

MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet complies with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.

1. Product and Supplier Identification

Product: Old Master's Soldering Flux

Product Use: Soldering Flux for stained glass crafts.

Supplier: Novacan Industries Ltd.
856 Washington Drive,
Port Moody, BC Canada V3L 5B5
Emergency Telephone: (604) 986-4617

Manufacturer: As above

2. Composition

Component	% (w/w)	Exposure Limits
Zinc Chloride Anhydrous (CAS No. 7646-85-7)	15-17	OSHA-PEL: 1 mg/m ³ as fume ACGIH-TLV: 1 mg/m ³ as fume

3. Hazards Identification

Routes of Entry: (under normal conditions of use)

Skin Contact: Minor Eye Contact: Major Ingestion: Major Inhalation: Moderate

Effects of Short-Term (Acute) Exposure:

Inhalation: Dusts, mists or vapours, may cause severe irritation to upper respiratory tract. Severe exposure may cause pulmonary edema. Metal fume fever may result from inhaling zinc oxide, which is a possible decomposition product at high temperatures.

Skin Contact: May cause skin irritation with discomfort and/or rash.

Eye Contact: Solutions may cause eye damage. Symptoms may include irritation with discomfort, tearing, blurring of vision or redness. May cause severe cornea injury and result in permanent impairment of vision or even blindness. Do not wear contact lenses.

Ingestion: Corrosive to mouth and throat. Symptoms include abdominal pain, nausea and vomiting. Gross overexposure may be fatal.

Effects of Long-Term (Chronic) Exposure:

No specific information available.

Medical Conditions Aggravated By Exposure:

Persons with pre-existing lung diseases may be more susceptible to the effects of this chemical.

4. First Aid Measures

Eye Contact: Immediately flush eyes with lots of running water for 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention immediately.

Skin Contact: Flush skin with running water for 15 minutes. Remove contaminated clothing and wash before re-use. Get medical attention of indicated.

Inhalation: If dusts, mists or vapors are inhaled, immediately remove person to fresh air. Give artificial respiration if person is not breathing. Get medical attention immediately.

Ingestion: Rinse mouth with water. Give lots of water or milk. **Do not induce vomiting.** Get medical attention immediately.

5. Fire Fighting Measures

Flash point:	Not flammable
Autoignition temperature:	Not applicable
Lower Explosive Limit:	Not established
Upper Explosion Limit:	Not established
Sensitivity to Impact:	Not sensitive.
Sensitivity to Static Discharge:	Not sensitive.

Hazardous Combustion Products: May release zinc oxide fumes, zinc chloride fumes, or hydrogen chloride gas in a fire.

Extinguishing Media: No specific recommendation. Use extinguishing media appropriate to suppress surrounding fire.

Fire Fighting Instructions: None

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:

HEALTH: 2 - Short exposure could cause temporary or residual injury.

FLAMMABILITY: 0 - Will not burn.

REACTIVITY: 1 - Normally stable but can become unstable at elevated temperatures and pressures, or may react non-violently with water.

SPECIFIC HAZARDS: Corrosive

6. Accidental Release Measures

Personal Protection Wear appropriate personal protective equipment as specified in section 8 while cleaning the spill.

Environmental Precautions: Implement spill control plan. Prevent from spilling into sewers, storm drains, surface water and soil.

Remedial Measures: Contain spillage and mop up with absorbent material. Dispose of in DOT approved waste containers. Comply with all applicable Governmental regulations on spill reporting and handling and disposal of waste. It is recommended that each user establish a spill

Accidental Release Measures, continued

prevention, control and counter measure plan. Such a plan should include procedures applicable to proper storage, control and clean-up of spills, including reuse or disposal as appropriate.

7. Handling and Storage

Handling Procedures: Keep containers closed. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke in areas where the product is being used. Wash hands and face before eating, drinking or smoking. Avoid getting in cuts.

Storage: Store in a cool well-ventilated location. Protect from sunlight. Do not store in a steel container. Plastic or plastic lined or rubber lined containers or storage tanks should be used.

8. Exposure Controls, Personal Protection

Engineering Controls: Use general or local exhaust ventilation to maintain exposure below the exposure limits.

Respiratory Protection: Use NIOSH approved respirators equipped for acid gases if thermal decomposition should occur.

Skin protection: Wear impervious gloves and boots and/or other protective clothing according to circumstances.

Eye and Face Protection: Eye protection is required. Chemical safety goggles are recommended. The wearing of contact lenses is not recommended.

Footwear: Wear impervious boots.

Other: Have a safety shower and eye wash station readily available in the immediate work area.

9. Physical and Chemical Properties

Appearance:	Pale green slightly viscous liquid.	Vapor Density:	Not determined
Odor:	No odor	Freezing Point	Not determined
Odor Threshold:	Not applicable	Boiling Point:	102 °C
pH:	4	Critical Temperature:	Not applicable.
Vapor Pressure:	Not determined	Relative Density:	1.14 (water = 1)
Solubility:	Completely soluble in water	Partition Coefficient:	No data
		Evaporation Rate:	Not determined

10. Stability and Reactivity

Chemical Stability: Stable.

Incompatibility: Cyanides and sulfides.

Hazardous Decomposition Products: May liberate zinc oxide fume, zinc chloride fumes, or hydrogen chloride gas.

Hazardous Polymerization: Will not occur

11. Toxicological Information

Acute Exposure: The LD₅₀ (rat/oral) for Old Master's Soldering Flux is > 2000 mg/kg

Chronic Exposure:	See Section 3.
Exposure Limits:	See Section 2.
Irritancy:	See Section 3.
Sensitization:	See Section 3.
Carcinogenicity:	None reported.
Teratogenicity:	Not determined.
Reproductive toxicity:	Tests in some animals indicate this chemical may have embryotoxic activity.
Mutagenicity:	Tests in bacterial or mammalian cell cultures demonstrate mutagenic activity.
Synergistic products:	None reported.

12. Ecological Information

Environmental toxicity: No data available.

Biodegradability: No data available.

13. Disposal Considerations

Neutralize residues and consult the appropriate Federal, State and Local regulatory agencies to ascertain proper disposal procedures. Depending on usage, after use by-products may contain solder and/or other metals. It is recommended that each user take into account the additional contaminants introduced during usage when disposing and handling of waste.

14. Transport Information

Department of Transport (49 CFR): Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

UNITED STATES – FEDERAL REGULATIONS:

TOXIC SUBSTANCES CONTROL ACT (TSCA): All components are listed in the inventory.

OSHA, 29 CFR 1910, Subpart Z: Meets the criteria for a hazardous substance.

CERCLA, 40 CFR 302: RQ, Zinc Chloride, 454 Kg (1000 pounds)

SARA 302, 40 CFR 355: Not listed

SARA 313, 40 CFR 372: Not listed

SARA 311/312, 40 CFR 370: Immediate (Acute) Health, Delayed (Chronic) Health.

16. Other Information

Preparation Date: September 25, 2001

Prepared by: Kel-Ex Agencies Ltd., P.O. Box 86643, North Vancouver, BC, Canada, V7L 4L2

Comments: This Material Safety Data Sheet was prepared using information provided by Novacan Industries Ltd., and CCINFO. The information in the Material safety Data Sheet is offered for your consideration and guidance when exposed to this product. Novacan Industries Ltd., expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

Revisions: None