

Revision Date 08/27/2013

Revision 9

Supersedes Date 05/06/2013



## SAFETY DATA SHEET

### SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

#### 1. IDENTIFICATION

**Product Name** SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

**Product No.** MCC-SPR, MCC-SPR101

**Synonyms, Trade Names** "SPR - SUPRCLEAN Nonflammable Flux Remover"

**Identification No.** UN1950

**Identified uses** Cleaning agent.

**Supplier** MicroCare Corporation  
595 John Downey Drive  
New Britain, CT 06019  
United States of America  
Toll Free: 1-800-638-0125  
Tel: 1-860-827-0626  
Web: www.MicroCare.com  
email: techsupport@microcare.com

www.MicroCare.com

**Emergency Telephone** CHEMTREC (800) 424-9300

#### 2. HAZARD(S) IDENTIFICATION

#### EMERGENCY OVERVIEW

Colourless liquid. Slight odor. Ether. This product is not flammable. Avoid contact with eyes and prolonged skin contact. Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

**Appearance** Clear liquid. Aerosol.

**Color** Colourless.

**Odor** Slight odor. Ether

**GHS Pictogram**



**Signal Word** Warning

**Hazard Statements**

H332

Harmful if inhaled.

H412

Harmful to aquatic life with long lasting effects.

**Precautionary Statements**

P501

Dispose of contents/container in accordance with local regulations.

**Contains**

trans-DICHLOROETHYLENE

**GHS Classification**

Physical and Chemical Hazards

Not classified.

Human health

Acute Tox. 4 - H332

Environment

Aquatic Chronic 3 - H412

#### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

WHMIS Label

**SPR - HEAVY DUTY FLUX REMOVER, AEROSOL**

Compressed Gas.

Materials Causing Other  
Toxic Effects.**Controlled Product Classification**

Canadian WHMIS Classification A D2 WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION (33)) This product has been classified according to the hazard criteria of the Controlled Product Regulations, and the MSDS contains all required information.

**Human Health**

Prolonged skin contact may cause redness, irritation and dry skin. Mild dermatitis, allergic skin rash.

**Inhalation**

Vapors may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness.

**Ingestion**

May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

**Skin Contact**

Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

**Eye Contact**

May cause temporary eye irritation.

**Medical Symptoms**

High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

**Environment**

The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

**Physical And Chemical Hazards**

Vapors are heavier than air and may travel along the floor and in the bottom of containers. Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small. Gas or vapor displaces oxygen available for breathing (asphyxiant).

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>1,1,1,2,3,4,4,5,5,5-decafluoropentane</b>	<b>10-30%</b>
<b>CAS No.: 138495-42-8</b>	<b>EC No.: 420-640-8</b>
GHS Classification Aquatic Chronic 3 - H412	
<b>ETHANOL</b>	<b>1-5%</b>
<b>CAS No.: 64-17-5</b>	<b>EC No.: 200-578-6</b>
GHS Classification Flam. Liq. 2 - H225	
<b>HFC-134a Tetrafluoroethane</b>	<b>10-30%</b>
<b>CAS No.: 811-97-2</b>	<b>EC No.: 212-377-0</b>
GHS Classification Not classified.	

**SPR - HEAVY DUTY FLUX REMOVER, AEROSOL**

<b>trans-DICHLOROETHYLENE</b>	<b>30-60%</b>
<b>CAS No.: 156-60-5</b>	<b>EC No.: 205-860-2</b>
GHS Classification Flam. Liq. 2 - H225; Acute Tox. 4 - H332; Aquatic Chronic 3 - H412	

**4. FIRST-AID MEASURES****Description of first aid measures****General Information**

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Place unconscious person on the side in the recovery position and ensure breathing can take place. Perform artificial respiration if breathing has stopped.

**Inhalation**

Move into fresh air and keep at rest. If respiratory problems, artificial respiration/oxygen.

**Ingestion**

Do not induce vomiting. Immediately rinse mouth and drink plenty of water (200-300 ml). Consult a physician for specific advice.

**Skin Contact**

Remove contaminated clothes and rinse skin thoroughly with water.

**Eye Contact**

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Consult a physician for specific advice.

**Most important symptoms and effects, both acute and delayed****General Information**

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

**Inhalation**

Vapors may cause headache, fatigue, dizziness and nausea. Difficulty in breathing. Upper respiratory irritation. Severe irritation in nose and throat.

**Ingestion**

May cause stomach pain or vomiting. Drowsiness, dizziness, disorientation, vertigo.

**Skin Contact**

Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

**Eye Contact**

Irritation of eyes and mucous membranes. Irritating and may cause redness and pain.

**Indication of any immediate medical attention and special treatment needed****Notes To The Physician**

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

**5. FIRE-FIGHTING MEASURES****Flammability Class**

This product is not flammable.

