

Liquid Flux

Mildly Activated RMA

Material Safety Data Sheet - **MSDS**



Section 1. Product and Company Identification			
Common Name	Flux RMA 202-25	Code	20219
Product type	Liquid flux (Rosin, Mildly Activated)	Validation Date	10/19/2001
Synonym	Flux RMA 202-35	Version Number	2
Material Uses	Not available.		
Supplier	ChemTools Pty Ltd	ChemTools Pty Ltd PO Box 4319 - Penrith NSW 2750 Phone: 1300 556 186 - Fax: 1300 781 995 www.chemtools.com.au info@chemtools.com.au	
Manufacturer	AIM Products Pty Ltd Unit 4, 3 Pullman Place - Emu Plains 2750 Ph 02 4735 6775 - info@aimsolder.com.au		

Section 2. Hazardous Components			
Name	CAS #	% by Weight	Toxicity Data (LC50/LD50, TLV)
1) Isopropyl alcohol	67-63-0	60-100	ORAL (LD50): Acute: 5045 mg/kg [rat]. 6410 mg/kg [rabbit]. 3600 mg/kg [mouse]. DERMAL (LD50): Acute: 12800 mg/kg [rabbit]. TWA: 400 STEL: 500 (ppm) from ACGIH (TLV) [United States] [1994] <u>INHALATION</u> TWA: 983 STEL: 1230 (mg/m ³) from ACGIH (TLV) [United States] [1994] <u>INHALATION</u> TWA: 400 STEL: 500 (ppm) from NIOSH [United States] [1994] <u>INHALATION</u> TWA: 980 STEL: 1225 (mg/m ³) from NIOSH [United States] [1994] <u>INHALATION</u> TWA: 400 STEL: 500 CEIL: 2000 (ppm) from OSHA (PEL) [United States] [1989] <u>INHALATION</u> TWA: 980 STEL: 1225 (mg/m ³) from OSHA (PEL) [United States] [1989] <u>INHALATION</u> *(see section 11)
2) Rosin	8050-09-7	10-30	

Section 3. Hazards Identification	
Physical State and Appearance	Liquid. (Clear.)
Emergency Overview	WARNING!! Keep away from heat, sparks and flame. Avoid prolonged contact with eyes, skin, and clothing. Avoid contact with eyes DO NOT ingest. Do not breathe vapor or mist. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Routes of Entry	Inhalation. Ingestion.
Potential Acute Health Effects	Eyes This product may be hazardous in case of eye contact (irritant). Skin This product may be hazardous in case of skin contact (irritant, sensitizer, permeator). Non-corrosive for skin. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Inhalation This product may be hazardous in case of inhalation (lung sensitizer). Ingestion Fumes and/or dusts produced by this product may be hazardous in case of ingestion.

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Potential Chronic Health Effects	Fumes and/or dusts produced by this product may be hazardous in case of ingestion, . This product may be hazardous in case of skin contact (irritant, sensitizer, permeator), of inhalation (lung sensitizer).
Medical Conditions Aggravated by Overexposure:	Repeated or prolonged exposure is not known to aggravate medical condition.
Overexposure /Signs/Symptoms	Not available.
See Toxicological Information (section 11)	

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Hazardous Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Hazardous Ingestion	Not available.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable.
Auto-Ignition Temperature	The lowest known value is 399°C (750.2°F) (Isopropanol).
Flash Points	CLOSED CUP: <10°C (50°F). (ASTM D-56 (Tagliabue).)
Flammable Limits	The greatest known range is LOWER: 2% UPPER: 12% (Isopropanol)
Products of Combustion	These products are carbon oxides (CO, CO ₂). Depending on conditions, some aliphatic aldehydes and carboxylic acids also may be formed.
Fire Hazards in Presence of Various Substances	Highly flammable in presence of open flames and sparks, of heat, of oxidizing materials. Slightly flammable in presence of combustible materials.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog.
Protective Clothing (Fire)	Be sure to use an approved/certified respirator or equivalent.
Special Remarks on Fire Hazards	Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition, it emits acrid smoke and fumes.

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Special Remarks on Explosion Hazards Not available.

Section 6. Accidental Release Measures

Small Spill and Leak Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill and Leak Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Handling Wear suitable protective clothing. Use in a well ventilated area. When using do not eat, drink or smoke. Avoid contact with skin and eyes. After handling, always wash hands thoroughly with soap and water.

Storage Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls, Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Vapor respirator. Wear appropriate respirator when ventilation is inadequate. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Hands Gloves (impervious).

Feet Not applicable.

* **Note:** Suggested protective clothing may not be adequate for a specific process. Consult a specialist before using.

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name

1) ISOPROPYL ALCOHOL

Exposure Limits

TWA: 400 STEL: 500 (ppm) from ACGIH (TLV) [United States] [1994] INHALATION
 TWA: 983 STEL: 1230 (mg/m³) from ACGIH (TLV) [United States] [1994] INHALATION
 TWA: 400 STEL: 500 (ppm) from NIOSH [United States] [1994] INHALATION
 TWA: 980 STEL: 1225 (mg/m³) from NIOSH [United States] [1994] INHALATION
 TWA: 400 STEL: 500 CEIL: 2000 (ppm) from OSHA (PEL) [United States] [1989] INHALATION
 TWA: 980 STEL: 1225 (mg/m³) from OSHA (PEL) [United States] [1989] INHALATION
 *(see section 11)

