FDA - Precursor Chemical** None of the ingredients are listed or exempt.

#### SARA (311/312) Hazard Categories

None of the ingredients are listed or exempt.

### OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

#### **US State Regulations**

California Proposition 65 Carcinogens and Reproductive Toxins The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE Carcinogen and developmental toxin.

*METHANOL* Developmental toxin.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE

METHANOL

California Air Toxics "Hot Spots" (A-II) None of the ingredients are listed or exempt.

#### California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE ETHYL ACETATE

ETHANOL

METHANOL

#### trans-1,2-DICHLOROETHYLENE

Massachusetts "Right To Know" ListThe following ingredients are listed or exempt:ISOBUTYL METHYL KETONEETHYL ACETATEETHANOLMETHANOLtrans-1,2-DICHLOROETHYLENERhode Island "Right To Know" ListThe following ingredients are listed or exempt:ISOBUTYL METHYL KETONE

ETHYL ACETATE

ETHANOL

METHANOL

#### Minnesota "Right To Know" List

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE

ETHYL ACETATE

ETHANOL

METHANOL

#### New Jersey "Right To Know" List

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE

ETHYL ACETATE

ETHANOL

METHANOL

#### Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

ISOBUTYL METHYL KETONE

ETHYL ACETATE

ETHANOL

METHANOL

trans-1,2-DICHLOROETHYLENE

#### Inventories

Canada - DSL/NDSL DSL ETHANOL trans-1,2-DICHLOROETHYLENE 1,1,1,2,2,3,4,5,5,5-decafluoropentane

#### US - TSCA

Present.

#### US - TSCA 12(b) Export Notification

The following ingredients are listed or exempt:

trans-1,2-DICHLOROETHYLENE

1, 1, 1, 2, 2, 3, 4, 5, 5, 5-decafluoropentane

#### 16. Other information

Classification abbreviations and acronyms	Acute Tox. = Acute toxicity Aquatic Chronic = Hazardous to the aquatic environment (chronic)
Training advice	Only trained personnel should use this material.
Revision date	1/30/2019
Revision	55
Supersedes date	1/30/2019
SDS No.	AEROSOL - SPR
Hazard statements in full	<ul> <li>H225 Highly flammable liquid and vapor.</li> <li>H280 Contains gas under pressure; may explode if heated.</li> <li>H301 Toxic if swallowed.</li> <li>H311 Toxic in contact with skin.</li> <li>H319 Causes serious eye irritation.</li> <li>H331 Toxic if inhaled.</li> <li>H332 Harmful if inhaled.</li> <li>H335 May cause respiratory irritation.</li> <li>H336 May cause drowsiness or dizziness.</li> <li>H360 May damage fertility or the unborn child.</li> <li>H370 Causes damage to organs .</li> </ul>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.