

SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION**Company Address:**8125 Cobb Center Drive
Kennesaw, GA 30152Product Information: 800-TECH-401
Customer Service: 800-645-5244Emergency: (Chemtrek) 800-424-9300
Revision Date: 2/10/2012**Product Identification****CircuitWorks® Lead Free Tacky Flux****Product Code: CW8700, CW8710****SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name | UN number | IDLH | Classification | | | CAS# | Wt. % Range |
|--|-----------|------|----------------|---|---|------------|-------------|
| | | | H | F | R | | |
| distillates (petroleum), hydrotreated middle | - | - | 1 | 1 | 0 | 64742-46-7 | 10 - 50 |
| Rosin | - | - | 2 | 1 | 1 | 8050-09-7 | 10 - 40 |
| Dicarboxylic Acid C6-18 abd C5-15 | - | - | 2 | 1 | 1 | 68937-69-9 | 2 - 10 |

SECTION 3: HAZARDS IDENTIFICATIONOSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).Emergency Overview: DANGER! MAY BE FATAL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. Very toxic if swallowed. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get on skin or clothing. Avoid contact with eyes. Contains material that can cause target organ damage. Wash thoroughly after handling.Potential Health Effects:Eyes: No known significant effects or critical hazards.Skin: No known significant effects or critical hazards..Ingestion: Very toxic if swallowed.Inhalation: No known significant effects or critical hazards.Chronic effects : Contains material that can cause target organ damage.Pre-Existing Medical Conditions Aggravated by Exposure: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.Over-exposure signs/symptoms:Inhalation : No specific data.Ingestion : No specific data.Skin : No specific data.Eyes: No specific data.**SECTION 4: FIRST AID MEASURES**Eyes: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediatelyIngestion: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.**SECTION 5: FIRE FIGHTING MEASURES**Flash Point: >140C Open Cup LEL/UEL: Not established (% by volume in air)Extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.**SECTION 6: ACCIDENTAL RELEASE MEASURES**Large Spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.Small Spills: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.**SECTION 7: HANDLING AND STORAGE**Handling: Put on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.Storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.**KEEP OUT OF REACH OF CHILDREN.**

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTIONExposure Guidelines:

| CHEMICAL NAME | United States Exposure Limits | Canada Exposure Limits | Mexico Exposure Limits |
|---------------|---|--|------------------------|
| Rosin | NIOSH REL (United States, 12/2001). Notes: as Formaldehyde, formed as a thermal decomposition product: TWA: 0.1 mg/m ³ , (as Formaldehyde) 10 hour(s). Notes: as Rosin (solid): TWA: 10 mg/m ³ OSHA PEL 1989 (United States, 3/1989). TWA: 0.1 mg/m ³ , (Measured as Formaldehyde, formed as a thermal decomposition product) 8 hour(s). | CA Quebec Provincial (Canada, 12/2006). Skin sensitizer Notes: as Formaldehyde, formed as a thermal decomposition product: TWAEV: 0.1 mg/m ³ , (formaldehyde) 8 hour(s). | |

NOTE: This product has two types of hazards - from the rosin itself, and from the thermal decomposition products. The thermal decomposition products (aka Rosin Core Solder Pyrolysis Products) include formaldehyde, acetone, methanol, aldehydes, carbon dioxide, carbon monoxide, methane, ethane, and acids. The handling of the rosin in the solid state is expected to be a low hazard. It may cause skin, eyes, and respiratory tract irritation. Ingestion may cause digestion tract irritation. The thermal decomposition products of Rosin (Rosin core solder pyrolysis products) can be irritating to the eyes, nose, throat in acute exposure.

Work/Hygienic Practices: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. local exhaust ventilation or other engineering controls may be required to keep worker exposure to airborne contaminants below any recommended or statutory limits. If vapor concentration exceeds TLV, use NIOSH approved organic vapor cartridge respirator. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection:

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

NFPA and HMIS Codes:

Health
Flammability
Reactivity
Personal Protection

NFPA

1
1
0
-

HMIS

1
1
0
B

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Cloudy, pale yellow paste

Odor: NA

pH: NA

Vapor Pressure: Not available

Vapor Density: Not available

Boiling Point: NA

Solubility in Water: NA

Specific Gravity: (Water =1) >1

Evaporation Rate: <1 (Butyl acetate=1)

Melting Point: NA

Percent Volatile: NA

SECTION 10: STABILITY AND REACTIVITY

Stability - This product is stable. Conditions to Avoid: Do not spray near open flames, red hot surfaces or other sources of ignition.

Incompatibility: Do not mix with oxidizing materials, acids and alkalis.

Products of Decomposition: Thermal decomposition may release formaldehyde, carbon monoxide, carbon dioxide and incompletely burned hydrocarbons.

Hazardous Polymerization: Will not occur

Conditions to Avoid: NA

SECTION 11: TOXICOLOGICAL INFORMATIONAcute toxicity

| <u>Product/ingredient name</u> | <u>Species</u> | <u>Dose</u> | <u>Result</u> | <u>Exposure</u> |
|--|----------------|-------------|---------------|-----------------|
| distillates (petroleum), hydrotreated middle | Rat - Male | >4300 mg/kg | LD50 | Oral |
| Rosin | Rat | >3000 mg/kg | LD50 | Oral |

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

SECTION 12: ECOLOGICAL INFORMATION**Environmental Impact Information**

Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

REPORTING US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is: **1-800-424-8802**

SECTION 13: DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

Air and Ground Shipments: Proper Shipping Name
Adhesives, sealants
Not Regulated

SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION

This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

This information should be included on all MSDSs copied and distributed for this material.

HCS Classification: Highly toxic material. Target organ effects

U.S. Federal regulations: United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Rosin

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Rosin: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations:

Connecticut Carcinogen Reporting: None of the components are listed.

Connecticut Hazardous Material Survey: None of the components are listed.

Florida substances: None of the components are listed.

Illinois Chemical Safety Act: None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.

Louisiana Reporting: None of the components are listed.

Louisiana Spill: None of the components are listed.

Massachusetts Spill: None of the components are listed.

Massachusetts Substances: None of the components are listed.

Michigan Critical Material: None of the components are listed.

Minnesota Hazardous Substances: None of the components are listed.

New Jersey Hazardous Substances: None of the components are listed.

New Jersey Spill: None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.

New York Acutely Hazardous Substances: None of the components are listed.

New York Toxic Chemical Release Reporting: None of the components are listed.

Pennsylvania RTK Hazardous Substances: None of the components are listed.

Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65:

No products were found.

WHMIS:

Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists:

CEPA Toxic substances: None of the components are listed.

Canadian ARET: None of the components are listed.

Canadian NPRI: None of the components are listed.

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

Canada inventory:

Not determined.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.



SECTION 16: OTHER INFORMATION

Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.