



SAFETY DATA SHEET

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Product number MCC-PRO, MCC-PRO101, MCC-PRO125, MCC-PRO12Y

Synonyms; trade names "PRO-ProClean Flux Remover"

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier MICROCARE EUROPE BVBA
 VEKESTRAAT 29 B11
 INDUSTRIEZONE 'T SAS
 1910 KAMPENHOUT, Belgium
 Phone +32.2.251.95.05
 Fax +32.2.400.96.39

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

1.4. Emergency telephone number

Emergency telephone CHEMTREC UK (London) +(44)-870-8200418 +1 703-741-5970 (from anywhere in the world)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Aerosol 1 - H222, H229

Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336

Environmental hazards Not Classified

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.

2.2. Label elements

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Pictogram



Signal word

Danger

Hazard statements

H222 Extremely flammable aerosol.
 H229 Pressurised container: may burst if heated
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Do not pierce or burn, even after use.
 P261 Avoid breathing spray.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Supplemental label information

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

Contains

PROPAN-2-OL

Supplementary precautionary statements

P264 Wash contaminated skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a POISON CENTER/ doctor if you feel unwell.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PROPAN-2-OL		30-60%
CAS number: 67-63-0	EC number: 200-661-7	REACH registration number: 05-2114285306-46-0000
Classification		
Flam. Liq. 2 - H225		
Eye Irrit. 2 - H319		
STOT SE 3 - H336		

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

ETHANOL			30-60%
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 05-2114285309-40-0000	
Classification			
Flam. Liq. 2 - H225			
HFC-134a Tetrafluoroethane			10-30%
CAS number: 811-97-2	EC number: 212-377-0	REACH registration number: 05-2114285300-58-0000	
Classification			
Press. Gas, Liquefied - H280			

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

Composition comments Not applicable.

Composition

SECTION 4: First aid measures

4.1. 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	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.

4.2. 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.
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.

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

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.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. Containers can burst violently or explode when heated, due to excessive pressure build-up. Oxides of carbon. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m³.

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

5.3. 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 vapours. 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.

SECTION 6: Accidental release measures

6.1. 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.

6.2. Environmental precautions

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

6.3. 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.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. 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 vapours. Use approved respirator if air contamination is above an acceptable level.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Specific end use(s) Cleaning agent.

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

SECTION 8: Exposure Controls/personal protection

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8.1. Control parameters

Occupational exposure limits

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

HFC-134a Tetrafluoroethane

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 4240 mg/m³

WEL = Workplace Exposure Limit

Additional Occupational Exposure Limits

Ingredient comments

WEL = Workplace Exposure Limits

8.2. 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 vapour 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 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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Clear liquid. Colourless.
Odour	Alcoholic.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	77.6°C/172°F @ 101.3 kPa

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Flash point	17°C/62.6°F TOC (Tag open 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: 12.7 %(V) Lower flammable/explosive limit: 2.0 %(V)
Other flammability	No information available.
Vapour pressure	5.2 kPa @ 20°C
Vapour density	1.82
Relative density	No information available.
Bulk density	No information available.
Solubility(ies)	Completely 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	There are no chemical groups present in the product that are associated with oxidising properties.
Comments	Aerosol.

9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	Not applicable.
Volatility	100%
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	This product contains a maximum VOC content of 785 g/litre.
UDF Phrase 1	Flammable aerosol.

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Will not polymerise.
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10.4. Conditions to avoid

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong alkalis. Strong mineral acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen fluoride (HF).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Inhalation May cause respiratory system irritation. Vapours 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.

Toxicological information on ingredients.

PROPAN-2-OL

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

NTP carcinogenicity Not listed.

OSHA Carcinogenicity Not listed.

ETHANOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 7,060.0

Species Rat

ATE oral (mg/kg) 7,060.0

Acute toxicity - inhalation

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

Species Rat

ATE inhalation (vapours mg/l) 20,000.0

Carcinogenicity

IARC carcinogenicity IARC Group 1 Carcinogenic to humans.

HFC-134a Tetrafluoroethane

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

Acute toxicity - inhalation

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Acute toxicity inhalation (LC ₅₀ gases ppmV)	567,000.0
Species	Rat
ATE inhalation (gases ppm)	567,000.0

SECTION 12: Ecological Information

12.1. Toxicity

Ecological information on ingredients.

PROPAN-2-OL

Acute toxicity - fish	LC ₅₀ , 96 hours: 9,640 mg/l, Algae
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 5102 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: >2,000 mg/l, Fish

ETHANOL

Acute toxicity - fish	LC ₅₀ , 96 hours: >10,000 mg/l, Algae
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 7,800 mg/l, Daphnia magna
Acute toxicity - aquatic plants	, 96 hours: 1000 mg/l, Freshwater algae

HFC-134a Tetrafluoroethane

Acute toxicity - fish	LC ₅₀ , 96 hours: 450 mg/l, Algae
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 980 mg/l, Daphnia magna

12.2. Persistence and degradability

Ecological information on ingredients.

ETHANOL

Persistence and degradability	The product is expected to be biodegradable.
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12.3. Bioaccumulative potential

Partition coefficient No information available.

Ecological information on ingredients.

PROPAN-2-OL

Partition coefficient : 0.05

ETHANOL

Bioaccumulative potential Bioaccumulation is unlikely.

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Partition coefficient No information available.

HFC-134a Tetrafluoroethane

Partition coefficient Pow: 1.06

12.4. Mobility in soil

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

Ecological information on ingredients.

ETHANOL

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Reuse or recycle products wherever possible.

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.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	NA
UN No. (IMDG)	UN1950
UN No. (ICAO)	UN1950
UN No. (ADN)	NA

14.2. UN proper shipping name

Proper shipping name (ADR/RID) 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 (ADN) LIMITED QUANTITY

14.3. Transport hazard class(es)

ADR/RID classification code	F1
IMDG class	2.1 LIMITED QUANTITY
ICAO class/division	2.1 LIMITED QUANTITY

14.4. Packing group

ADR/RID packing group	N/A
IMDG packing group	N/A
ICAO packing group	N/A

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

ADN packing group N/A

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-D, S-U

ADR transport category 2

Emergency Action Code •3YE

Hazard Identification Number 23
(ADR/RID)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Restrictions (Title VIII Regulation 1907/2006) No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

Not listed.

SECTION 16: Other information

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

Revision date 05/04/2017

Revision 52

Supersedes date 05/04/2017

SDS number AEROSOL - PRO

PRO ALCOHOL-ENHANCED FLUX REMOVER - PROCLEAN, AEROSOL

Hazard statements in full

H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H229 Pressurised container: may burst if heated
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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.