2) ROSIN CORE SOLDER THERMAL DECOMPOSITION PRODUCTS

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid. (Clear.)	Odor	Alcohol like.
Molecular Weight	Not applicable.	Taste	Not applicable.
Chemical formula	Not applicable.	Color	Orange. (Light.)
pH (1% Soln/Water)	Neutral.	Specific Gravity	0.83 to 0.85 (Water = 1)
Acid Value (IPC TM-650, 2.3.13)	39.7 to 41.7		
Boiling/Condensation Point	82°C (179.6°F)		
Melting/Freezing Point	May start to solidify at -89.5°C (-129.1°F) based on data for: Isopropyl alcohol.		
Critical Temperature	Not available.		
Vapor Pressure	The highest known value is 4.4 kPa (@ 20°C) (Isopropanol).		
Vapor Density	The highest known value is 2.07 (Air = 1) (Isopropanol).		
Volatility	Not available.		
Odor Threshold	The highest known value is 43 ppm (Isopropanol)		
Evaporation Rate	2.3 (Isopropanol) (compared to Butyl acetate		
VOC	Not available.		
Viscosity	Not available.		
LogK_{ow}	The product is more soluble in oil.		
Ionicity (in Water)	Not available.		
Dispersion Properties	Is not dispersed in cold water, hot water. See solubility in methanol, diethyl ether, n-octanol.		
Solubility	Easily soluble in methanol, diethyl ether. Partially soluble in n-octanol. Insoluble in cold water, hot water.		
Physical Chemical Comments	Not available.		

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Stable in normal conditions.
Incompatibility with Various Substances	Reactive with oxidizing agents, acids.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Will not occur.
Corrosivity	Corrosive in presence of copper.
Special Remarks on Corrosivity	No additional remark.

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Section 11. Toxicological Information

Toxic and Chronic Effects on Humans	<p>Fumes and/or dusts produced by this product may be hazardous in case of ingestion, of inhalation. This product may be hazardous in case of skin contact (irritant, sensitizer, permeator), of eye contact (irritant).</p> <p>CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.</p> <p>The product may be toxic to upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea, thyroid. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to toxic material may produce general deterioration of health by an accumulation in one or many human organs.</p>
Toxicity to Animals	No specific information is available in our data base regarding the toxicity to animals.
Special Remarks on Chronic Effects on Humans	Human: ISOPROPYL ALCOHOL is detected in maternal milk. Repeated and prolonged contact with bare skin may cause an allergic reaction (sensitization) in susceptible individuals.
Special Remarks on Other Toxic Effects on Humans	Inhalation of smoke and fumes, at high temperatures, may cause an asthmatic reaction in some individuals. Prolonged and repeated contact with bare skin may cause irritation, dermatitis and defatting. *If this product is heated to temperatures sufficient to produce smoke or fumes, the TLV-TWA of 0.1 mg/m ³ (as formaldehyde, as per ACGIH), for rosin core pyrolysis products should be observed.
Special Remarks on Toxicity to Animals	No additional remark.


Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Not available. Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Class 3: Flammable liquid.	
	Isopropyl alcohol, solution, 3, 1219, II	
Special Provisions for Transport	Not available.	
Special Provisions for Transport		
IMO/IMDG Classification	Class 3.2: Flammable liquid (Intermediate flashpoint group of liquids having a flashpoint of -18°C (0°F) up to, but not including, 23°C (73°F) c.c.).	
Marine Pollutant	Not available.	
ADR/RID Classification	Class 3: Flammable liquid A.	
ICAO/IATA Classification	Class 3: Flammable liquid.	

Section 15. Regulatory Information

HCS Classification	Class: Flammable liquid having a flash point lower than 37.8°C (100°F). Class: Sensitizing substance. Class: Target organ effects. Class: Reproductive toxins.	
U.S. Federal Regulations	TSCA 8(a) PAIR: Isopropanol TSCA 8(a) IUR: Isopropanol TSCA inventory: ALL COMPONENTS TSCA 12(b) one time export: Isopropanol 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: No products were found. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found. SARA 313 toxic chemical notification and release reporting: Isopropanol: 1% 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	Pennsylvania RTK: Isopropanol: (environmental hazard) Florida: Isopropanol Minnesota: Isopropanol; Rosin Massachusetts RTK: Isopropanol New Jersey: Isopropanol New Jersey spill list: Isopropanol California prop. 65: No products were found.	
International Regulations		
EINECS	Not available.	
DSCL (EEC)	11- Highly flammable. 42/43- May cause sensitization by inhalation and skin contact.	
International Lists	No products were found.	

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Section 16. Other Information**Hazardous Material
Information System
(U.S.A.)**

Health	*	1
Fire Hazard		3
Reactivity		1
Personal Protection		h

**National Fire
Protection
Association (U.S.A.)****Label statements**

BIRTH DEFECT HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
HIGHLY FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: REPRODUCTIVE SYSTEM, RESPIRATORY TRACT,
SKIN, EYES.
MAY CAUSE EYE AND SKIN IRRITATION.
MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.

References

-ACGIH, Threshold Limit Values, 1994-1995. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". -CFR29, OSHA's Permissible Exposure Limits, revision July, 1993. -CFR29, part 1910.1200, Hazard Communication. -CHEMTOX database -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Raton, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. Sigma-Alrich handbook of fine chemicals, 1998 -TSCA (Toxic Substance Contral Act), Chemical Substance Inventory List, 1985.

**Other Special
Considerations**

-ALL COMPONENTS WITH SUSCEPTIBLE HAZARDS THAT ARE PRESENT IN A CONCENTRATION GREATER THAN 1 % (GREATER THAN 0.1 % FOR CARCINOGENS) HAVE BEEN DISCLOSED IN THIS SAFETY DOCUMENT.

**Document
Modifications**

New document

Validated by P. Diallo on 10/19/2001.

Verified by P. Diallo.
Printed 10/19/2001.

Information/Contact

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