**Flammability Limit - Lower(%)** 5.0

**Flammability Limit - Upper(%)** 14.4

**Extinguishing Media**

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

**Hazardous combustion products**

When heated, toxic and corrosive vapors/gases may be formed. In case of fire, toxic gases (CO, CO<sub>2</sub>, NO<sub>x</sub>) may be formed.

**Unusual Fire & Explosion Hazards**

Aerosol containers can explode when heated, due to excessive pressure build-up.

**Specific Hazards**

Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

## SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

### Special Fire Fighting Procedures

Move container from fire area if it can be done without risk. Water spray should be used to cool containers.

### Protective Equipment For Fire-Fighters

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

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Warn everybody of potential hazards and evacuate if necessary. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level.

### Environmental Precautions

Contain spillages with sand, earth or any suitable adsorbent material. Avoid release to the environment.

### Spill Clean Up Methods

Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

### Reference to other sections

See section 11 for more detailed information on health effects and symptoms.

## 7. HANDLING AND STORAGE

### Handling

Provide good ventilation. Avoid inhalation of vapors/spray and contact with skin and eyes. Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

### Storage

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)		STEL (15 min)		Notes
ETHANOL	ACGIH			1000 ppm		A3
ETHANOL	PEL	1000 ppm	1900 mg/m3			
trans-DICHLOROETHYLENE	ACGIH	200 ppm				

COMPONENT	IDLH
ETHANOL	3300 ppm

ACGIH=American Conference of Governmental Industrial Hygienists.

A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans.

### Protective Equipment



### Engineering Measures

No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation.

### Respiratory Equipment

Vapors are heavier than air and may travel along the floor and in the bottom of containers. At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used. Self-contained breathing apparatus with full facepiece.

### Hand Protection

For prolonged or repeated skin contact use suitable protective gloves.

### Eye Protection

Wear approved, tight fitting safety glasses where splashing is probable.

### Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

## SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

### Hygiene Measures

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. When using do not eat, drink or smoke.

### Skin Protection

Wear apron or protective clothing in case of splashes.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear liquid. Aerosol.
<b>Color</b>	Colourless.
<b>Odor</b>	Slight odor. Ether
<b>Solubility</b>	Slightly soluble in water.
<b>Initial boiling point and boiling range</b>	41 C / 106 F
<b>Vapor density (air=1)</b>	3.4
<b>Vapor pressure</b>	mm Hg 20 284
<b>Solubility Value (G/100G H2O@20°C)</b>	.4
<b>Flammability Limit - Lower(%)</b>	5.0
<b>Flammability Limit - Upper(%)</b>	14.4
<b>Other Flammability</b>	
This product is not flammable.	
<b>Volatility Description</b>	Volatile
<b>Volatile By Vol. (%)</b>	100
<b>Flammability</b>	This product is not flammable.

## 10. STABILITY AND REACTIVITY

### Reactivity

Reaction with: Strong alkalis.

### Stability

Stable under normal temperature conditions and recommended use.

### Hazardous Polymerisation

Will not polymerise.

### Conditions To Avoid

Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

### Materials To Avoid

Alkali metals. Alkali earth metals. Powdered metal.

### Hazardous Decomposition Products

When heated, toxic and corrosive vapors/gases may be formed. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

## 11. TOXICOLOGICAL INFORMATION

### Toxicological Information on Ingredients:

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

#### Toxic Dose 1 - LD 50

7, 060 mg/kg (oral rat)

#### Toxic Conc. - LC 50

20000 mg/l/4h (inh-rat)

## SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

trans-DICHLOROETHYLENE (CAS: 156-60-5)

**Toxic Dose 1 - LD 50**

1235 mg/kg (oral rat)

**Toxic Dose 2 - LD 50**

>5000 mg/kg (oral-rbt)

**Toxic Conc. - LC 50**

24100 ppm/4h (inh-rat)

**Other Health Effects**

This substance has no evidence of carcinogenic properties.

HFC-134a Tetrafluoroethane (CAS: 811-97-2)

**Toxic Dose 1 - LD 50**

>2085 mg/kg (oral rat)

**Other Health Effects**

This substance has no evidence of carcinogenic properties.

1,1,1,2,3,4,4,5,5,5-decafluoropentane (CAS: 138495-42-8)

**Toxic Dose 1 - LD 50**

>5, 000 mg/kg (oral rat)

**Toxic Conc. - LC 50**

11, 100 ppm/4h (inh-rat)

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Dangerous for the environment if discharged into watercourses.

**Acute Fish Toxicity**

Very toxic to aquatic organisms.

**Degradability**

The product is not readily biodegradable.

**Bioaccumulative potential**

No data available on bioaccumulation.

**Mobility:**

The product contains volatile substances, which may spread in the atmosphere.

**Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB Substances.

**Other adverse effects**

The product contains substances which contribute to global warming (greenhouse effect). The product contains a substance which has a photochemical ozone creation potential.

