SAFETY DATA SHEET
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK
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

<table>
<thead>
<tr>
<th>Product name</th>
<th>IPA-BASED FLUX REMOVER-ISOCLEAN, BULK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>MCC-BACG, MCC-BACP, MCC-BACD, MCC-BACL, MCC-BACGL, MCC-BACGG, MCC-BACJG, MCC-BACGI</td>
</tr>
<tr>
<td>Synonyms; trade names</td>
<td>BACG, BACP, BACD, 4722, 4724, 4725, BAC-ISOPROPYL ALCOHOL, BULK</td>
</tr>
</tbody>
</table>

Recommended use of the substance or mixture and restrictions on use

Identified uses Cleaning agent.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

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

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

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>Flam. Liq. 2 - H225</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Eye Irrit. 2 - H319 STOT SE 3 - H336</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not Classified</td>
</tr>
</tbody>
</table>

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

Label elements
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

Pictogram

Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P240 Ground/bond container and receiving equipment.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing vapour/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.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Supplemental label information

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

Contains

PROPAN-2-OL

Supplementary precautionary statements

P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
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.
P303+P361+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician 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.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Other hazards

This product does not contain any substances classified as PBT or vPvB (persistent, bioaccumulative and toxic, or very persistent and very bioaccumulative).

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

Mixtures

PROPAN-2-OL 60-100%
CAS number: 67-63-0

Classification

Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
STOT SE 3 - H336

The full text for all hazard statements is displayed in Section 16.
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

Composition

SECTION 4: First-aid measures

Description of first aid measures

General information
Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

Ingestion
Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if symptoms are severe or persist.

Skin contact
Rinse with water.

Eye contact
Rinse cautiously with water for several minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

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
A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.

Ingestion
No specific symptoms known.

Skin contact
No specific symptoms known.

Eye contact
Irritating to eyes.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media
The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

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

Specific hazards
Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

Advice for fire-fighters

3/11
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

**Protective actions during firefighting**
Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters**
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Fire-fighter's clothing will provide a basic level of protection for chemical incidents.

**Hazchem code**
•2YE

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**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate.

**Environmental precautions**
Avoid discharge into drains or watercourses or onto the ground.

**Methods and material for containment and cleaning up**
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

**Reference to other sections**
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

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**SECTION 7: Handling and storage**

**Precautions for safe handling**

**Usage precautions**
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions
Store away from incompatible materials (see Section 10). Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class
Flammable liquid storage.

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

Usage description
Cleaning agent.

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

SECTION 8: Exposure controls and personal protection

Control parameters

Occupational exposure limits
PROPAN-2-OL
Eight-hour time-weighted average: PEL 400 ppm 983 mg/m³
Permissible exposure limit (PEL)

Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection
Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection
No specific hand protection recommended.

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures
Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection
Ensure all respiratory protective equipment is suitable for its intended use. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges suitable for intended use should be used. Full face mask respirators with replaceable filter cartridges suitable for intended use should be used. Half mask and quarter mask respirators with replaceable filter cartridges suitable for intended use should be used.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

Appearance
Clear liquid.

Colour
Colourless.

Odour
Characteristic. Alcoholic.

Odour threshold
No information available.

pH
Not applicable.

Melting point
Not relevant.

Initial boiling point and range
82 - 83°C/179 - 182°F @ 101.3 kPa

Flash point
12°C/54°F Tag closed cup.

Evaporation rate
2 (butyl acetate = 1)

Evaporation factor
No information available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
Upper flammable/explosive limit: 12.0 Lower flammable/explosive limit: 2.0

Vapour pressure
41 hPa @ 20°C

Vapour density
1.82

Relative density
0.785 g/cm3 @ 20°C

Bulk density
Not applicable.

Solubility(ies)
Completely soluble in water.

Partition coefficient
No information available.

Auto-ignition temperature
399°C/750.2°F

Decomposition temperature
No information available.

Viscosity
2.43 mPa s @ 20°C

Refractive index
No information available.

Particle size
Not applicable.

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 785 g/litre.

SECTION 10: Stability and reactivity

Reactivity
See the other subsections of this section for further details.

