



Issuing Date December 18, 2009

Revision Date December 17, 2009

Revision Number 04

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	AC-®131 4-Part Part B
Product Code(s)	AC-131 4-Part Part B
UN-No	1993
Recommended Use	Metal adhesion promoter .
Company	Advanced Chemistry & Technology, Inc. 7341 Anaconda Avenue Garden Grove, CA 92841
Company Emergency Phone Number	714-373-2837 (8 AM to 5 PM Pacific)
Emergency Telephone Number	Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Flammable Liquid
Harmful by inhalation
Severe eye irritation

Appearance Clear, amber colored	Physical State Liquid	Odor Slight
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OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects
Principle Routes of Exposure Eye contact, Skin contact, Inhalation

Acute Toxicity

Eyes	Irritating to eyes. Avoid contact with eyes. Risk of serious damage to eyes.
Skin	Substance may cause slight skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Inhalation	May cause irritation of respiratory tract. Avoid breathing vapors or mists. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
Ingestion	Gastrointestinal discomfort. May cause additional affects as listed under "Inhalation". May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system.

Main Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Vapors may cause drowsiness and dizziness.

Aggravated Medical Conditions Skin disorders. Liver disorders. Kidney disorders. Neurological disorders. Respiratory disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
1-Propanol, zirconium(4+) salt	23519-77-9	73 - 77
n-Propyl alcohol	71-23-8	23 - 27

4. FIRST AID MEASURES

General Advice	Remove from exposure, lie down. If symptoms persist, call a physician. Do not get in eyes, on skin, or on clothing.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If symptoms persist, call a physician. Remove and wash contaminated clothing before re-use.
Inhalation	If fumes from reactions are inhaled, move to fresh air immediately. If symptoms persist, call a physician. Oxygen or artificial respiration if needed.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Notes to Physician	Treat symptomatically. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
Protection of First-aiders	Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE-FIGHTING MEASURES

Flash Point Method	22 °C / 72 °F Closed cup
Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Foam. Water. Dry chemical.
Hazardous Combustion Products	Carbon oxides, Carbon monoxide, Carbon dioxide (CO ₂)
Explosion Data	
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
NFPA	Health Hazard 2 Flammability 4 Stability 1 Physical and Chemical Hazards N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
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Methods for Containment Dike for later disposal; do not apply water unless directed to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Clean contaminated surface thoroughly. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures below 28°C..

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1-Propanol, zirconium(4+) salt 23519-77-9	= 10 mg/m ³ STEL TWA: 5 mg/m ³	TWA: 5 mg/m ³ (vacated) TWA: 5 mg/m ³ (vacated) STEL: 10 mg/m ³	IDLH: 50 mg/m ³ except Zirconium tetrachloride TWA: 5 mg/m ³ STEL: 10 mg/m ³
n-Propyl alcohol 71-23-8	TWA: 100 ppm	TWA: 200 ppm TWA: 500 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 500 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 625 mg/m ³	IDLH: 800 ppm TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 625 mg/m ³

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields. If splashes are likely to occur, wear.. Face-shield.

Skin and Body Protection

Wear protective gloves/clothing. Wear latex or Nitrile gloves.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, amber colored	Odor	Slight
Physical State	Liquid	pH	No information available
Flash Point	22 °C / 72 °F	Method	Closed cup
Autoignition Temperature	No information available	Boiling Point/Range	No information available
		Flammability Limits in Air	
		Upper	13.7% (n-propanol)
		Lower	2.2% (n-propanol)
Explosion Limits	No information available		
Specific Gravity	1.05 g/cc	Solubility	No information available
Evaporation Rate	No information available	Vapor Pressure	No information available
Vapor Density	2.11	Weight per Gallon (lbs)	8.75
Actual VOC (lb/gal)	2.67	EPA VOC (lb/gal)	2.67
EPA VOC (g/l)	318	Viscosity	No data available

