SAFETY DATA SHEET
RMA Flux Remover Pen

1. Identification

Product identifier
Product name         RMA Flux Remover Pen
Product number       MCC-RMAPEN

Recommended use of the chemical and restrictions on use
Application          Cleaning agent.

Details of the supplier of the safety 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 number
Emergency telephone   CHEMTREC 1-800-424-9300 (within the U.S.)
                        +1 703-741-5970 (from anywhere in the world)

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. Liq. 2 - H225
Health hazards          Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Repr. 2 - H361f STOT SE 3 - H336 STOT RE 2 - H373
Environmental hazards   Aquatic Acute 1 - H400 Aquatic Chronic 3 - H412

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         The product is highly flammable. Vapors may form explosive mixtures with air.

Label elements
Pictogram

Signal word            Danger
RMA Flux Remover Pen

Hazard statements
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P261 Avoid breathing vapor/spray.
P271 Use only outdoors or in a well-ventilated area.
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.
P314 Get medical advice/attention if you feel unwell.

Supplemental label information
Safety data sheet available on request. For use in industrial installations only.
Contains PROSAN-2-OL, HEXANE-norm, 1-METHOXY-2-PROPAHOL

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

3. Composition/Information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLDISILOXANE (Methyl siloxane)</td>
<td>30-60%</td>
</tr>
<tr>
<td>ETHANOL</td>
<td>10-30%</td>
</tr>
<tr>
<td>PROSAN-2-OL</td>
<td>10-30%</td>
</tr>
</tbody>
</table>

Classification
HEXAMETHYLDISILOXANE (Methyl siloxane)
Flam. Liq. 2 - H225
Aquatic Acute 1 - H400
ETHANOL
Flam. Liq. 2 - H225
PROSAN-2-OL
Flam. Liq. 2 - H225
Eye Irrit. 2A - H319
STOT SE 3 - H336
RMA Flux Remover Pen

<table>
<thead>
<tr>
<th>HEXANE-norm</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 110-54-3</td>
<td></td>
</tr>
</tbody>
</table>

**Classification**
- Flam. Liq. 2 - H225
- Skin Irrit. 2 - H315
- Repr. 2 - H361f
- STOT SE 3 - H336
- STOT RE 2 - H373
- Asp. Tox. 1 - H304
- Aquatic Chronic 2 - H411

<table>
<thead>
<tr>
<th>1-METHOXY-2-PROPANOL</th>
<th>5-10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 107-98-2</td>
<td></td>
</tr>
</tbody>
</table>

**Classification**
- Flam. Liq. 3 - H226
- STOT SE 3 - H336

The full text for all hazard statements 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

**Composition**

4. First-aid measures

**Description of first aid measures**

**General information**
Promptly remove any clothing that becomes wet or contaminated. 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**
Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

**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.

**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**
RMA Flux Remover Pen

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

Special hazards arising from the substance or mixture

Specific hazards
The product is flammable. Heating may generate flammable vapors. Oxides of carbon. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3.

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
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.

Environmental precautions

Environmental precautions
Do not discharge into drains or watercourses or onto the ground. Never use water by itself on spillage; this will spread the spill and cause further contamination.

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. If leakage cannot be stopped, evacuate area. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb in vermiculite, dry sand or earth and place into containers.

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. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage precautions
Keep away from heat, sparks and open flame.

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).

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

ETHANOL
Short-term exposure limit (15-minute): ACGIH 1000 ppm 1880 mg/m³
A3
Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m³
RMA Flux Remover Pen

PROPAN-2-OL
Long-term exposure limit (8-hour TWA): OSHA 400 ppm 980 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 492 mg/m³
Short-term exposure limit (15-minute): ACGIH 400 ppm 984 mg/m³
A4

HEXANE-norm
Long-term exposure limit (8-hour TWA): OSHA 500 ppm 1800 mg/m³
Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 176 mg/m³
Sk

1-METHOXY-2-PROPYL-ALCHOL
Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 184 mg/m³
Short-term exposure limit (15-minute): ACGIH 100 ppm 369 mg/m³
A4

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.
A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.
Sk = Danger of cutaneous absorption.
A4 = Not Classifiable as a Human Carcinogen.

