



## MATERIAL SAFETY DATA SHEET

### HDS - HEAVY DUTY DEGREASING SOLVENT

#### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<b>PRODUCT NAME</b>	HDS - HEAVY DUTY DEGREASING SOLVENT
<b>PRODUCT NO.</b>	MCC-HDSL, MCC-HDSG, MCC-HDSP, MCC-HDSD
<b>SYNONYMS, TRADE NAMES</b>	MCC-HDSL (2.5 lb - 1 Liter); MCC-HDSG (10 lb - 1 Gallon Pail); MCC-HDSP (50 lb - 5 Gallon Pail); MCC-HDSD (500 lb - 55 Gallon Drum)
<b>SUPPLIER</b>	MICROCARE CORPORATION 595 John Downey Drive New Britain, CT 06019 United States of America CAGE: OATV9 +1 860-827-0626 +1 860-827-8105 techsupport@microcare.com
<b>CONTACT PERSON</b>	techsupport@microcare.com
<b>EMERGENCY TELEPHONE</b>	CHEMTREC (800) 424-9300

#### 2 HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

Colorless liquid Slight odor Ether. This product is not flammable. The liquid may irritate the skin, the eyes and the respiratory tract. Gas or vapor displaces oxygen available for breathing (asphyxiant). No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation. Keep out of the reach of children.

##### 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. Gas or vapor displaces oxygen available for breathing (asphyxiant).

##### HUMAN HEALTH

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

##### POTENTIAL HEALTH EFFECTS

##### 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.

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
1,1,1,2,3,4,4,5,5,5-decafluoropentane	420-640-8	138495-42-8	10-30%
PENTAFLUOROBUTANE		406-58-6	10-30%
trans-DICHLOROETHYLENE	205-860-2	156-60-5	30-60%

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### 4 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.

### 5 FIRE-FIGHTING MEASURES

#### EXTINGUISHING MEDIA

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

#### SPECIAL FIRE FIGHTING PROCEDURES

Containers close to fire should be removed immediately or cooled with water.

#### UNUSUAL FIRE & EXPLOSION HAZARDS

Closed containers can burst violently when heated, due to excess pressure build-up.

#### SPECIFIC HAZARDS

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

#### PROTECTIVE MEASURES IN FIRE

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

**FLAMMABILITY LIMIT - LOWER(%)** 7.5

**FLAMMABILITY LIMIT - UPPER(%)** 9.0

#### FLAMMABILITY CLASS

This product is not flammable.

### 6 ACCIDENTAL RELEASE MEASURES

#### PERSONAL PRECAUTIONS

Warn everybody of potential hazards and evacuate if necessary. Ventilate well, avoid breathing vapours. 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

Large quantities should not be discharged into the drain but removed with absorbing material. Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

### 7 HANDLING AND STORAGE

#### HANDLING

Provide good ventilation. Avoid inhalation of vapors/spray and contact with skin and eyes.

#### STORAGE

Store in tightly closed original container in a dry and cool place.

#### STORAGE CLASS

Unspecified storage. This product is not flammable.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

#### PROTECTIVE EQUIPMENT

## HDS - HEAVY DUTY DEGREASING SOLVENT



### 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 face piece.

### HAND PROTECTION

For prolonged or repeated skin contact use suitable protective gloves.

### EYE PROTECTION

Wear approved, tight fitting safety glasses where splashing is probable. If risk of splashing, wear safety goggles or face shield.

### OTHER PROTECTION

Wear suitable protective clothing as protection against splashing or contamination.

### 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

APPEARANCE	Clear liquid		
COLOR	Colorless		
ODOR	Slight odor Ether		
VOLATILITY DESCRIPTION	Volatile.		
SOLUBILITY	Slightly soluble in water.		
UDF Phrase 1	This product is not flammable.		
	This product is not flammable.		
BOILING POINT (°C)	37 C / 99 F	VAPOR DENSITY (air=1)	4.0
VAPOR PRESSURE	65 kPa 20 C / 77 F	VOLATILE BY VOL. (%)	100

## 10 STABILITY AND REACTIVITY

### STABILITY

Stable under normal temperature conditions and recommended use.

### CONDITIONS TO AVOID

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

### HAZARDOUS POLYMERISATION

Will not polymerise.

