SAFETY DATA SHEET
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL


1. Identification

Product identifier

Product name          EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL
Product number        MCC-EC7M, MCC-EC7101, MCC-EC7M0Y
Synonyms; trade names "EC7M - Bioact EC7M"

Recommended use of the chemical and restrictions on use

Application          Cleaning agent.

Details of the supplier of the safety data sheet

Supplier             MicroCare Corporation
Contact Person       techsupport@microcare.com
Manufacturer         MICROCARE CORPORATION
                      595 John Downey Drive
                      New Britain, CT   06051
                      United States of America
                      CAGE: OATV9
                      Tel: +1 860-827-0626
                      Fax: +1 860-827-8105
                      techsupport@microcare.com

Emergency telephone number

Emergency telephone   CHEMTREC (800) 424-9300

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status          This Product is Hazardous under the OSHA Hazard Communication Standard.
Physical hazards                 Flam. Aerosol 1 - H222
Health hazards                   Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317
Environmental hazards            Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Human health                    Splashes in the eyes may cause redness and irritation. Keep out of the reach of children. See Section 11 for additional information on health hazards.
Physicochemical                 Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

Pictogram

Signal word

Danger

Hazard statements

H222 Extremely flammable aerosol.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, sparks, open flames and 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.
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 If on skin: Wash with plenty of water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P410+P403 Protect from sunlight. Store in a well-ventilated place.
P412 Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label

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

Contains

d-LIMONENE

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>d-LIMONENE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 5989-27-5</td>
</tr>
<tr>
<td>M factor (Acute) = 1</td>
</tr>
<tr>
<td>M factor (Chronic) = 1</td>
</tr>
<tr>
<td>60-100%</td>
</tr>
</tbody>
</table>

Classification

Flam. Liq. 3 - H226
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Skin Sens. 1 - H317
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

<table>
<thead>
<tr>
<th>HFC-134a Tetrafluoroethane</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 811-97-2</td>
<td></td>
</tr>
</tbody>
</table>

**Classification**
Press. Gas, Liquefied - H280

The Full Text for all Hazard Statements are Displayed in Section 16.

**Composition comments**
The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of CFR 1900.1200 TSCA: The ingredients of this product are on the TSCA Inventory.

**Composition**

**4. First-aid measures**

**Description of first aid measures**

**General information**
Move affected person to fresh air at once. Get medical attention if any discomfort continues.

**Inhalation**
Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep affected person warm and at rest. Get medical attention immediately.

**Ingestion**
Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Never give anything by mouth to an unconscious person. Consult a physician for specific advice.

**Skin Contact**
Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if irritation persists after washing.

**Eye contact**
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

**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**
Vapors may cause headache, fatigue, dizziness and nausea.

**Ingestion**
May cause stomach pain or vomiting. Headache.

**Skin contact**
Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

**Eye contact**
Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain. Irritation and redness, followed by blurred vision.

**Indication of immediate medical attention and special treatment needed**

**Notes for the doctor**
No specific recommendations. If in doubt, get medical attention promptly.

**5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media**
Extinguish with the following media: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Special hazards arising from the substance or mixture**
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

Specific hazards
Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember. Containers can burst violently when heated, due to excess pressure build-up.

Hazardous combustion products
Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

Advice for firefighters

Protective actions during firefighting
Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapors.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions
Do not discharge into drains or watercourses or onto the ground.

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. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely.

Reference to other sections
For personal protection, see Section 8.

7. Handling and storage

Precautions for safe handling

Usage precautions
Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level.

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 uses(s)

Specific end use(s)
Cleaning agent.

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

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits
HFC-134a Tetrafluoroethane
Long-term exposure limit (8-hour TWA): OES 4240 mg/m³
Short-term exposure limit (15-minute): OES
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

Additional Occupational Exposure Limits

Ingredient comments
WEL = Workplace Exposure Limits

Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate general and local exhaust 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. It is recommended that gloves are made of the following material: Nitrile rubber. Polyvinyl alcohol (PVA). Viton rubber (fluoro rubber).

Other skin and body protection
Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

Hygiene measures
Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Respiratory protection
No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance
Liquid.

Color
Colorless to pale yellow.

Odor

Odor threshold
No information available.

pH
No information available.

Melting point
No information available.

Initial boiling point and range
340-370 F / 169-187°C @ 101.3 kPa

Flash point
117 F /47°C TCC (Tag closed cup).

Evaporation rate
No information available.

Evaporation factor
No information available.

Flammability (solid, gas)
No information available.

Upper/lower flammability or explosive limits
Upper flammable/explosive limit: 6.0 %(V) Lower flammable/explosive limit: .7 %(V)

Other flammability
No information available.

Vapor pressure
0.21 kPa @ 20°C
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

Vapor density 4.6
Relative density No information available.
Bulk density No information available.
Solubility(ies) Insoluble 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.
Oxidizing properties There are no chemical groups present in the product that are associated with oxidizing properties.
Comments Aerosol.
Refractive index No information available.
Particle size No information available.
Molecular weight Not applicable.
Vatility 100%
Saturation concentration No information available.
Critical temperature No information available.

10. Stability and reactivity

Reactivity There are no known reactivity hazards associated with this product.
Stability Stable at normal ambient temperatures.
Possibility of hazardous reactions Will not polymerize.
Conditions to avoid Avoid heat, flames and other sources of ignition.