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible Products	Acids. Strong oxidizing agents.
Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Carbon oxides. Carbon monoxide (CO). Carbon dioxide (CO ₂).
Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
n-Propyl alcohol	1870 mg/kg (Rat)		13548 ppm (Rat) 4 h

Chronic Toxicity

Chronic Toxicity Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
n-Propyl alcohol		LC50= 4480 mg/L Pimephales promelas 96 h	EC50 = 17700 mg/L 5 min EC50 = 45000 mg/L 5 h EC50 = 8686 mg/L 15 min EC50 = 980 mg/L 12 h	EC50 = 3642 mg/L 48 h

Chemical Name	Log Pow
n-Propyl alcohol	0.25 - 0.34

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of contents/container in accordance with local regulation. Can be incinerated, when in compliance with local regulations.

Contaminated Packaging Do not re-use empty containers.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
1-Propanol, zirconium(4+) salt - 23519-77-9				
n-Propyl alcohol - 71-23-8				

Chemical Name	California Hazardous Waste Status
n-Propyl alcohol	Toxic; Ignitable

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Flammable Liquid, N.O.S. (contains n-propanol)
Hazard Class	3
UN-No	1993
Packing Group	II

IATA

UN-No	1993
Proper Shipping Name	Flammable Liquid, N.O.S. (contains n-propanol)
Hazard Class	3
Packing Group	II
ERG Code	128

IMDG/IMO

Proper Shipping Name	Flammable Liquid, N.O.S. (contains n-propanol)
Hazard Class	3
UN-No	1993
Packing Group	II
EmS No.	F-E, S-E

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Does not Comply
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA**U.S. State Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1-Propanol, zirconium(4+) salt					X
n-Propyl alcohol	X	X	X		X

International Regulations**Mexico - Grade**

Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
1-Propanol, zirconium(4+) salt		Mexico: TWA= 5 mg/m ³ Mexico: STEL= 10 mg/m ³
n-Propyl alcohol		Mexico: TWA= 200 ppm Mexico: TWA= 500 mg/m ³ Mexico: STEL= 250 ppm Mexico: STEL= 625 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

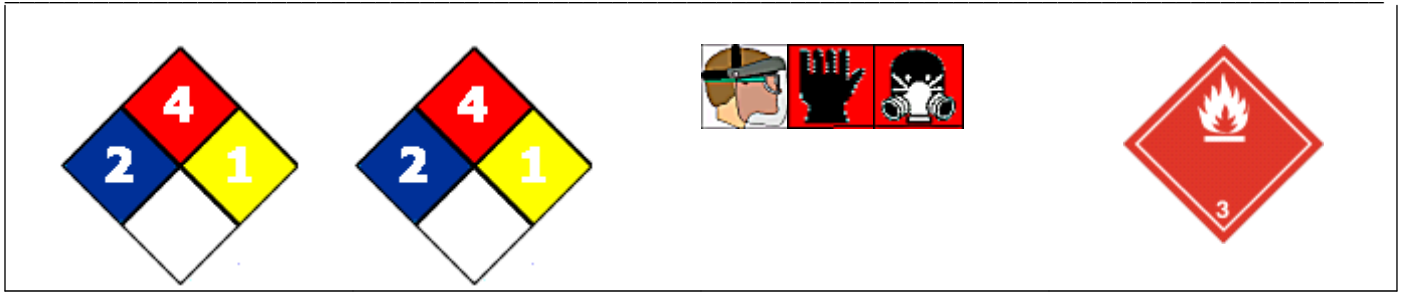
WHMIS Hazard Class

B2 Flammable liquid

D2B Toxic materials

**16. OTHER INFORMATION**

NFPA	HMIS	PPE	Transport Symbol
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**Indicates a chronic health hazard.*

Prepared By David Jordan
Director of R&D

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Revision Note (M)SDS sections updated. 1. 14. 16.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS