

Safety Data Sheet (SDS)

www.chipquik.com

To comply with European CLP Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878, US 29CFR 1910.1200 OSHA's Hazard Communication Standard, and Australian NOHSC: 1008 [2004] and ADG Code 7.4

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Flux Remover

SYNONYMS:

PART NUMBERS: CQIRM, CQIRM-0.5, CQIRM-1.0

MANUFACTURER: Chip Quik Inc.

ADDRESS: 931-3909 Witmer Rd., Niagara Falls, NY 14305 (USA)
3rd Floor, 207 Regent Street, London W1B 3HH (UK)
13 Adelaide Road, Dublin, Ireland, D02 P950 (EU)
8-1500 Sandhill Dr., Ancaster, ON L9G 4V5 (Canada)
42A Crimea Street, C/O A03886, Parramatta, NSW, 2150 (Australia)

PHONE: (508) 477-2264

EMERGENCY PHONE: (800) 424-9300 (USA and Canada 24/7 CHEMTREC)
+44 20 3868 7152 (UK and EU 24/7)
+61 2 8607 7057 (Australia 24/7)

REVISION DATE: 2023/12/13

REVISION NUMBER: 1.8

REVISED BY: Chip Quik Product Safety

PRODUCT USE: Cleaning flux off circuit boards.

2. HAZARD IDENTIFICATION

Classified in accordance with European CLP Regulation 1272/2008

| | | |
|-----------------------------------|---|------|
| Flammable Liquid | 2 | H225 |
| Serious Eye Damage/Eye Irritation | 2 | H319 |

CHEMICAL NAME: NA

CHEMICAL FAMILY: Mixture

CHEMICAL FORMULA: Proprietary

ROUTES OF ENTRY: Inhalation, Ingestion, Skin/Eye Contact

TARGET ORGANS: NA

GHS/CLP:



Signal Word: Danger

GHS/CLP LABEL ELEMENTS:

| | |
|-----------------------------------|---|
| Hazard statement(s) | |
| H225 | Highly flammable liquid and vapor. |
| H319 | Causes serious eye irritation. |
| Precautionary statement(s) | |
| P102 | Keep out of reach of children. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P264 | Wash hands thoroughly after handling. |
| P305/P351/P338/P310 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call POISON CENTER/Doctor. |
| P342/P311 | IF EXPERIENCING RESPIRATORY SYMPTOMS: Call POISON CENTER/Doctor. |
| P370/P378 | IN CASE OF FIRE: Use appropriate media for extinction. |
| P402/P404 | Store in a dry place. Store in a closed container. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

SECTION 2 NOTES:

Chip Quik Inc. does not recommend, manufacture, market, or endorse any of its products for human consumption.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Classified in accordance with European CLP Regulation 1272/2008

| Hazardous Ingredients ⁽¹⁾ | C.A.S. Number | Weight Percent | OSHA PEL mg/m ³ | ACGIH TLV TWA mg/m ³ | LD 50 Ingested g/Kg | LD 50 Inhaled g/m ³ |
|--------------------------------------|----------------------|----------------|-------------------------------|------------------------------------|------------------------|-----------------------------------|
| Isopropyl Alcohol ⁽²⁾ | 67-63-0 200-661-7 | 90-99 | NE | NE | NE | NE |

| Non-Hazardous Ingredients | C.A.S. Number | Weight Percent | OSHA PEL mg/m ³ | ACGIH TLV TWA mg/m ³ | LD 50 Ingested g/Kg | LD 50 Inhaled g/m ³ |
|---------------------------|------------------------|----------------|-------------------------------|------------------------------------|------------------------|-----------------------------------|
| Water | 7732-18-5 231-791-2 | 1-10 | NE | NE | NE | NE |

SECTION 3 NOTES:

(1) Per 29 CFR 1910 the mixture has not been tested as a whole. All hazardous components, which comprise 1% of the mixture (0.1% carcinogenic), are listed. Percentages of individual components are not listed as this information is considered a trade secret.

(2) The identity of the specific chemical(s) is being withheld as a trade secret per 29 CFR 1910.1200. The hazardous properties of these ingredients are disclosed in this SDS.

4. FIRST-AID MEASURES

EYES: Flush with plenty of water, contact a physician. If contact lenses can be removed easily, flush eyes without contact lenses.

SKIN: Wash affected area with plenty of warm, soapy water. If irritation persists, seek medical attention.

INGESTION: Call a physician or Poison Control Center immediately. Do not induce vomiting.

INHALATION: Remove to fresh air. If not breathing, seek immediate medical attention.

5. FIREFIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, foam

SPECIAL FIRE FIGHTING PROCEDURES: Do not use water. Use NIOSH-approved self-contained Breathing Apparatus and full protective clothing if involved in a fire. Avoid inhalation of material or combustion by-products.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Highly flammable liquid and vapor.

6. ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: If material spills or leaks collect and place it in a plastic or glass jar. Follow on-site personal protective equipment recommendations.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Collect spillage.

SECTION 6 NOTES:

See Sections 2, 4, and 7 for additional information.

7. HANDLING AND STORAGE

HANDLING/STORAGE: Keep containers tightly closed when not in use. Use care to avoid spills. Avoid inhalation of fumes. Avoid contact with eyes, skin, and clothing. Store in a closed corrosive resistant container, with corrosive resistant liner, in cool dry place. Wear appropriate personal protective equipment when working with or handling. Always wash hands thoroughly after handling this product. Dispose of following Federal, State/Provincial, and Local regulations.

OTHER PRECAUTIONS: Empty containers may retain product residues in vapor, liquid, and/or solid form. All labeled hazard precautions should be observed.

WORK HYGIENIC PRACTICES: Cosmetics/Food/Drink/Tobacco should not be consumed or used in work areas. Always wash hands after handling material and before applying or using cosmetics/food/drink/tobacco.

SECTION 7 NOTES:

Keep out of reach of children.

Not for internal consumption.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Occupational Exposure Limit Values:**

| | |
|--------------------------|---|
| Isopropyl Alcohol | 67-63-0 |
| Austria | 200 ppm TWA [TMW] (short time value for large casting); 500 mg/m ³ TWA [TMW] (short time value for large casting) 800 ppm STEL [KZW] 4 X 15 min; 2000 mg/m ³ STEL [KZW] 4 X 15 min; 800 ppm STEL [KZW] (STEL for large casting valid |

| | |
|----------------|---|
| | till 12/31/2013) 4 X 30 min; 2000 mg/m3 STEL [KZW] (STEL for large casting valid till 12/31/2013) 4 X 30 min |
| Belgium | 200 ppm TWA; 500 mg/m3 TWA 400 ppm STEL; 1000 mg/m3 STEL |
| Denmark | 200 ppm TWA; 490 mg/m3 TWA |
| Finland | 200 ppm TWA; 500 mg/m3 TWA 250 ppm STEL; 620 mg/m3 STEL |
| France | 400 ppm STEL [VLCT]; 980 mg/m3 STEL [VLCT] |
| Germany (TRGS) | 200 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) exposure factor 2; 500 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) exposure factor 2 |
| Germany (DFG) | 200 ppm TWA MAK; 500 mg/m3 TWA MAK 400 ppm Peak; 1000 mg/m3 Peak |
| Greece | 400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL |
| Ireland | 200 ppm TWA 400 ppm STEL Potential for cutaneous absorption |
| Portugal | 200 ppm TWA [VLE-MP] 400 ppm STEL [VLE-CD] |
| Spain | 200 ppm TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound); 500 mg/m3 TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound) 400 ppm STEL [VLA-EC]; 1000 mg/m3 STEL [VLA-EC] |
| Sweden | 150 ppm LLV; 350 mg/m3 LLV 250 ppm STV; 600 mg/m3 STV |
| United Kingdom | 400 ppm TWA; 999 mg/m3 TWA 500 ppm STEL; 1250 mg/m3 STEL |
| ACGIH | 200 ppm TWA 400 ppm STEL |
| NIOSH | 400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL 2000 ppm IDLH (10% LEL) |
| OSHA (US) | 400 ppm TWA; 980 mg/m3 TWA |
| Mexico | 400 ppm TWA LMPE-PPT; 980 mg/m3 TWA LMPE-PPT 500 ppm STEL [LMPE-CT]; 1225 mg/m3 STEL [LMPE-CT] |

Also see section 3.

ENGINEERING CONTROLS: Based on available information, additional ventilation is not required. Ensure compliance with applicable exposure limits.

RESPIRATORY PROTECTION: Use with adequate ventilation.

EYE PROTECTION: Use with appropriate safety glasses (EU: EN 166-S).

SKIN PROTECTION: Not required.

WORK HYGIENIC PRACTICES: Cosmetics/Food/Drink/Tobacco should not be consumed or used in areas where solder products may be used. Always wash hands after handling soldering products and before applying or using cosmetics/food/drink/tobacco.

OTHER: Maintain eye wash stations in work areas. Avoid the use of contact lenses in high fume areas. Clean protective equipment regularly. Clean up spills immediately.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| APPEARANCE: | Non-woven cloth saturated with liquid in foil package |
| ODOR: | Alcohol |
| ODOR THRESHOLD: | N/A |
| pH as SUPPLIED: | N/A |
| MELTING POINT: | N/A |
| FREEZING POINT: | -89°C (literature value) |
| INITIAL BOILING POINT: | +82°C (literature value) |
| BOILING RANGE: | N/A |
| FLASH POINT: | 12°C (estimated based on isopropyl alcohol) |
| EVAPORATION RATE: | N/A |
| FLAMMABILITY (solid): | N/A |
| UPPER/LOWER FLAMMABILITY: | NE |
| UPPER/LOWER EXPLOSIVE LIMITS: | 12% (V) / 2% (V) |
| VAPOR PRESSURE (mmHg): | 33 mmHg @ 20°C (literature value) |
| VAPOR DENSITY (AIR = 1): | 2.1 (literature value) |
| SPECIFIC GRAVITY (WATER = 1): | 0.7855 @ 20°C (literature value) |
| RELATIVE DENSITY: | NE |
| SOLUBILITY IN WATER: | 100% |
| PARTITION COEFFICIENT (n-octanol/water): | 0.05 (measured value) |
| AUTOIGNITION TEMPERATURE: | 399°C (literature value) |
| DECOMPOSITION TEMPERATURE: | N/A |
| VISCOSITY: | N/A |

9.2 Other Information

9.2.1 Information with regard to physical hazard classes

No additional information available.

9.2.2 Other safety characteristics

No additional information available.

10. STABILITY AND REACTIVITY

REACTIVITY:

Not known to occur

STABILITY:

Stable under normal conditions of use

CONDITIONS TO AVOID (STABILITY):

Avoid direct sunlight

INCOMPATIBILITY (MATERIAL TO AVOID):

Aldehydes, halogenated compounds, halogens, strong acids, strong oxidizing agents

HAZARDOUS DECOMPOSITION/BY-PRODUCTS:

Oxides of carbon

POSSIBILITY OF HAZARDOUS REACTIONS:

Hazardous polymerization will not occur

11. TOXICOLOGICAL INFORMATION

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Isopropyl alcohol (67-63-0)

Oral LD50 Rat 5045 mg/kg

Dermal LD50 Rabbit 12800 mg/kg

Inhalation LC50 Rat 1600 ppm 4 h

Irritation/Corrosivity Data

Causes serious eye irritation.

Respiratory Sensitization

No data available

Dermal Sensitization

No data available

Germ Cell Mutagenicity

No data available

Component Carcinogenicity

| | |
|-------------------|--|
| Isopropyl alcohol | 67-63-0 |
| ACGIH | A4 - Not Classifiable as a Human Carcinogen |
| IARC | Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable)) |

Reproductive toxicity

No data available

Specific Target Organ Toxicity - Single Exposure

No information available

Specific Target Organ Toxicity - Repeated Exposure

No information available

Aspiration hazard

No data available

11.2 Information on other hazards:

11.2.1 Endocrine disrupting properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named manufacturer, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

12. ECOLOGICAL INFORMATION

Avoid release to the environment.

Component Analysis - Aquatic Toxicity:

| | |
|-------------------|--|
| Isopropyl Alcohol | 67-63-0 |
| Fish | LC50 96 h Pimephales promelas 9640 mg/L [flow-through]; LC50 96 h Pimephales promelas 11130 mg/L [static]; LC50 96 h Lepomis macrochirus >1400000 µg/L |
| Algae | EC50 96 h Desmodesmus subspicatus >1000 mg/L IUCLID; EC50 72 h Desmodesmus subspicatus >1000 mg/L IUCLID |
| Invertebrate | EC50 48 h Daphnia magna 13299 mg/L IUCLID |

Persistence and degradability

N/A

Bioaccumulative potential

N/A

Mobility in soil

N/A

Results of PBT and vPvB assessment

EU - Interim Strategy for Management of PBT and vPvB Substances

No components of this material are listed.

