



Material Safety Data Sheet

Issuing Date December 22, 2009

Revision Date December 21, 2009

Revision Number 07

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name AC-®770 Class B-2 Mixed
Product Code(s) AC-770 Class B-2 Mixed
Recommended Use Aircraft Sealant.
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

CAUTION!

Emergency Overview

May cause skin irritation and/or dermatitis

Mild eye irritation

May be harmful if swallowed

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Appearance Dark gray

Physical State Paste/Gel

Odor Sulphurous

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, Eye contact, Inhalation

Acute Toxicity

Eyes

Moderately irritating to the eyes.

Skin

Substance may cause slight skin irritation.

Inhalation

May cause irritation of respiratory tract.

Ingestion

May be harmful if swallowed. Ingestion may cause irritation to mucous membranes.

Chronic Effects

Prolonged exposure may cause chronic effects. Repeated or prolonged skin contact with the unexposed coating may cause skin irritation and/or dermatitis and sensitization of susceptible persons.

Main Symptoms

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Aggravated Medical Conditions

Liver disorders. Kidney disorders. Central nervous system. Respiratory disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
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Calcium carbonate	471-34-1	15-20
Manganese dioxide	1313-13-9	1-5
Formaldehyde	50-00-0	0.0001-0.004
Phenol	108-95-2	0.0001-0.0075

4. FIRST AID MEASURES

General Advice	If symptoms persist, call a physician.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult 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	Remove from exposure, lie down. If symptoms persist, call a physician. If not breathing, give artificial respiration.
Ingestion	Call a physician immediately. Do not induce vomiting without medical advice.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Use personal protective equipment.

5. FIRE-FIGHTING MEASURES

Flash Point Method	> 110 °C / > 230 °F Closed cup
Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or alcohol-resistant foam.
Hazardous Combustion Products	Carbon oxides, Carbon monoxide, Carbon dioxide (CO ₂), Sulfur oxides
Explosion Data	
Sensitivity to Mechanical Impact	Not impact sensitive.
Sensitivity to Static Discharge	Not sensitive.
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 1 Flammability 1 Stability 0 Physical and Chemical Hazards -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with the skin and the eyes. Use personal protective equipment. Ensure adequate ventilation.
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. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not smoke.

Storage Keep at temperature not exceeding -40°C. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium carbonate 471-34-1		TWA: 5 mg/m ³ TWA: 15 mg/m ³	TWA: 5 mg/m ³ TWA: 10 mg/m ³
Manganese dioxide 1313-13-9	TWA: 0.2 mg/m ³	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³
Formaldehyde 50-00-0		TWA: 0.75 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm TWA: 0.016 ppm
Phenol 108-95-2	TWA: 5 ppm	TWA: 5 ppm TWA: 19 mg/m ³	IDLH: 250 ppm Ceiling: 60 mg/m ³ Ceiling: 15.6 ppm TWA: 5 ppm TWA: 19 mg/m ³

Engineering Measures Showers, eyewash stations, and ventilation systems.

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields.

Skin and Body Protection

Wear protective gloves/clothing.

Respiratory Protection

Maintain adequate ventilation.

Hygiene Measures

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dark gray	Odor	Sulphurous
Physical State	Paste/Gel	pH	Not applicable
Flash Point	> 110 °C / > 230 °F	Method	Closed cup
Autoignition Temperature	No information available	Boiling Point/Range	No information available
Explosion Limits	No information available	Flammability Limits in Air	No information available
Solubility	No information available	Evaporation Rate	No information available
Vapor Pressure	No information available	Vapor Density	No information available.
Density	1.1	Weight per Gallon (lbs)	9.16
Actual VOC (lb/gal)	0.02	EPA VOC (lb/gal)	0.02
EPA VOC (g/l)	2.6		

10. STABILITY AND REACTIVITY

Stability Hazardous polymerization does not occur.

Incompatible Products Incompatible with strong acids and bases. Strong reducing agents.

Hazardous Decomposition Products Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information The product itself has not been tested.

