



SAFETY DATA SHEET HEAVY-DUTY TRANSIT CLEANER, AEROSOL

According to the Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013, as amended.

SECTION 1: identification of the hazardous chemical and of the supplier

Product identifier

Product name HEAVY-DUTY TRANSIT CLEANER, AEROSOL

Product number MCC-HDTC19A

Recommended use of the substance or mixture and restrictions on use

Identified uses Cleaning agent.

Details of the supplier of the safety data sheet

Supplier MICROCARE ASIA PTE LTD
102E, Pasir Panjang Road,
Citilink, #05-06,
Singapore 118529
(65) 6271.0182
techsupport@microcare.com

Manufacturer MICROCARE LLC
595 John Downey Drive
New Britain, CT 06051
United States of America
CAGE: OATV9
Tel: +1 800-638-0125, +1 860-827-0626
techsupport@microcare.com

Emergency telephone number

Emergency telephone INFOTRAC +65 3163 5349 (SINGAPORE)
1-352-323-3500 (from anywhere in the world)

SECTION 2: Hazard identification

Classification of the substance or mixture

Classification

Physical hazards Press. Gas, Liquefied - H280

Health hazards Acute Tox. 4 - H332

Environmental hazards Aquatic Chronic 3 - H412

Human health Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Mild dermatitis, allergic skin rash.

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

HEAVY-DUTY TRANSIT CLEANER, AEROSOL

Physicochemical

Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Not considered to be a significant hazard due to the small quantities used. Gas or vapour displaces oxygen available for breathing (asphyxiant).

Label elements

Pictogram



Signal word

Warning

Hazard statements

H280 Contains gas under pressure; may explode if heated.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat/ sparks/ open flames /hot surfaces – No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50oC/122oF.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information

EUH210 Safety data sheet available on request.
RCH001a For use in industrial installations only.

Contains

trans-1,2-DICHLOROETHYLENE

Supplementary precautionary statements

P273 Avoid release to the environment.

Other hazards

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Mixtures

trans-1,2-DICHLOROETHYLENE	30-60%
CAS number: 156-60-5	

Classification

Flam. Liq. 2 - H225
Acute Tox. 4 - H332
Eye Irrit. 2 - H319
STOT SE 3 - H336
Aquatic Chronic 3 - H412

1,1,1,2,2,3,4,5,5,5-decafluoropentane	10-30%
CAS number: 138495-42-8	
Classification	
Aquatic Chronic 3 - H412	

The full text for all hazard statements is displayed in Section 16.

Composition comments

The data shown are in accordance with the latest EC Directives.

Composition

HEAVY-DUTY TRANSIT CLEANER, AEROSOL

SECTION 4: First-aid measures

Description of first aid measures

General information	Never give anything by mouth to an unconscious person. Do not induce vomiting. Place unconscious person on the side in the recovery position and ensure breathing can take place. If breathing stops, provide artificial respiration.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Consult a physician for specific advice.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. 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 dependent on the concentration and the length of exposure.
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea. Difficulty in breathing. Upper respiratory irritation. Severe irritation of nose and throat.
Ingestion	May cause stomach pain or vomiting. Drowsiness, dizziness, disorientation, vertigo.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	Irritation of eyes and mucous membranes. Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.
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Special hazards arising from the substance or mixture

Specific hazards	Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Aerosol containers can explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Heating may generate the following products: Toxic and corrosive gases or vapours. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

Advice for fire-fighters

Protective actions during firefighting	Move containers from fire area if it can be done without risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Bursting aerosol containers may be propelled from a fire at high speed.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
Hazchem code	N/A

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SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

Environmental precautions

Environmental precautions Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.

Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

Reference to other sections

Reference to other sections See Section 11 for additional information on health hazards.

SECTION 7: Handling and storage

Precautions for safe handling

Usage precautions Provide adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

Conditions for safe storage, including any incompatibilities

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

Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

Reference to other sections. Store away from incompatible materials (see Section 10).

SECTION 8: Exposure controls and personal protection

Control parameters

Ingredient comments ACGIH = US Standard.

Exposure controls

Protective equipment



Appropriate engineering controls

No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

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Hygiene measures	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. When using do not eat, drink or smoke.
Respiratory protection	Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. In confined or poorly-ventilated spaces, a supplied-air respirator must be worn. Wear self-contained breathing apparatus with full facepiece.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid. Aerosol.
Colour	Colourless.
Odour	Slight. Ether.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	39°C/102°F @ 101.3 kPa
Flash point	The product is not flammable.
Evaporation rate	No information available.
Evaporation factor	No information available.
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 13 %(V) Lower flammable/explosive limit: 5.5 %(V)
Other flammability	The product is not flammable. Aerosol ignition distance: none at 0.0 cm
Vapour pressure	55.3 kPa @ 25°C
Vapour density	3.7
Relative density	1.27
Bulk density	No information available.
Solubility(ies)	0.3 g/100 g water @ 20°C Slightly soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Oxidising properties	Not known.
Comments	Aerosol
Global Warming Potential (GWP)	
Surface tension	
Refractive index	No information available.

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Particle size	No information available.
Molecular weight	No information available.
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.
Heat of vaporization (at boiling point), cal/g (Btu/lb)	

SECTION 10: Stability and reactivity

Reactivity	The following materials may react with the product: Strong alkalis.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	Will not polymerise.
Conditions to avoid	Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.
Materials to avoid	Alkali metals. Alkaline earth metals. Powdered metal.
Hazardous decomposition products	Heating may generate the following products: Toxic and corrosive gases or vapours. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO ₂). Carbon monoxide (CO).

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 19.05

Inhalation	Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing.
Ingestion	May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.
Skin contact	Product has a defatting effect on skin. May cause allergic contact eczema.
Eye contact	May cause temporary eye irritation.
Medical symptoms	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting.

Toxicological information on ingredients

trans-1,2-DICHLOROETHYLENE

Other health effects There is no evidence that the product can cause cancer.

Acute toxicity - oral

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Acute toxicity oral (LD₅₀ mg/kg)	7,902.0
Species	Rat
ATE oral (mg/kg)	7,902.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	5,000.0
Species	Rat
ATE dermal (mg/kg)	5,000.0
<u>Acute toxicity - inhalation</u>	
ATE inhalation (vapours mg/l)	11.0
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Prolonged and frequent contact may cause redness and irritation.
Animal data	Slightly irritating. Rabbit
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Supplier's information. Rabbit 500 mg 24 hours Causes mild skin irritation.
<u>Respiratory sensitization</u>	
Respiratory sensitization	No specific test data are available.
<u>Skin sensitization</u>	
Skin sensitization	No specific test data are available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.
<u>Carcinogenicity</u>	
Carcinogenicity	No specific test data are available.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	NOAEL Not available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEL 16 mg/l, 90 days
Target organs	Endocrine system Liver Kidneys Bladder Respiratory tract
<u>HFC-134a Tetrafluoroethane</u>	
Other health effects	There is no evidence that the product can cause cancer.
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ gases ppmV)	567,000.0

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Species	Rat
ATE inhalation (gases ppmV)	567,000.0
Inhalation	Vapours 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 (LC₅₀ 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/irritation

Serious eye damage/irritation Not irritating. Rabbit

Respiratory sensitization

Respiratory sensitization Data lacking.

Skin sensitization

Skin sensitization Not sensitizing. - Guinea pig: Not sensitizing.

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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.

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.

SECTION 12: Ecological Information

Ecological information on ingredients

trans-1,2-DICHLOROETHYLENE

Ecotoxicity Harmful to aquatic life. May cause long lasting harmful effects to aquatic life.

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.

Ecological information on ingredients

trans-1,2-DICHLOROETHYLENE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 135 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 220 mg/l, Daphnia magna

Acute toxicity - aquatic plants LC₅₀, 72 hours: 36.36 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 48 hours: 110,000 mg/l, Daphnia magna

HFC-134a Tetrafluoroethane

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 450 mg/l, Fish

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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

Persistence and degradability

Ecological information on ingredients

trans-1,2-DICHLOROETHYLENE

Biodegradation Not readily biodegradable.
Method: OECD Test Guideline 301D

Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients

trans-1,2-DICHLOROETHYLENE

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

Partition coefficient log Pow: 2.06

HFC-134a Tetrafluoroethane

Partition coefficient Pow: 1.06

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

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

Partition coefficient Pow: 2.7

Mobility in soil

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

Ecological information on ingredients

trans-1,2-DICHLOROETHYLENE

Mobility The product has poor water-solubility.

Other adverse effects

Other adverse effects The product contains a substance or substances that will contribute to global warming (greenhouse effect).

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SECTION 13: Disposal information

Waste treatment methods

General information	Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transportation information

UN number

UN No. (IMDG)	1950
UN No. (ICAO)	1950

UN proper shipping name

Proper shipping name (Road/Rail)	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

Transport hazard class(es)

IMDG class	2.2 LIMITED QUANTITY
ICAO class/division	2.2 LIMITED QUANTITY
ICAO subsidiary risk	N/A

Packing group

IMDG packing group	N/A
ICAO packing group	N/A

Environmental hazards

Special precautions for user

EmS	F-C, S-V
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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. No information required.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the substance or mixture

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	3/6/2021
Revision	69
Supersedes date	3/1/2021
SDS number	AEROSOL - HDTC
SDS status	Approved.

HEAVY-DUTY TRANSIT CLEANER, AEROSOL

Hazard statements in full

H225 Highly flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

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.