12.6 Endocrine Disrupting Properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

No known significant effects or critical hazards

12.7 OTHER ADVERSE EFFECTS:**13. DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Scrap and waste should be recycled or stored in a dry, sealed container for later disposal. Disposal must be in accordance with Federal, State/Provincial, and Local Regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN Number:

Not available

UN Proper Shipping Name:

Not available

Packaging Group:

Not applicable

Environmental Hazards:

None

TRANSPORT HAZARD CLASSES:

US DOT Hazardous Material Classification:

Non-Hazardous

Water Transportation:

Non-Hazardous

IATA Hazardous Material Classification:

Non-Hazardous

ADR Road Regulations

Not regulated

IMDG Sea Regulations

Not regulated

ADG Land Transportation

Not regulated

15. REGULATORY INFORMATION**United States Regulatory Information:****TSCA 8 (b) Inventory Status:**

All components are listed or are exempt from listing on the Toxic Substances Control Act (TSCA) Inventory.

TSCA 12 (b) Export Notification:

Not required.

Canada Regulatory Information:**CEPA DSL/NDL Status:**

All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

U.S. FEDERAL REGULATIONS:

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b).

| | |
|-------------------|--|
| Isopropyl Alcohol | 67-63-0 |
| SARA 313 | 1 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification) |

STATE REGULATIONS:

Not regulated

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

| | |
|-------------------|---------|
| Isopropyl Alcohol | 67-63-0 |
| | 1% |

INTERNATIONAL REGULATIONS:

Not regulated

EU - REACH (1907/2006) - Annex XIV List of Substances Subject to Authorization

No components of this material are listed.

EU - REACH (1907/2006) - Article 59(1) Candidate List of Substances Subject to Authorization

No components of this material are listed.

EU - REACH (1907/2006) - Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles

No components of this material are listed.

EU - Biocides (1451/2007) - Existing Active Substance

| | |
|-------------------|---------|
| Isopropyl Alcohol | 67-63-0 |
| | Present |

Germany Regulations**Germany Water Classification**

Isopropyl alcohol (67-63-0) ID Number 135, hazard class 1 - low hazard to waters

Denmark Regulations

No components of this material are listed.

Chemical Safety Assessment

No chemical safety assessment has been carried out for the substance/mixture.

AUSTRALIAN REGULATIONS:

Australia inventory (AICS): This material is listed or exempted

16. OTHER INFORMATION**LEGEND:**

ACGIH American Conference of Governmental Industrial Hygienists

| | |
|-----------------------|---|
| ADG | Australian Dangerous Goods Code |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| AICS | Australian Inventory of Chemical Substances |
| BCF | Bioconcentration factor |
| C.A.S. | Chemical Abstract Service |
| CLP | Classification, Labeling and Packaging |
| DOT | Department of Transportation |
| EC | Effective Concentration |
| EPA | Environmental Protection Agency |
| GHS | Global Harmonized System |
| HMIS | Hazardous Material Identification System |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods Code |
| LC | Lethal Concentration |
| LD | Lethal Dose |
| NA | Not available |
| NE | Not established |
| NIOSH | National Institute for Occupational Safety & Health |
| NOEC | No observed effective concentration |
| NOHSC | National Occupational Health and Safety Commission (Australia) |
| NTP | National Toxicology Program |
| OSHA | Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| P_{ow} | Octanol water partition coefficient |
| SDS | Safety Data Sheet |
| STEL | Short-Term Exposure Limit |
| STOT | Specific target organ toxicity |
| TLV | Threshold Limit Value |
| TSCA | Toxic Substance Control Act |
| TWA: | Time Weighted Average |
| US DOT: | United States Department of Transportation |

PREPARATION INFORMATION:

This update supersedes all previously released documents.

DISCLAIMER:

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to Chip Quik at the time of issue. No warranty, guarantee, or representation is made by Chip Quik nor does Chip Quik assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances. The data on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

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