



Material Safety Data Sheet

Issuing Date December 30, 2009

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Revision Number 03

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name AC-@236 Class C Mixed
Product Code(s) AC-236 Class C-8 and C-24 Mixed
UN-No 1263
Recommended Use 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

WARNING!

Emergency Overview
FLAMMABLE LIQUID AND VAPOR
Harmful by inhalation
Harmful if swallowed
Physical State Paste/Gel

Appearance Gray

Odor Aromatic

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

May cause sensitization by skin contact. 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

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 skin contact with the unexposed coating may cause skin irritation and/or dermatitis and sensitization of susceptible persons.

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 %
Calcium carbonate	471-34-1	30 - 40
Phenol	108-95-2	.001-.05
Formaldehyde	50-00-0	.01-0.04
Titanium dioxide	13463-67-7	1 - 5
Toluene	108-88-3	5 - 10
Hydrogenated terphenyls	61788-32-7	1 - 5
Manganese dioxide	1313-13-9	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.
Ingestion	Do not induce vomiting without medical advice. Consult a physician.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Remove all sources of ignition.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Flammable.
Flash Point Method	30 °C / 86 °F Closed cup
Suitable Extinguishing Media	Use: Water spray. Carbon dioxide (CO ₂). Dry chemical.
Uniform Fire Code	• Flammable Liquid: I-C
Hazardous Combustion Products	Carbon monoxide, Carbon dioxide (CO ₂), Sulfur oxides, Nitrogen oxides (NO _x), Aldehydes
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 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 temperature not exceeding -40°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
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
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
Formaldehyde 50-00-0		TWA: 0.75 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm TWA: 0.016 ppm
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³	IDLH: 5000 mg/m ³
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm	IDLH: 500 ppm TWA: 375 mg/m ³ TWA: 100 ppm STEL: 560 mg/m ³ STEL: 150 ppm
Hydrogenated terphenyls 61788-32-7	TWA: 0.5 ppm	(vacated) TWA: 0.5 ppm (vacated) TWA: 5 mg/m ³	TWA: 0.5 ppm TWA: 5 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

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. 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	Gray	Odor	Aromatic
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Physical State	Paste/Gel	pH	No data available
Flash Point	30 °C / 86 °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	1.59 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)	13.24
Actual VOC (lb/gal)	0.81	EPA VOC (lb/gal)	0.81
EPA VOC (g/l)	97	Viscosity	Thixotropic paste

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible Products	Incompatible with strong acids and bases. Strong reducing agents.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition. Keep away from children.
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. Harmful by inhalation.
Irritation	Moderately irritating to eyes, skin and respiratory system.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium carbonate	6450 mg/kg (Rat)		
Phenol	317 mg/kg (Rat)	525 mg/kg (Rat) 630 mg/kg (Rabbit)	
Formaldehyde	100 mg/kg (Rat)	270 mg/kg (Rabbit)	0.578 mg/L (Rat) 4 h 250 ppm (Rat) 4 h
Titanium dioxide	10000 mg/kg (Rat)		
Toluene	636 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h 26700 ppm (Rat) 1 h
Hydrogenated terphenyls	10200 mg/kg (Rat)	6800 mg/kg (Rabbit)	4.3 mg/L (Rat) 4 h
Manganese dioxide	9000 mg/kg (Rat)		

Chronic Toxicity

Chronic Toxicity	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Repeated or prolonged skin contact with the unexposed coating may cause skin irritation and/or dermatitis and sensitization of susceptible persons.
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Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen. This product contains titanium dioxide which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is a liquid.
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Chemical Name	ACGIH	IARC	NTP	OSHA
Formaldehyde	A2	Group 1	Reasonably Anticipated	X
Titanium dioxide		Group 2B		X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product contains an ingredient that is classified, according to European regulations, as "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)
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
Formaldehyde		LC50= 0.10 mg/L Lepomis macrochirus 96 h LC50= 24.1 mg/L Pimephales promelas 96 h LC50= 41 mg/L Brachydanio rerio 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
Toluene	EC50 > 433 mg/L 96 h	LC50= 13 mg/L Lepomis macrochirus 96 h LC50= 24.0 mg/L Lepomis macrochirus 96 h LC50= 24.0 mg/L Oncorhynchus mykiss 96 h LC50= 25 mg/L Pimephales promelas 96 h	EC50 = 19.7 mg/L 30 min	EC50 = 11.3 mg/L 48 h EC50 = 310 mg/L 48 h
Hydrogenated terphenyls	EC50 > 0.53 mg/L 96 h	LC50> 0.53 mg/L Lepomis macrochirus 96 h LC50> 0.53 mg/L Oncorhynchus mykiss 96 h LC50> 0.53 mg/L Pimephales promelas 96 h		EC50 = 0.011 mg/L 48 h

Chemical Name	Log Pow
Phenol	= 1.47
Formaldehyde	= 0.35 25 °C
Toluene	= 2.65
Manganese dioxide	< 0 20 °C

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	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Calcium carbonate - 471-34-1				
Phenol - 108-95-2				
Formaldehyde - 50-00-0				
Titanium dioxide - 13463-67-7				
Toluene - 108-88-3			Toxic waste; (waste number F025); Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated	
Hydrogenated terphenyls - 61788-32-7				
Manganese dioxide - 1313-13-9				

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

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Paint (Flammable)
Hazard Class 3
UN-No 1263
Packing Group III

IATA

UN-No 1263
Proper Shipping Name Paint (Flammable)
Hazard Class 3
Packing Group III
ERG Code 127
Description Packing group III is allowed under IATA section 3.3.3 viscous substances – 10 liter limit

IMDG/IMO

Proper Shipping Name Paint (Flammable)
Hazard Class 3.3
UN-No 1263
Packing Group III
EmS No. F-E, S-E

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
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 %
Phenol	108-95-2	.001-.05	1.0
Formaldehyde	50-00-0	.01-0.04	0.1
Toluene	108-88-3	5 - 10	1.0
Manganese dioxide	1313-13-9	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
Phenol 108-95-2 (.001-.05)	1000 lb	X	X	X
Formaldehyde 50-00-0 (.01-0.04)	100 lb			X
Toluene 108-88-3 (5 - 10)	1000 lb	X	X	X

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Phenol	108-95-2	.001-.05	Present	Group III		
Formaldehyde	50-00-0	.01-0.04	Present	Group I		
Toluene	108-88-3	5 - 10	Present	Group I		
Manganese dioxide	1313-13-9	2.5 - 10	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)			

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Phenol	1000 lb	1000 lb
Formaldehyde	100 lb	100 lb
Toluene	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
Toluene	108-88-3	Developmental

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

International Regulations**Mexico - Grade**

Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Calcium carbonate		Mexico: TWA= 10 mg/m ³
Phenol		Mexico: TWA= 5 ppm Mexico: TWA= 19 mg/m ³
Formaldehyde	A2	
Titanium dioxide		Mexico: TWA= 10 mg/m ³
Toluene		Mexico: TWA= 50 ppm Mexico: TWA= 188 mg/m ³
Hydrogenated terphenyls		Mexico: TWA= 0.5 ppm Mexico: TWA= 5 mg/m ³
Manganese dioxide		Mexico: TWA= 0.2 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
Phenol	X
Formaldehyde	X
Toluene	X
Manganese dioxide	X

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol

Prepared By David Jordan
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Revision Note (M)SDS sections updated. 1. 2. 3. 5. 9. 11. 13. 14. 15. 16.

Disclaimer

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End of MSDS