### MATERIALS TO AVOID

Alkali metals. Alkali earth metals. Powdered metal.

### HAZARDOUS DECOMPOSITION PRODUCTS

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

## 11 TOXICOLOGICAL INFORMATION

Name	trans-DICHLOROETHYLENE
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)

### CARCINOGENICITY

This substance has no evidence of carcinogenic properties.

## HDS - HEAVY DUTY DEGREASING SOLVENT

<b>Name</b>	1,1,1,2,3,4,4,5,5,5-decafluoropentane
<b>Toxic Dose 1 - LD 50</b>	>5,000 mg/kg (oral rat)
<b>Toxic Conc. - LC 50</b>	11,100 ppm/4h (inh-rat)
<b>Name</b>	PENTAFLUOROBUTANE
<b>Toxic Dose 1 - LD 50</b>	>2000 mg/kg (oral rat)
<b>Toxic Conc. - LC 50</b>	25000 ppm/4h (inh-rat)

### CARCINOGENICITY

IARC Not Listed. OSHA Not Regulated.

## 12 ECOLOGICAL INFORMATION

### MOBILITY

The product has poor water-solubility.

### BIOACCUMULATION

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

<b>Name</b>	trans-DICHLOROETHYLENE
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#### Ecotoxicity

Low acute toxicity to aquatic organisms.

<b>LC 50, 96 hrs, Fish mg/l</b>	1350
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<b>EC 50, 48 hrs, Daphnia, mg/l</b>	220
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#### Mobility

The product has poor water-solubility.

#### Bioaccumulation potential

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

#### Degradability

No data available.

<b>Name</b>	1,1,1,2,3,4,4,5,5,5-decafluoropentane
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#### Ecotoxicity

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

<b>LC 50, 96 hrs, Fish mg/l</b>	27.2
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<b>IC 50, 72 hrs, Algae, mg/l</b>	120
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#### Bioaccumulation potential

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

#### Degradability

The product is not expected to be biodegradable.

<b>Name</b>	PENTAFLUOROBUTANE
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<b>LC 50, 96 hrs, Fish mg/l</b>	>200
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<b>EC 50, 48 hrs, Daphnia, mg/l</b>	>200
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<b>IC 50, 72 hrs, Algae, mg/l</b>	113
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#### Mobility

The product has poor water-solubility.

#### Bioaccumulation potential

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

#### Degradability

The product is not readily biodegradable.

## 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

## HDS - HEAVY DUTY DEGREASING SOLVENT

**TRANSPORT NOTES**

Not regulated. The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

**15 REGULATORY INFORMATION**

**INVENTORIES**

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
trans-DICHLOROETHYLENE	DSL	Yes.						
1,1,1,2,3,4,4,5,5-decafluoropentane	DSL	Yes.						
PENTAFLUOROBUTANE	DSL	Yes.						

COMPONENT	TSCA 12(b) Export Notification
trans-DICHLOROETHYLENE	No.
1,1,1,2,3,4,4,5,5-decafluoropentane	Yes.
PENTAFLUOROBUTANE	No.

**SARA (311/312) HAZARD CATEGORIES**

Acute Chronic

**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). NFPA30 Flammable and Combustible Liquids Code.

**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS**

**LABEL(S) FOR SUPPLY**



Materials Causing  
 Other Toxic  
 Effects.

**CONTROLLED PRODUCT CLASSIFICATION**

Canadian WHMIS Classification 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.

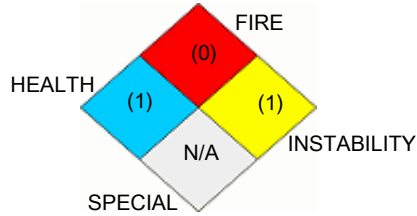
**16 OTHER INFORMATION**

**HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)**

HEALTH	1
FLAMMABILITY	0
PHYSICAL	1
PERSONAL PROTECTION	upervisor

## HDS - HEAVY DUTY DEGREASING SOLVENT

### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



### REVISION COMMENTS

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

**REVISION DATE** 08/13/2010

**VERSION No.** 2

### SAFETY DATA SHEET STATUS

Approved.

**DATE** May 5, 2010

### DISCLAIMER

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