CHIPQUIK® Flux Remover

www.chipquik.com

Safety Data Sheet (SDS) www.chipquik.co 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: SYNONYMS: | Chip Quik Flux Remover: COSOLV175 | | | |
|---|---|--|--|--|
| PART NUMBERS: | COSOLV175-1L, COSOLV175-5GAL, COSOLV175-55GAL, COSOLV175-1.0 | | | |
| MANUFACTURER: ADDRESS: | Chip Quik Inc. 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: EMERGENCY PHONE: | (508) 477-2264 (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: REVISION NUMBER: REVISED BY: | 2023/12/13 1.9 Chip Quik Product Safety | | | |

PRODUCT USE:

Removing flux from circuit boards.

2. HAZARD IDENTIFICATION

Classified in accordance with European CLP Regulation 1272/2008

| Aspiration Hazard | 1 | H304 | | |
|------------------------------|-------------|---|---|------------|
| Acute Toxicity (oral) | 4 | H302 | | |
| Acute Toxicity (dermal) | 4 | H317 | | |
| Eye Irritant | 2 | H319 | | |
| Skin Irritant | 2 | H315 | | |
| Skin Sensitization | 1 | H317 | | |
| Reproductive toxicity | 1 | H360FD | | |
| Carcinogenic | 2 | H351 | | |
| Specific Target Organ Toxici | ty (STOT) · | - Single Exposure (SE) Respiratory Tract Irritation | 3 | H332, H335 |

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) H302 H304 H315 | Harmful if swallowed. May be fatal if swallowed and enters airways Causes skin irritation. |
|---|--|
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H351 | Suspected of causing cancer. |
| H360FD | May damage fertility. May damage the unborn child. |

| 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. |
| P233 | Keep container tightly closed. |
| P260 | Do not breathe dust/fume/gas/mist/vapor/spray. |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P264 | Wash hands thoroughly after handling. |
| P270 | Do not eat, drink, or smoke when using this product. |
| P271 | Use in a well-ventilated area. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P284 | In case of inadequate ventilation wear respiratory protection. |
| P301/P330/P331/P310 | IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER/Doctor. |
| P303/P361/P352/P333/P313 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with soap & water. Get medical advice/attention if |
| | skin irritation or rash occurs or if you feel unwell. |
| P304/P340/312 | IF INHALED: Remove victim to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if |
| | you feel unwell. |
| P305/P351/338/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. |
| P308/P313 | IF EXPOSED OR CONCERNED: Get medical advice/attention. |
| P342/P311 | IF EXPERIENCING RESPIRATORY SYMPTOMS: Call POISON CENTER/Doctor. |
| P362 | Take off contaminated clothing and wash it before reuse. |
| P391 | Collect spillage. |
| 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. |
| | |
| POTENTIAL HEALTH EFFE | |
| 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, |

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

SECTION 2 NOTES:

CHRONIC:

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

vomiting, and/or diarrhea.

Not established.

| 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 |
|--------------------------------------|---------------|----------------|-------------------------------|------------------------------------|------------------------|--------------------------------|
| Hydrocarbons | 64742-47-8 | <60 | NE | NE | NE | NE |
| 2-methylpentane-2,4-diol | 107-41-5 | <20 | NE | NE | NE | NE |
| Carboxyl-phosphate-ester | - | <20 | NE | NE | NE | NE |
| Propanol | 34590-94-8 | <20 | 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: Use NIOSH-approved self-contained Breathing Apparatus and full protective clothing if involved in a fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not classified as flammable, but may present a risk in the event of a fire. Explosive vapor/air mixtures may be formed. Under high temperatures (fire) toxic vapors are released (CO, CO₂).