Stability
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of hazardous reactions
The following materials may react strongly with the product: Oxidising agents.
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

**Conditions to avoid**
Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.

**Materials to avoid**
Oxidising materials. Acids - oxidising.

**Hazardous decomposition products**
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

### SECTION 11: Toxicological information

**Information on toxicological effects**

**Acute toxicity - oral**

**Notes (oral LD₅₀)**
Based on available data the classification criteria are not met.

**Acute toxicity - dermal**

**Notes (dermal LD₅₀)**
Based on available data the classification criteria are not met.

**Acute toxicity - inhalation**

**Notes (inhalation LC₅₀)**
Based on available data the classification criteria are not met.

**Skin corrosion/irritation**

**Animal data**
Based on available data the classification criteria are not met.

**Serious eye damage/irritation**

**Serious eye damage/irritation**
Causes serious eye irritation.

**Respiratory sensitization**

**Respiratory sensitization**
Based on available data the classification criteria are not met.

**Skin sensitization**

**Skin sensitization**
Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

**Genotoxicity - in vitro**
Based on available data the classification criteria are not met.

**Carcinogenicity**

**Carcinogenicity**
Based on available data the classification criteria are not met.

**IARC carcinogenicity**
Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.

**Reproductive toxicity**

**Reproductive toxicity - fertility**
Based on available data the classification criteria are not met.

**Reproductive toxicity - development**
Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

**STOT - single exposure**
STOT SE 3 - H336 May cause drowsiness or dizziness.

**Target organs**
Central nervous system

**Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure**
Not classified as a specific target organ toxicant after repeated exposure.

**Aspiration hazard**
Based on available data the classification criteria are not met.
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.

Ingestion
No specific symptoms known.

Skin contact
No specific symptoms known.

Eye contact
Irritating to eyes.

Acute and chronic health hazards
Keep out of the reach of children.

Route of entry
Ingestion Inhalation Skin and/or eye contact

Target organs
Central nervous system

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.

SECTION 12: Ecological Information

Ecotoxicity
Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity
Based on available data the classification criteria are not met.

Ecological information on ingredients

PROPAN-2-OL

Acute aquatic toxicity
Acute toxicity - fish LC₅₀, 96 hours: 9,640 mg/l, Fish
Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 5102 mg/l, Daphnia magna
Acute toxicity - aquatic plants IC₅₀, 72 hours: >2,000 mg/l, Algae

Persistence and degradability
The degradability of the product is not known.

Bioaccumulative potential
No data available on bioaccumulation.

Partition coefficient
No information available.

Ecological information on ingredients
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

Partition coefficient : 0.05

Mobility in soil
Mobility
No data available.

Other adverse effects
Other adverse effects
None known.

SECTION 13: Disposal information
Waste treatment methods
General information
The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods
Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transportation information
UN number
UN No. (Road/Rail) 1219
UN No. (IMDG) 1219
UN No. (ICAO) 1219

UN proper shipping name
Proper shipping name (Road/Rail) ISOPROPANOL (ISOPROPYL ALCOHOL)
Proper shipping name (IMDG) ISOPROPANOL (ISOPROPYL ALCOHOL)
Proper shipping name (ICAO) ISOPROPANOL (ISOPROPYL ALCOHOL)

Transport hazard class(es)
Road/Rail class 3
Road/Rail classification code F1
Road/Rail label 3
IMDG class 3
ICAO class/division 3

Transport labels

Packing group
IPA-BASED FLUX REMOVER-ISOCLEAN, BULK

Road/Rail packing group  II
IMDG packing group  II
ICAO packing group  II

Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

Special precautions for user

EmS  F-E, S-D

Hazard Identification Number (Road/Rail)  33

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

SECTION 15: Regulatory information

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

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

IATA: International air transport association.
ICAO: Technical instructions for the safe transport of dangerous goods by air.
IMDG: International maritime dangerous goods.
CAS: Chemical abstracts service.
ATE: Acute toxicity estimate.
LC₅₀: Lethal concentration to 50 % of a test population.
LD₅₀: Lethal dose to 50% of a test population (median lethal dose).
EC₅₀: 50% of maximal effective concentration.
PBT: Persistent, bioaccumulative and toxic substance.
vPvB: Very persistent and very bioaccumulative.

Classification abbreviations and acronyms

Flam. Liq. = Flammable liquid
Eye Irrit. = Eye irritation
STOT SE = Specific target organ toxicity-single exposure

Training advice

Only trained personnel should use this material.

Revision comments

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

Revision date  13/7/2022
Revision  45
Supersedes date  2/9/2020
SDS number  BULK - BAC
SDS status  Approved.

Hazard statements in full

H225 Highly flammable liquid and vapour.
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.