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Revision Number 06

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name AC-®137 Red
Product Code(s) AC-137 Red Adhesion Promoter
UN-No 1170
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 AND VAPOR

Harmful by inhalation

Harmful if swallowed

Appearance Red

Physical State Liquid

Odor Alcohol

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 Skin contact, Inhalation, Eye contact.

Acute Toxicity

Eyes

Irritating to eyes. Vapor may cause irritation.

Skin

Irritating to skin. Prolonged skin contact may defat the skin and produce dermatitis.

Inhalation

Harmful by inhalation. Avoid breathing vapors or mists. Inhalation of vapors in high concentration may cause irritation of respiratory system. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Ingestion

Harmful if swallowed.

Chronic Effects

Repeated or prolonged skin contact with the unexposed coating may cause skin irritation and/or dermatitis and sensitization of susceptible persons. See Section 11 for additional Toxicological Information.

Main Symptoms

Redness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Aggravated Medical Conditions

Skin disorders. Liver disorders. Kidney disorders. Allergies.

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Ethanol	64-17-5	70 - 80
Isopropyl alcohol	67-63-0	2.5 - 10
Methyl alcohol	67-56-1	2.5 - 10

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash skin with soap and water.
Inhalation	Move to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult and you are trained. Call a physician immediately.
Ingestion	Immediate medical attention is required. Induce vomiting, but only if victim is fully conscious.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Remove all sources of ignition.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Flammable.
Flash Point Method	13 °C / 55 °F Closed cup
Suitable Extinguishing Media	Use: Water spray. Carbon dioxide (CO ₂). Dry chemical.
Uniform Fire Code	• Flammable Liquid: I-B
Hazardous Combustion Products	Carbon monoxide, Carbon dioxide (CO ₂), Aldehydes.
Explosion Data	
Sensitivity to Mechanical Impact	Not impact sensitive.
Specific Hazards Arising from the Chemical	
In the event of fire, cool tanks with water spray.	
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 3 Stability 0 Physical and Chemical Hazards N/A

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions** Avoid contact with the skin and the eyes. Use personal protective equipment. Ensure adequate ventilation. Refer to Section 8.
- Methods for Containment** Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
- Methods for Cleaning Up** Pick up and transfer to properly labeled containers. Ground and bond containers when transferring material. Clean contaminated surface thoroughly. Prevent product from entering drains.

7. HANDLING AND STORAGE

- Handling** Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing. Do not smoke. Remove and wash contaminated clothing before re-use.
- Storage** Keep at temperatures below 28°C. Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5		TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
Isopropyl alcohol 67-63-0	= 400 ppm STEL TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 1225 mg/m ³ (vacated) STEL: 500 ppm	IDLH: 2000 ppm 10% LEL TWA: 400 ppm TWA: 980 mg/m ³ STEL: 1225 mg/m ³ STEL: 500 ppm
Methyl alcohol 67-56-1	= 250 ppm STEL TWA: 200 ppm	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ Skin	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 325 mg/m ³ STEL: 250 ppm

- Engineering Measures** Showers, eyewash stations, and ventilation systems.
- 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.
 - Respiratory Protection** Maintain adequate ventilation. 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 before re-use. General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Red **Odor** Alcohol

Physical State	Liquid	pH	No data available
Flash Point	13 °C / 55 °F	Method	Closed cup
Autoignition Temperature	No data available	Boiling Point/Range	Not applicable
Explosion Limits	No information available	Flammability Limits in Air	No information available
Specific Gravity	0.82 g/cc	Solubility	Soluble in aromatic hydrocarbons and ketones
Evaporation Rate	No information available	Vapor Pressure	No information available
Vapor Density	No information available.	Weight per Gallon (lbs)	6.83
Actual VOC (lb/gal)	6.07	EPA VOC (lb/gal)	6.07
EPA VOC (g/l)	723	Viscosity	(Water)

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible Products	Incompatible with strong acids and bases. Strong oxidizing agents.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition. Keep away from children.
Hazardous Decomposition Products	Carbon oxides. Aldehydes.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information	The product itself has not been tested. Harmful by inhalation. Product is harmful by ingestion.
Irritation	Moderately irritating to eyes, skin and respiratory system.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	7060 mg/kg (Rat)		
Isopropyl alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Methyl alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h

Chronic Toxicity

Chronic Toxicity	Repeated or prolonged skin contact with the unexposed coating may cause skin irritation and/or dermatitis and sensitization of susceptible persons. See Section 11 for additional Toxicological Information.
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Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol		Group 1	Known	X

IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans

Target Organ Effects Liver, Kidney, Skin, Central nervous system (CNS), Lungs.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Ethanol		LC50= 12900 mg/L Oncorhynchus mykiss 96 h LC50= 14.2 mg/L Pimephales promelas 96 h	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	EC50 = 10800 mg/L 24 h EC50 = 9268 mg/L 48 h
Isopropyl alcohol	EC50 > 1000 mg/L 72 h EC50 > 1000 mg/L 96 h	LC50= 61200 mg/L Pimephales promelas 96 h LC50= 94900 mg/L Pimephales promelas 96 h LC50= 9640 mg/L Pimephales promelas 96 h	EC50 = 35390 mg/L 5 min	EC50 = 13299 mg/L 48 h
Methyl alcohol		LC50= 13200 mg/L Oncorhynchus mykiss 96 h LC50= 28100 mg/L Pimephales promelas 96 h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	

Chemical Name	Log Pow
Ethanol	-0.32
Isopropyl alcohol	= 0.05 25 °C
Methyl alcohol	= -0.77

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose of contents/container in accordance with local regulation. Can be incinerated, when in compliance with local regulations. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging

Dispose of in accordance with local regulations.

Chemical Name	California Hazardous Waste Status
Ethanol	Toxic; Ignitable
Isopropyl alcohol	Toxic; Ignitable
Methyl alcohol	Toxic; Ignitable

14. TRANSPORT INFORMATION**DOT**

Proper Shipping Name	Ethanol Solution
Hazard Class	3
UN-No	1170
Packing Group	II

IATA

UN-No	1170
Proper Shipping Name	Ethanol Solution
Hazard Class	3
Packing Group	II
ERG Code	127

IMDG/IMO

Proper Shipping Name	Ethanol Solution
Hazard Class	3.2
UN-No	1170
Packing Group	II
EmS No.	F-E, S-D

15. REGULATORY INFORMATION

International Inventories

TSCA	Listed
DSL	Listed
EINECS/ELINCS	Listed
ENCS	Not Listed
IECSC	Listed
KECL	Listed
PICCS	Listed
AICS	Listed

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Isopropyl alcohol	67-63-0	2.5 - 10	1.0
Methyl alcohol	67-56-1	2.5 - 10	1.0

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 contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Isopropyl alcohol 67-63-0 (2.5 - 10)				x

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	67-56-1	2.5 - 10	Present	Group IV		

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Methyl alcohol	5000 lb	

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Chemical Name	CAS-No	California Prop. 65
Ethanol	64-17-5	Developmental

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethanol	X	X	X		X
Isopropyl alcohol	X	X	X		X
Methyl alcohol	X	X	X	X	X

International Regulations

Mexico - Grade Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Ethanol		Mexico: TWA= 1900 mg/m ³ Mexico: TWA= 1000 ppm
Isopropyl alcohol		Mexico: TWA= 400 ppm Mexico: TWA= 980 mg/m ³ Mexico: STEL= 1225 mg/m ³ Mexico: STEL= 500 ppm
Methyl alcohol		Mexico: TWA= 200 ppm Mexico: TWA= 260 mg/m ³ Mexico: STEL= 250 ppm Mexico: STEL= 310 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
 D2A Very toxic materials
 D2B Toxic materials



Chemical Name	NPRI
Isopropyl alcohol	X
Methyl alcohol	X

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol

Prepared By David Jordan
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Disclaimer

The information provided on this SDS 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