Additional Occupational Exposure Limits

ETHANOL (CAS: 64-17-5)

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. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

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 appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

Hygiene measures
Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes wet or 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.
RMA Flux Remover Pen

Color
Clear liquid. Colorless.

Odor
Slight. Ether.

Odor threshold
No information available.

pH
No information available.

Melting point
No information available.

Initial boiling point and range
No information available.

Flash point
0.6°C/33.1°F Tag closed cup.

Evaporation rate
No information available.

Evaporation factor
No information available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
No information available.

Other flammability
The product is highly flammable.

Vapor pressure
No information available.

Vapor density
No information available.

Relative density
No information available.

Bulk density
No information available.

Solubility(ies)
No information available.

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.

Refractive index
No information available.

Particle size
Not applicable.

Molecular weight
Not applicable.

Vocality
100%

Saturation concentration
No information available.

Critical temperature
No information available.

Volatile organic compound
This product contains a maximum VOC content of 60.4%.

Flammability
The product is flammable.

10. Stability and reactivity

Reactivity
There are no known reactivity hazards associated with this product.

Stability
Stable at normal ambient temperatures.
RMA Flux Remover Pen

Possibility of hazardous reactions
Will not polymerize.

Conditions to avoid
Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Strong oxidizing agents. Strong alkalis. Strong mineral acids.

Materials to avoid
Strong oxidizing agents.

Hazardous decomposition products
Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Vapors/gases/fumes of: Formaldehyde

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.

Ingestion
No harmful effects expected from quantities likely to be ingested by accident.

Skin Contact
Product has a defatting effect on skin. May cause skin irritation/eczema.

Eye contact
Irritating to eyes.

Toxicological information on ingredients.

HEXAMETHYLDISILOXANE (Methyl siloxane)

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ vapours mg/l) 106.0
Species Rat

ETHANOL

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ vapours mg/l) 20,000.0
ATE inhalation (vapours mg/l) 20,000.0

Carcinogenicity
IARC carcinogenicity IARC Group 1 Carcinogenic to humans.

PROPAN-2-OL

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ vapours mg/l) 16,000.0
ATE inhalation (vapours mg/l) 16,000.0

Carcinogenicity
IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.
**RMA Flux Remover Pen**

- **NTP carcinogenicity**: Not listed.
- **OSHA Carcinogenicity**: Not listed.

### 12. Ecological information

**Ecotoxicity**
There are no data on the ecotoxicity of this product.

**Ecological information on ingredients.**

**HEXAMETHYLDISILOXANE (Methyl siloxane)**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Very toxic to aquatic organisms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute aquatic toxicity</td>
<td></td>
</tr>
<tr>
<td>LE(C)ₗ₀</td>
<td>$0.1 &lt; L(E)C50 ≤ 1$</td>
</tr>
<tr>
<td>M factor (Acute)</td>
<td>1</td>
</tr>
<tr>
<td>Acute toxicity - fish</td>
<td>LC₅₀, 96 hours: 0.46 mg/l, Fish</td>
</tr>
<tr>
<td>Acute toxicity - aquatic invertebrates</td>
<td>EC₅₀, 72 hours: 0.79 mg/l, Daphnia magna</td>
</tr>
<tr>
<td>Acute toxicity - aquatic plants</td>
<td>EC₅₀, 96 hours: &gt; 0.93 mg/l, Selenastrum capricornutum</td>
</tr>
</tbody>
</table>

**ETHANOL**

<table>
<thead>
<tr>
<th>Acute aquatic toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - fish</td>
<td>LC₅₀, 96 hours: &gt;10,000 mg/l, Fish</td>
</tr>
<tr>
<td>Acute toxicity - aquatic invertebrates</td>
<td>EC₅₀, 48 hours: 7,800 mg/l, Daphnia magna</td>
</tr>
<tr>
<td>Acute toxicity - aquatic plants</td>
<td>, 96 hours: 1000 mg/l, Freshwater algae</td>
</tr>
</tbody>
</table>

**PROPA-2-OL**

<table>
<thead>
<tr>
<th>Acute aquatic toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - fish</td>
<td>LC₅₀, 96 hours: 9,640 mg/l, Fish</td>
</tr>
<tr>
<td>Acute toxicity - aquatic invertebrates</td>
<td>EC₅₀, 48 hours: 5102 mg/l, Daphnia magna</td>
</tr>
<tr>
<td>Acute toxicity - aquatic plants</td>
<td>IC₅₀, 72 hours: &gt;2,000 mg/l, Algae</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
There are no data on the degradability of this product.

