

## Safety Data Sheet (SDS)

[www.chipquik.com](http://www.chipquik.com)

To comply with European CLP Regulation 1272/2008, 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:** Chip Quik Flux Remover Series: CQNRM, CQNTRM  
**SYNONYMS:**  
**PART NUMBERS:** CQNIRM, CQNIRM-0.5, CQNIRM-1.0

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**REVISION DATE:** 2019/6/21  
**REVISION NUMBER:** 1.0  
**REVISED BY:** Chip Quik Product Safety

**PRODUCT USE:** Removing flux from circuit boards. This product is for industrial use only.

### 2. HAZARD IDENTIFICATION

Classified in accordance with European CLP Regulation 1272/2008

Aquatic Chronic 4

**CHEMICAL NAME:** NA  
**CHEMICAL FAMILY:** Mixture  
**CHEMICAL FORMULA:** Proprietary

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

**TARGET ORGANS:** NA

**GHS/CLP:**



Signal Word: Warning

#### GHS/CLP LABEL ELEMENTS:

Hazard statement(s)  
H413 May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### POTENTIAL HEALTH EFFECTS:

**EYE CONTACT:** May cause moderate irritation. Do not allow material to come in contact with eyes.

**SKIN CONTACT:** May cause moderate skin irritation.

**INHALATION:** May cause irritation to the respiratory tract.

**INGESTION:** Harmful if swallowed. May cause irritation to the mouth, throat, and stomach. May cause abdominal discomfort, nausea, vomiting, and/or diarrhea.

**CHRONIC:** Not established.

**MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:** Diseases of the blood-forming organs, kidneys, nervous and possibly reproductive systems. Occupational Asthma.

#### 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 <sup>(1)</sup>	C.A.S. Number	Weight Percent	OSHA PEL mg/m <sup>3</sup>	ACGIH TLV TWA mg/m <sup>3</sup>	LD 50 Ingested g/Kg	LD 50 Inhaled g/m <sup>3</sup>
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethyl-hexane	297730-93-9	>90	NE	NE	NE	NE
Polypropylene glycol monobutyl ether	9003-13-8	<1	NE	NE	NE	NE
Tripropylene glycol	24800-44-0	<1	NE	NE	NE	NE
Dipropylene glycol n-butylether	29911-28-2	<1	NE	NE	NE	NE
Isopropyl Alcohol	67-63-0 200-661-7	<5	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.

### 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.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** This product does not present any unusual fire and explosion hazards.

### 6. ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** If material spills or leaks use a spatula to collect and place it in a plastic or glass jar. Remove traces of residue using cloth rags or paper towels moistened with Isopropyl Alcohol. Exposure to spilled material may be irritating. 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 or dust. 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:

For industrial use only.  
Keep out of reach of children.  
Not for internal consumption.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Occupational Exposure Limit Values:

3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-trifluoromethylhexane  
MEL: 100 ppm TWA.

Dipropylene glycol nbutylether  
 MEL: 10 mg/m<sup>3</sup> TWA.

<b>Isopropyl Alcohol</b>	<b>67-63-0</b>
Austria	200 ppm TWA [TMW] (short time value for large casting); 500 mg/m <sup>3</sup> TWA [TMW] (short time value for large casting) 800 ppm STEL [KZW] 4 X 15 min; 2000 mg/m <sup>3</sup> 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/m <sup>3</sup> STEL [KZW] (STEL for large casting valid till 12/31/2013) 4 X 30 min
Belgium	200 ppm TWA; 500 mg/m <sup>3</sup> TWA 400 ppm STEL; 1000 mg/m <sup>3</sup> STEL
Denmark	200 ppm TWA; 490 mg/m <sup>3</sup> TWA
Finland	200 ppm TWA; 500 mg/m <sup>3</sup> TWA 250 ppm STEL; 620 mg/m <sup>3</sup> STEL
France	400 ppm STEL [VLCT]; 980 mg/m <sup>3</sup> 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/m <sup>3</sup> 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/m <sup>3</sup> TWA MAK 400 ppm Peak; 1000 mg/m <sup>3</sup> Peak
Greece	400 ppm TWA; 980 mg/m <sup>3</sup> TWA 500 ppm STEL; 1225 mg/m <sup>3</sup> 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/m <sup>3</sup> 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/m <sup>3</sup> STEL [VLA-EC]
Sweden	150 ppm LLV; 350 mg/m <sup>3</sup> LLV 250 ppm STV; 600 mg/m <sup>3</sup> STV
United Kingdom	400 ppm TWA; 999 mg/m <sup>3</sup> TWA 500 ppm STEL; 1250 mg/m <sup>3</sup> STEL
ACGIH	200 ppm TWA 400 ppm STEL
NIOSH	400 ppm TWA; 980 mg/m <sup>3</sup> TWA 500 ppm STEL; 1225 mg/m <sup>3</sup> STEL 2000 ppm IDLH (10% LEL)
OSHA (US)	400 ppm TWA; 980 mg/m <sup>3</sup> TWA
Mexico	400 ppm TWA LMPE-PPT; 980 mg/m <sup>3</sup> TWA LMPE-PPT 500 ppm STEL [LMPE-CT]; 1225 mg/m <sup>3</sup> STEL [LMPE-CT]

Also see section 3.