Irritation Moderately irritating to eyes, skin and respiratory system.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium carbonate	6450 mg/kg (Rat)		
Manganese dioxide	9000 mg/kg (Rat)		
Formaldehyde	100 mg/kg (Rat)	270 mg/kg (Rabbit)	0.578 mg/L (Rat) 4 h 250 ppm (Rat) 4 h
Phenol	317 mg/kg (Rat)	525 mg/kg (Rat) 630 mg/kg (Rabbit)	

Chronic Toxicity

Chronic Toxicity Prolonged exposure may cause chronic effects. Repeated or prolonged skin contact with the unexposed coating may cause skin irritation and/or dermatitis and sensitization of susceptible persons.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Formaldehyde	A2	Group 1	Reasonably Anticipated	X

Legend:

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Formaldehyde		LC50= 0.10 mg/L <i>Lepomis macrochirus</i> 96 h LC50= 24.1 mg/L <i>Pimephales promelas</i> 96 h LC50= 41 mg/L <i>Brachydanio rerio</i> 96 h	EC50 = 1.2 mg/L 1 h EC50 = 16.5 mg/L 30 min EC50 = 3.7 mg/L 5 h EC50 = 5.39 mg/L 72 h EC50 = 6.81 mg/L 25 min EC50 = 7.26 mg/L 15 min EC50 = 9.0 mg/L 5 min	EC50 = 2 mg/L 48 h EC50 = 20 mg/L 96 h

Phenol	EC50 = 150 mg/L 96 h	LC50 5 - 12 mg/L Oncorhynchus mykiss 96 h LC50= 23.88 mg/L Lepomis macrochirus 96 h LC50= 24 mg/L Pimephales promelas 96 h LC50= 27.8 mg/L Brachydanio rerio 96 h LC50= 40 mg/L Poecilia reticulata 96 h LC50= 8.9 mg/L Oncorhynchus mykiss 96 h	EC50 21 - 36 mg/L 30 min EC50 = 23.28 mg/L 5 min EC50 = 25.61 mg/L 15 min EC50 = 28.8 mg/L 5 min EC50 = 31.6 mg/L 15 min	LC50 = 13 mg/L 48 h EC50 = 23.0 mg/L 48 h
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Chemical Name	Log Pow
Manganese dioxide	< 0 20 °C
Formaldehyde	= 0.35 25 °C
Phenol	= 1.47

13. DISPOSAL CONSIDERATIONS

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Calcium carbonate - 471-34-1				
Manganese dioxide - 1313-13-9				
Formaldehyde - 50-00-0				
Phenol - 108-95-2				

Chemical Name	California Hazardous Waste Status
Formaldehyde	Toxic; Ignitable
Phenol	Toxic; Corrosive

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
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 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 %
Manganese dioxide	1313-13-9	1-5	1.0
Formaldehyde	50-00-0	0.0001-0.004	0.1
Phenol	108-95-2	0.0001-0.0075	1.0

SARA 311/312 Hazard Categories

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

Clean Water Act

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde 50-00-0 (0.0001-0.004)	100 lb			X
Phenol 108-95-2 (0.0001-0.0075)	1000 lb	X	X	X

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Manganese dioxide	1313-13-9	1-5	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)			
Formaldehyde	50-00-0	0.0001-0.004	Present	Group I		
Phenol	108-95-2	0.0001-0.0075	Present	Group III		

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Formaldehyde	100 lb	100 lb
Phenol	1000 lb	1000 lb

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

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Formaldehyde	50-00-0	Carcinogen

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Calcium carbonate	X		X		X
Manganese dioxide		X	X	X	
Formaldehyde	X	X	X	X	X
Phenol	X	X	X	X	X

International Regulations

Mexico - Grade Slight risk, Grade 1

Chemical Name	Carcinogen Status	Exposure Limits
Calcium carbonate		Mexico: TWA= 10 mg/m ³
Manganese dioxide		Mexico: TWA= 0.2 mg/m ³
Formaldehyde	A2	
Phenol		Mexico: TWA= 5 ppm Mexico: TWA= 19 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
D2A Very toxic materials



Chemical Name	NPRI
Manganese dioxide	X
Formaldehyde	X
Phenol	X

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	1	Fire Hazard	1	Reactivity	0		Not regulated
Health Hazard	1								
Fire Hazard	1								
Reactivity	0								

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Revision Note (M)SDS sections updated. 1. 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