

Safety Data Sheet

1. Information of Manufacturer/Supplier

Product Name: KorriSeal [®] TC-78
Suggested use : excellent against tarnishing of copper, copper alloys and the metals plated therewith.
Restriction : Do not use in food
Name of Manufacturer/Supplier: Allucid, Inc.
Address of Manufacturer/Supplier: 1-1, Bengong 5th Rd., Gangshan Kaohsiung, Taiwan82059
Person/Telephone Number for Inquiry: H.-T. Eric Chen +886-7-624-3737
Emergency Telephone Number: +886-7-624-3737 Facsimile Number: +886-7-624-3736

2. Hazards Identification

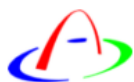
Description:	Xn Harmful
Information pertaining to particular dangers for man and environment	
R 20/21/22 R 36/37/38 R 40 R 43	Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.
NFPA ratings	Health: 2 Fire: 1 Reactivity: 0 Specific Hazard Designation: No
Hazards Classification: Hazardous	

3. Product Identification

Product Name: KorriSeal [®] TC-78			
Synonym: No			
The product is a mixture of harmless substance and the following listings.			
Hazardous Ingredients			CAS NO
Name	Molecular Formula	Content (%)	
1-Methoxy 2-propanol acetate (PMA)	C ₆ H ₁₂ O ₃	10 ~ 20	108-65-6

4. First Aid Measures

Attention: Should there be any persistent symptoms, even after the following measures, should be sent for medical advice and clinical treatment.



- Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

- Skin Contact:
Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

- Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

- Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5. Fire Fighting/Explosion Hazards Measures

Flash Point:	Closed cup: >42 °C	Open cup: >45.6 °C	Explosion:Not available
Suitable extinguishing agents:Use fire fighting measures that suit the environment			
Special hazards caused by inflammation: No			

6. Accidental Release Measures

Handling Accidental Release	<ol style="list-style-type: none"> Absorb with liquid binding-material (sand, diatomite or acid binders). Send for recovery or disposal in suitable containers. Do not allow to dry out and handle in well-ventilated condition, while released in confined areas. After recovery/disposal, clean the sites with soaped water. The contaminated clothes and accessories have to be washed thoroughly before reuse. Do not allow the product to reach sewage system, water bodies, ground or soil. If material reaches soil, water bodies or sewage system inform authorities responsible for such cases. Wear protective equipment. Keep unprotected persons away. Use breathing protection against the effects of fumes/dust/aerosol Caution: Avoid tip-over by the leakage or the film formed therewith.
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7. Handling and Storage Measures

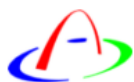
Handling:
Good ventilation/exhaustion at the work place are ensured.
Proper ordinary personal protection are required as described in Section 8.
Fire extinguishers are required against explosions or fires.

Storage:
Well-sealed containers are stored to prevent any penetration into ground/soil.
Preferably store in cool, dry conditions in well sealed containers and protect from frost.

8. Exposure Controls/Personal Protection

Exposure Guidelines:

CAS No	Component	OSHA-PELS		ACGIH-TLV		NIOSH-REL		Unit
		TWA	STEL	TWA	STEL	TWA	STEL	
108-65-6	1-Methoxy 2-propanol acetate	Not established		Not established		100	-	ppm



Personal Protection	Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.
	Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Note: 1-Methoxy 2-propanol (PM) can be absorbed through skin.
Ventilation System	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <i>Industrial Ventilation, A Manual of Recommended Practices</i> , most recent edition, for details.

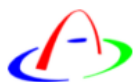
9. Physical and Chemical Properties

Appearance: Amber translucent solution	pH Value (1% in water): 6.0 ~ 7.0
Boiling Point: > 107 °F (> 42 °C)	Auto Ignition Point: > 669°F (> 354 °C)
Solvent Content: PMA (1-Methoxy 2-propanol acetate) 10 ~ 20%	
Flash Point: Closed Cup: > 107 °F (> 42 °C)	Flash Point: Open Cup: > 114 °F (> 46 °C)
Specific Gravity: 1.04 ~ 1.06 (Water = 1)	Solubility in Water: Dilutable at 0 ~ 90 °C

10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Hazardous decomposition product:	Carbon oxides and nitrogen oxides may be emitted upon decomposition.
Hazardous Polymerization:	No occurrence
Incompatibilities:	Reactive with oxidizing agents, acids, alkalis.
Conditions to avoid:	Heat, flames, ignition sources and incompatibles.

11. Toxicological Information



Pathways	nhalation, ingestion, skin and eye contact are all possible.
Primary Health Hazards	Acute toxicity: Methoxy-2-propanol acetate (PMA) 108-65-6: Oral LD50: 8532 mg/Kg (Rat) Dermal LD50: > 5000mg/Kg (Rabbit) Primary irritant effect: Skin: Trace levels of formaldehyde may cause an allergic response. Eye: May cause mild irritation PMA may be of slightly hazardous in case of skin contact, ingestion, of inhalation. No available data for PMA on chronic effect and toxicity to humans and animals.
Carcinogenicity/ Mutagenicity:	No available data for PMA.
Teratogenicity:	No available data for PMA.

12. Ecological Information

Environmental Fate:

When released into the soil, this material may leach into groundwater. When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

Ecotoxicity: Not available

BOD5 and COD:Not available

Product of biodegradation:

Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.

Toxicity of product of biodegradation: Much less toxic than the product itself.

Environmental Toxicity: No information found.

13. Disposal Considerations

Disposal Measures: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport Information

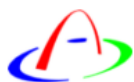
DOT	Class 3	Hazards Classification	Flammable	Hazard Labels	
UN	3272 PG: II				

15. Regulatory Information

OSHA:	Hazardous by definition of Hazard Communication Standard (29CFR 1910.1200)
EINECS:	This product is on the European Inventory of Existing Commercial Chemical Substances.

16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability



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resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damage of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if the company has been advised of the possibility of such damages.

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