**ENGINEERING CONTROLS:** Use only with production equipment designed for use with flux remover.

**VENTILATION:** Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLVs.

**RESPIRATORY PROTECTION:** Use with adequate ventilation.

**EYE PROTECTION:** Use with appropriate safety glasses.

**SKIN PROTECTION:** Protective gloves.

**PROTECTIVE CLOTHING OR EQUIPMENT:** Work clothes should be worn and laundered in accordance with current OSHA Lead (Pb) standards.

**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

<b>APPEARANCE:</b>	Clear liquid
<b>ODOR:</b>	Odorless
<b>ODOR THRESHOLD:</b>	NE
<b>pH as SUPPLIED:</b>	N/A
<b>MELTING POINT:</b>	NE
<b>FREEZING POINT:</b>	NE
<b>INITIAL BOILING POINT:</b>	NE
<b>BOILING RANGE:</b>	NE
<b>FLASH POINT:</b>	NE
<b>EVAPORATION RATE:</b>	NE
<b>FLAMMABILITY (solid):</b>	NE
<b>UPPER/LOWER FLAMMABILITY:</b>	NE
<b>UPPER/LOWER EXPLOSIVE LIMITS:</b>	NE

<b>VAPOR PRESSURE (mmHg):</b>	N/A
<b>VAPOR DENSITY (AIR = 1):</b>	N/A
<b>RELATIVE DENSITY:</b>	NE
<b>SOLUBILITY IN WATER:</b>	Partially
<b>PARTITION COEFFICIENT (n-octanol/water):</b>	NE
<b>AUTOIGNITION TEMPERATURE:</b>	NE
<b>DECOMPOSITION TEMPERATURE:</b>	NE
<b>VISCOSITY:</b>	N/A

## 10. STABILITY AND REACTIVITY

<b>STABILITY:</b>	Stable
<b>CONDITIONS TO AVOID (STABILITY):</b>	NE
<b>INCOMPATIBILITY (MATERIAL TO AVOID):</b>	Oxidizing materials, acids, hydrogen peroxide, bases
<b>HAZARDOUS DECOMPOSITION/BY-PRODUCTS:</b>	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
<b>POSSIBILITY OF HAZARDOUS REACTIONS:</b>	NE

## 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

### 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))

### INHALATION:

This product does not present a risk at ambient temperatures. The flux remover fumes evolved during soldering will irritate the nose, throat and lungs. Repeated or prolonged exposure to flux remover fumes may cause an allergic affect which may lead to occupational asthma.

### SKIN:

Contact with flux remover fumes and flux remover residues may cause irritation and sensitization.

### EYES:

Flux remover fumes may cause irritation.

<b>ACUTE TOXICITY:</b>	Not available
<b>SKIN CORRISSION/IRRITATION:</b>	Not available
<b>SERIOUS EYE DAMAGE/IRRITATION:</b>	Not available
<b>RESPIRATORY OR SKIN SENSITIZATION:</b>	NE
<b>GERM CELL MUTAGENICITY:</b>	Not available
<b>CARCINOGENICITY:</b>	Not available
<b>REPRODUCTIVE TOXICITY:</b>	Not available
<b>STOT-SINGLE EXPOSURE:</b>	Not available
<b>STOT-REPEATED EXPOSURE:</b>	NE
<b>ASPIRATION HAZARD:</b>	NE

## 12. ECOLOGICAL INFORMATION

### 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

<b>TOXICITY:</b>	Not available
<b>PERSISTENCE AND DEGRADIBILITY:</b>	NE
<b>BIOACCUMULATIVE POTENTIAL:</b>	Not available
<b>MOBILITY IN SOIL:</b>	NE
<b>RESULT OF PBT and vPvB ASSESSMENT:</b>	Not applicable
<b>OTHER ADVERSE EFFECTS:</b>	NE

## 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.

<b>UN Number:</b>	Not available
<b>UN Proper Shipping Name:</b>	Not available
<b>Packaging Group:</b>	Not applicable
<b>Environmental Hazards:</b>	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

All ingredients used to manufacture this product are listed on the EPA TSCA Inventory. Finished product is not listed on the EPA TSCA Inventory.

<b>U.S. FEDERAL REGULATIONS:</b>	Not regulated
<b>STATE REGULATIONS:</b>	Not regulated
<b>INTERNATIONAL REGULATIONS:</b>	Not regulated
<b>AUSTRALIAN REGULATIONS:</b>	Not regulated

## 16. OTHER INFORMATION

**LEGEND:**

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