11. Toxicological information

Information on toxicological effects
Other health effects There is no evidence that the product can cause cancer.
Inhalation May cause respiratory system irritation. Vapors may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system.
Skin Contact Product has a defatting effect on skin. May cause skin irritation/eczema.
Eye contact Irritating to eyes.
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

Toxicological information on ingredients.

d-LIMONENE

**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 Rabbit
ATE dermal (mg/kg) 5,000.0

**Acute toxicity - inhalation**

Acute toxicity inhalation (LC₅₀ vapours mg/l) 1,000.0
Species Mouse
ATE inhalation (vapours mg/l) 1,000.0

HFC-134a Tetrafluoroethane

**Other health effects**

There is no evidence that the product can cause cancer.

**Acute toxicity - Inhalation**

Acute toxicity inhalation (LC₅₀ gases ppmV) 567,000.0
Species Rat
ATE inhalation (gases ppm) 567,000.0

12. Ecological Information

**Ecotoxicity**

The product contains a substance which is harmful to aquatic organisms.

**Toxicity**

Very toxic to aquatic organisms.

Ecological information on ingredients.

d-LIMONENE

**Acute aquatic toxicity**

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1
M factor (Acute) 1
Acute toxicity - fish EC₅₀, 96 hours: 0.69 mg/l, Pimephales promelas (Fat-head Minnow)
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 0.42 mg/l, Daphnia magna

Chronic aquatic toxicity
NOEC
0.001 < NOEC ≤ 0.01

Degradability
Rapidly degradable

M factor (Chronic)
1

HFC-134a Tetrafluoroethane

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

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 980 mg/l, Daphnia magna

Persistence and degradability
The product is biodegradable but it must not be discharged into drains without permission from the authorities.

Ecological information on ingredients.

d-LIMONENE

Persistence and degradability
The product is more than 80% biodegradable.

Biodegradation
- Degradation 92.7: 21 days

Bioaccumulative potential
Bio-Accumulative Potential
No data available on bioaccumulation.

Partition coefficient
No information available.

Ecological information on ingredients.

d-LIMONENE

Partition coefficient
No information available.

HFC-134a Tetrafluoroethane

Mobility in soil
Mobility
Not considered to be a significant hazard due to the small quantities used.

Results of PBT and vPvB assessment
Results of PBT and vPvB assessment
This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects
Other adverse effects
The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

13. Disposal considerations

Waste treatment methods
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

**General information**
Materials such as cleaning rags and paper wipes that are contaminated with flammable liquids may self-ignite after use and should be stored in designated fireproof containers with tight-fitting, self-closing lids.

**Disposal methods**
Empty containers must not be punctured or incinerated because of the risk of an explosion. Reuse or recycle products wherever possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### 14. Transport information

**UN Number**
- UN No. (TDG) UN1950
- UN No. (IMDG) UN1950
- UN No. (ICAO) UN1950
- UN No. (DOT) UN1950

**UN proper shipping name**
- Proper shipping name (TDG) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY
- Proper shipping name (IMDG) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY
- Proper shipping name (ICAO) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY
- Proper shipping name (DOT) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

**Transport hazard class(es)**
- TDG class 2.1
- TDG label(s) 2.1
- ICAO class/division 2.1

**Transport labels**

**Packing group**
- ICAO packing group N/A

**Environmental hazards**
- Environmentally Hazardous Substance

**Special precautions for user**
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### 15. Regulatory information

**US Federal Regulations**
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Not listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
Not listed.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
Not listed.

SARA 313 Emission Reporting
Not listed.

CAA Accidental Release Prevention
Not listed.

SARA (311/312) Hazard Categories
Acute
Chronic
Fire
Pressure

OSHA Highly Hazardous Chemicals
Not listed.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
Not listed.

California Air Toxics "Hot Spots" (A-I)
Not listed.

California Air Toxics "Hot Spots" (A-II)
Not listed.

California Directors List of Hazardous Substances
Not listed.

Massachusetts "Right To Know" List
Not listed.

Rhode Island "Right To Know" List
Not listed.

Minnesota "Right To Know" List
HFC-134a Tetrafluoroethane
Present.

New Jersey "Right To Know" List
Not listed.

Pennsylvania "Right To Know" List
Not listed.

Inventories
Canada - DSL/NDSL
Yes
EC7M - SLOW DRYING FLUX REMOVER, CITRUS BASED, AEROSOL

HFC-134a Tetrafluoroethane

US - TSCA
All the ingredients are listed.

US - TSCA 12(b) Export Notification
Not listed.

16. Other information

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

Revision date
3/24/2016

Revision
34

Supersedes date
3/22/2016

SDS No.
AEROSOL - EC7M

Hazard statements in full
H222 Extremely flammable aerosol.
H226 Flammable liquid and vapor.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

NFPA - health hazard
Irritation, minor residual injury. (1)

NFPA - flammability hazard
Burns only if heated moderately. (2)

NFPA - instability hazard
Unstable if heated. (1)

NFPA - special hazard
N/A

ACA HMIS Health rating.
Slight Hazard. (1)

ACA HMIS Flammability rating.
Burns only if heated moderately. (2)

ACA HMIS Physical hazard rating.
Unstable if heated. (1)

ACA HMIS Personal protection rating.
B

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.