MATERIAL SAFETY DATA SHEET

Chip Quik Inc. 05/12/09

195 Falmouth Rd, Bldg. 1C. Mashpee, MA 02649

USA

Trade name: Chip Quik tacky paste fluxes shown as Product name

SECTION 1: IDENTIFICATION OF SUBSTANCE

PRODUCT NAME: Chip Quik Tacky Paste Flux: SMD291, SMD4300TF10 and SMD291NL

SYNONYMS: Tacky Flux CHEMICAL FAMILY: Mixture FORMULA: Proprietary

CAS REGISTRY NUMBER: Not applicable since product is a mixture.

MANUFACTURED BY: AMTECH, Inc. 75 School Ground Road, Branford, CT 06405; Ph: 203-481-0362

SECTION 2: COMPOSITION/ DATA ON COMPONENTS⁽¹⁾

HAZARDOUS COMPONENTS

CAS NUMBER

EXPOSURE LIMITS

Modified Rosins

NA

Not Established

Pine Oil Derivatives

8000-41-7

Not Established

Proprietary Ingredients

NA

Not Established

Mixed Carboxylic Acids

NA

Not Established

- (1) Per 29 CFR 1910 the mixture has not been tested as a whole. All hazardous components, which comprise \geq 1% of the mixture (0.1% if 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 MSDS.

SECTION 3: HAZARDS IDENTIFICATION

PRINCIPAL HEALTH EFFECTS:

Toxic effects described in animals from exposure to component(s) of this product by inhalation, ingestion, skin or eye contact includes: Skin sensitization, skin irritation, moderate to severe eye irritation, liver effects, and kidney effects. Human health effects of over exposure to components of this product may include: Allergic skin rashes, skin irritation with discomfort or rash, shortness of breath.

OTHER EFFECTS AND ADDITIONAL HEALTH HAZARD INFORMATION:

Skin sensitization may be caused in susceptible humans.

SECTION 4: FIRST AID MEASURES

SKIN CONTACT: In case of contact, immediately wash skin with soap and plenty of water. Remove clothing. EYE CONTACT: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INHALATION: If large amounts are inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth.

INGESTION: If swallowed, drink large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

Skin sensitization may be caused in susceptible humans.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: (Most flammable component): 88°C (190°F)

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

EXTINGUISHING MEDIA: Water Fog, Alcohol Foam or Dry Chemical.

SPECIAL FIRE FIGHTING INSTRUCTIONS: Cool exposed containers with water. Use NIOSH approved self contained breathing apparatus with face piece operated in positive pressure mode, as evolved fumes may be toxic and cause respiratory irritation.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Clean spill with disposable paper towels and wash area with soap and water.

SECTION 7: HANDLING AND STORAGE

Storage Temperature: Keep containers closed and sealed when not in use.

Storage Pressure: Store containers at ambient pressure.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

PROTECTION INFORMATION: Adequate local ventilation is sufficient to maintain exposures below application limits. Appropriate respiratory protection must also be used if exposures cannot be maintained below applicable limits. Administrative or engineering controls should be implemented to reduce exposure.

RESPIRATORY PROTECTION: Not required in local exhaust is satisfactory. Respiratory protection must be used if exposures cannot be maintained below applicable exposure limits through the use of ventilation and other engineered controls. Full-face respiratory protection may be required for substances that are corrosive or irritating to the eyes. Cartridge, canister or any negative pressure respirator should never be used in areas where the contaminant concentration levels may exceed the IDLH (Immediately Dangerous to Life and Health) value or is unknown. GLOVES: Gloves (Solvent Resistant) should be worn whenever the possibility of skin or hand contact exists. OTHER PROTECTION PRACTICES: Appropriate eye protection, e.g. chemical splash goggles, should be used if the possibility of eye contact exists. Protective outer clothing should be used where the possibility of body contact exists. Contaminated work clothing should not be allowed out of the work place. Do not smoke, consume or store food or drinks in areas where the product is stored. After handling the product, wash hands and face thoroughly before leaving the work area.

SECTION 9: PHYSICAL and Chemical Properties:

Appearance and Odor: Physical State – Cream

Color - Clear, White, Yellow to Dark Amber

Odor – mild solvent

Initial Boiling Point of Organic Mixture: 214°C (417°F)

Specific Gravity < 1

Vapor Pressure (estimated for mixture) <1mm Hg Vapor Density (air= 1):>1

Evaporation Rate (estimated for mixture, n-butyl acetate = $1, 20^{\circ}$ C) <1

Solubility in Water: Partially

SECTION 10: STABILITY AND REACTIVITY

INSTABILITY: Material is stable

INCOMPATIBILITY: Will not react with water. Avoid mixing with strong oxidizing agents, acids and caustics. DECOMPOSITION: The product is normally stable and does not decompose at room temperature. At elevated temperatures, vapors or condensed vapors of the following may be produced: Carbon or carbon oxides, water vapor, nitrogen oxides, rosin pyrolysis products (such as formaldehyde).

POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION (3)

PRINCIPAL HEALTH EFFECTS:

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OTHER EFFECTS AND ADDITIONAL HEALTH HAZARD INFORMATION:

Skin sensitization may be caused in susceptible humans.

SECTION12: ECOLOGICAL INFORMATION

---Data not Available, this product is a mixture that has not been tested as a whole to determine its hazards ---

SECTION 13: DISPOSAL CONSIDERATIONS

Emptied product containers, contaminated clothing and cleaning equipment should be considered "hazardous" and disposed of in accordance with area procedures for materials which may contain lead.

SECTION 14: TRANSPORT INFORMATION

DOT Hazardous Material Classification: Tacky Paste Flux is not listed as a DOT Hazardous Material.

SECTION 15: REGULATORY INFORMATION

This product is not listed on the EPA TSCA list. All components of this product are on the TSCA inventory list.

REVIEWS, STANDARDS AND REGULATIONS

CARCINOGENIC REVIEW: Animal Indefinite Inemdt 23, 325, 80

ACGIH TLV-TWA 0.15 Mg (Pb)/M3 85INA8 5,343,86

MSHA Standard-AIR: TWA 0.15 Mg (Pb)/M3 DTLVS 3,143,71

OSHA Standard-AIR: TWA 0.05 Mg (Pb)/M3 FEREAC 43,53007,78

NIOSH Rel to Inorganic Lead AIR TWA $0.10\ Mg/\ (Pb)\ /M3$

MMWWR 34 (1S), 21S, 85

EPA Genotox Program 1986, Inconclusive: Carcinogenicity - Mouse/Rat

EPA Genotox Program 1986, Inconclusive: Invivo Cytogentics - Human Lymphocyte

EPA TSCE Section 8(E) Status Report 8EHQ-0680-0345

MIOSH Analytical Methods: See Lead, 7082; Elements, 7300; Lead in Blood and Urine, 8003

Meets criteria for proposed OSHA Medical Records Rule FEREAC 47,30420,82

Only Selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in

RTECS for complete information.

SECTION 16: OTHER INFORMATION

This MSDS is a compilation of the information supplied in the MSDS's obtained from the manufacturers of the chemicals contained in this product. 29 CFR 1910.1200 was consulted for MSDS guidelines.

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