**SPR - HEAVY DUTY FLUX REMOVER, AEROSOL****Ecological Information on Ingredients:****ETHANOL (CAS: 64-17-5)****LC 50, 96 Hrs, Fish mg/l**

&gt;10, 000

**EC 50, 48 Hrs, Daphnia, mg/l**

7, 800

**trans-DICHLOROETHYLENE (CAS: 156-60-5)****Ecotoxicity**

Low acute toxicity to aquatic organisms.

**LC 50, 96 Hrs, Fish mg/l**

1350

**EC 50, 48 Hrs, Daphnia, mg/l**

220

**Degradability**

No data available.

**Bioaccumulative potential**

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

**Mobility:**

The product has poor water-solubility.

**HFC-134a Tetrafluoroethane (CAS: 811-97-2)****LC 50, 96 Hrs, Fish mg/l**

450

**EC 50, 48 Hrs, Daphnia, mg/l**

980

**1,1,1,2,3,4,4,5,5,5-decafluoropentane (CAS: 138495-42-8)****Ecotoxicity**

It is unlikely that the substance will dissolve in water in amounts big enough to have a toxic effect on fish and daphnies.

**LC 50, 96 Hrs, Fish mg/l**

27.2

**Degradability**

The product is not expected to be biodegradable.

**Bioaccumulative potential**

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

**IC 50, 72 Hrs, Algae, mg/l**

120

**13. DISPOSAL CONSIDERATIONS****Waste Management**

Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

**Disposal Methods**

Dispose of waste and residues in accordance with local authority requirements.

**14. TRANSPORT INFORMATION**

<b>UN No. (DOT/TDG)</b>	UN1950
<b>UN No. (IMDG)</b>	UN 1950
<b>UN No. (ICAO)</b>	UN 1950
<b>DOT Proper Shipping Name</b>	LIMITED QUANTITIES
<b>DOT Proper Shipping Name</b>	AEROSOLS
<b>TDG Proper Shipping Name</b>	AEROSOLS

**SPR - HEAVY DUTY FLUX REMOVER, AEROSOL**

IMDG Class	2.2
ICAO Class	2.2
ICAO Subsidiary Risk	N/A

**Transport Labels**

IMDG Pack Group	N/A
Air Pack Group	N/A

**Environmentally Hazardous Substance/Marine Pollutant**

No.

**Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes**

Not applicable. No information required.

**15. REGULATORY INFORMATION****Regulatory Status (US)**

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. TSCA: The ingredients of this product are on the TSCA Inventory.

**Regulatory References**

29 CFR 1910.1010 Federal Regulations (OSHA Standard).

**US Federal Regulations****SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed.

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

The following ingredients are listed.

trans-DICHLOROETHYLENE; 1, 000 lbs (454 Kg)

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed.

**SARA 313 Emission Reporting**

None of the ingredients are listed.

**CAA Accidental Release Prevention**

None of the ingredients are listed.

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

Acute

**OSHA Highly Hazardous Chemicals**

None of the ingredients are listed.

**US State Regulations****California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed.

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

None of the ingredients are listed.

**California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are listed.

**Massachusetts "Right To Know" List**

The following ingredients are listed.

ETHANOL

trans-DICHLOROETHYLENE



## SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

**Rhode Island "Right To Know" List**

The following ingredients are listed.

ETHANOL

**Minnesota "Right To Know" List**

The following ingredients are listed.

ETHANOL

HFC-134a Tetrafluoroethane

**New Jersey "Right To Know" List**

The following ingredients are listed.

ETHANOL

**Pennsylvania "Right To Know" List**

The following ingredients are listed.

ETHANOL

trans-DICHLOROETHYLENE

**International Inventories**

**Canada – DSL/NDSL**

The following ingredients are listed.

ETHANOL

HFC-134a Tetrafluoroethane

trans-DICHLOROETHYLENE

**US - TSCA**

The following ingredients are listed.

ETHANOL

HFC-134a Tetrafluoroethane

trans-DICHLOROETHYLENE

**US – TSCA 12(b) Export Notification**

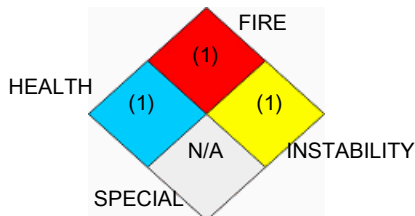
None of the ingredients are listed.

**16. OTHER INFORMATION**

**HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)**

HEALTH	1
FLAMMABILITY	1
PHYSICAL	1
PERSONAL PROTECTION	A

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)**



**Revision Comments**

NOTE: Lines within the margin indicate significant changes from the previous revision.

<b>Revision Date</b>	08/27/2013
<b>Revision</b>	9
<b>Supersedes Date</b>	05/06/2013
<b>Sds No.</b>	AEROSOL_SPR
<b>Material Safety Data Sheet Status</b>	Approved.
<b>Date</b>	06 May 2013

## SPR - HEAVY DUTY FLUX REMOVER, AEROSOL

### Disclaimer

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.