**Bioaccumulative potential**

The product is expected to be biodegradable.
RMA Flux Remover Pen

Bio-Acumulative Potential
No data available on bioaccumulation.

Partition coefficient
No information available.

Ecological information on ingredients.

ETHANOL

Bio-Accumulative Potential
Bioaccumulation is unlikely.

Partition coefficient
No information available.

PROPAN-2-OL

Partition coefficient
0.05

Mobility in soil

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

Ecological information on ingredients.

ETHANOL

Mobility
The product is soluble in water.

Other adverse effects
Not available.

13. Disposal considerations

Waste treatment methods

General information
Waste is classified as hazardous 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.

14. Transport information

General
As supplied, this product is consigned under the Limited Quantities provisions.

UN Number

UN No. (IMDG) 1993

UN No. (ICAO) 1993

UN proper shipping name

Proper shipping name (TDG) LIMITED QUANTITY

Proper shipping name (IMDG) UN1993, FLAMMABLE LIQUID, N.O.S.(Hexamethyldisiloxane), 3, PGII, LIMITED QUANTITY

Proper shipping name (ICAO) UN1993, FLAMMABLE LIQUID, N.O.S.(Hexamethyldisiloxane), 3, PGII, LIMITED QUANTITY

Proper shipping name (DOT) LIMITED QUANTITY

Transport hazard class(es)

IMDG Class 3

ICAO class/division 3

Environmental hazards
RMA Flux Remover Pen

Environmentally Hazardous Substance

Special precautions for user
EmS F-E, S-E

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
Not listed.

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

*HEXANE-norm*
Final CERCLA RQ: 5000(2270) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
Not listed.

SARA 313 Emission Reporting

*HEXANE-norm*
1.0 %

CAA Accidental Release Prevention
Not listed.

SARA (311/312) Hazard Categories
Fire

OSHA Highly Hazardous Chemicals
Not listed.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins

Reproductive harm - www.p65warnings.ca.gov

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

*PROPN-2-OL*
Present.

*HEXANE-norm*
Present.

*1-METHOXY-2-PRO Panol*
Present.
RMA Flux Remover Pen

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

California Directors List of Hazardous Substances
ETHANOL
Present.
PROPAN-2-OL
Present.
1-METHOXY-2-PROPA NOL
Present.

Massachusetts "Right To Know" List
ETHANOL
Present.
PROPAN-2-OL
Present.
HEXANE-norm
Present.
1-METHOXY-2-PROPA NOL
Present.

Rhode Island "Right To Know" List
ETHANOL
Present.
PROPAN-2-OL
Present.
HEXANE-norm
Present.
1-METHOXY-2-PROPA NOL
Present.

Minnesota "Right To Know" List
ETHANOL
Present.
PROPAN-2-OL
Present.
HEXANE-norm
Present.
1-METHOXY-2-PROPA NOL
Present.

New Jersey "Right To Know" List
ETHANOL
Present.
PROPAN-2-OL
Present.
RMA Flux Remover Pen

*HEXANE-norm*
Present.

*1-METHOXY-2-PROPA NOL*
Present.

**Pennsylvania "Right To Know" List**

*ETH ANOL*
Present.

*PROPA N-2-OL*
Present.

*HEXANE-norm*
Present.

*1-METHOXY-2-PROPA NOL*
Present.

**Inventories**

**Canada - DSL/NDSL**

DSL

**US - TSCA**

Yes

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

Not listed.

**16. Other information**

<table>
<thead>
<tr>
<th>Revision date</th>
<th>10/17/2018</th>
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<tbody>
<tr>
<td>Revision</td>
<td>45</td>
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<tr>
<td>Supersedes date</td>
<td>10/8/2018</td>
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<tr>
<td>SDS No.</td>
<td>BULK - RMAPEN</td>
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<tr>
<td>SDS status</td>
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</table>

**Hazard statements in full**

H225 Highly flammable liquid and vapor.
H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
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.