ACCIDENTAL RELEASE MEASURES: If material spills or leaks collect and place it in a plastic or glass jar. Remove traces of residue using cloth rags or paper towels. 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:

Keep out of reach of children. Not for internal consumption.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit Values:

| | Country | mg/m ³ | ppm |
|--------------------------|----------------|---------------------------------|-------------------------------|
| 2-methylpentane-2,4-diol | USA (NIOSH) | 125 (STEL 15min) | 25 (STEL 15min) |
| | United Kingdom | 123 (TWA 8hr/15min) | 25 (TWA 8hr/15min) |
| | France | 125 (TWA 15min) | 25 (TWA 15min) |
| | Germany | 49 (TWA 8hr), 98 (STEL 15min) | 10 (TWA 8hr), 20 (STEL 15min) |
| | Belgium | 123 (TWA 8hr) | 25 (TWA 8hr) |
| | Switzerland | 49 (TWA 8hr), 98 (STEL 15min) | 10 (TWA 8hr), 20 (STEL 15min) |
| Propanol | USA (NIOSH) | 600 (TWA 8hr) | 100 (TWA 8hr) |
| | EU | 300 (TWA 8hr), 300 (STEL 15min) | 50 (TWA 8hr), 50 (STEL 15min) |

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

| APPEARANCE: | Clear liquid |
|-------------------------------|--------------|
| ODOR: | Odorless |
| ODOR THRESHOLD: | NE |
| pH as SUPPLIED: | N/A |
| MELTING POINT: | NE |
| FREEZING POINT: | NE |
| INITIAL BOILING POINT: | 175-215°C |
| BOILING RANGE: | 77°C |
| FLASH POINT: | NE |
| EVAPORATION RATE: | NE |
| FLAMMABILITY (solid): | NE |
| UPPER/LOWER FLAMMABILITY: | NE |
| UPPER/LOWER EXPLOSIVE LIMITS: | NE |
| VAPOR PRESSURE (mmHg): | N/A |
| VAPOR DENSITY (AIR = 1): | N/A |
| · / | |

RELATIVE DENSITY: SOLUBILITY IN WATER: PARTITION COEFFICIENT (n-octanol/water): AUTOIGNITION TEMPERATURE: DECOMPOSITION TEMPERATURE: VISCOSITY: NE Not Miscible NE NE 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

STABILITY: CONDITIONS TO AVOID (STABILITY): INCOMPATIBILITY (MATERIAL TO AVOID): HAZARDOUS DECOMPOSITION/BY-PRODUCTS: POSSIBILITY OF HAZARDOUS REACTIONS:

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:

 2-methylpentane-2,4-diol (107-41-5)

 Oral LD50
 Rat 4000 mg/kg

 Dermal LD50
 Rabbit 13000 mg/kg

Stable

NF

NF

Propanol (34590-94-8)

Oral LD50 Rat 5000 mg/kg Dermal LD50 Rabbit 9510 mg/kg Inhalation LC50 Rat 55 ppm 4 h

Component Carcinogenicity

Hydrocarbons (64742-47-8)

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.

Oxidizing materials, acids, hydrogen peroxide, bases

Harmful organic fumes and toxic oxide fumes may form at elevated temperatures. CO and CO₂.

SKIN:

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

EYES:

Flux remover fumes may cause irritation.

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

Component Analysis - Aquatic Toxicity:

| 2-methylpentane-2,4-diol | 107-41-5 |
|--------------------------|---|
| Fish | LC50 96 h Pimephales promelas 10000 mg/L [flow-through] |
| Algae | EC50 72 h Selenastrum capricornutum >1000 mg/L IUCLID |
| Invertebrate | EC50 48 h Daphnia magna 1919 mg/L IUCLID |
| Infortoprato | |

12.7 OTHER ADVERSE EFFECTS:

13. DISPOSAL CONSIDERATIONS

Not available NE Not applicable 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

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: Water Transportation: IATA Hazardous Material Classification: ADR Road Regulations IMDG Sea Regulations ADG Land Transportation

15. REGULATORY INFORMATION

United States Regulatory Information: TSCA 8 (b) Inventory Status:

TSCA 12 (b) Export Notification:

Canada Regulatory Information: CEPA DSL/NDSL Status:

U.S. FEDERAL REGULATIONS: STATE REGULATIONS: INTERNATIONAL REGULATIONS: AUSTRALIAN REGULATIONS:

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 |
| ΙΑΤΑ | 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 |
| Pow | Octanol water partition coefficient |
| SDS | Safety Data Sheet |
| STEL | Short-Term Exposure Limit |
| STOT | Specific target organ toxicity |
| TLV | Threshold Limit Value |

Non-Hazardous Non-Hazardous Non-Hazardous Not regulated Not regulated Not regulated

Not regulated

Not regulated

Not regulated

Not regulated

All components are listed or are exempt from listing on the Toxic Substances Control Act (TSCA) Inventory. Not required.

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

| 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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