



Issuing Date December 29, 2009

Revision Date December 28, 2009

Revision Number 05

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name AC-@350 Class A Mixed

Product Code(s) AC-350 Class A-1/2, A-1, and A-2 Mixed

UN-No 1263

Recommended Use Adhesives and/or sealants.

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
 Vapors may be irritating to eyes, nose, throat, and lungs
 Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
 May cause skin irritation and/or dermatitis

Appearance Gray **Physical State** Liquid **Odor** Solvent, Ketones

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 Contact with eyes may cause irritation. Vapor may cause irritation.

Skin May cause irritation. Prolonged skin contact may defat the skin and produce dermatitis.

Inhalation 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 Ingestion may cause irritation to mucous membranes. 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 Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Aggravated Medical Conditions Skin disorders. Respiratory disorders.

Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Calcium carbonate	471-34-1	10-15
Toluene	108-88-3	5-10
Titanium dioxide	13463-67-7	2.5-10
Phenol	108-95-2	0.01 - 0.03
Formaldehyde	50-00-0	0.01-0.04
Methyl ethyl ketone	78-93-3	1-5
Manganese dioxide	1313-13-9	1 - 5
Hydrogenated terphenyls	61788-32-7	1 - 5

4. FIRST AID MEASURES

General Advice	Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
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.
Inhalation	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Use personal protective equipment.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Flammable.
Flash Point Method	9 °C / 48 °F Closed cup
Suitable Extinguishing Media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray.
Uniform Fire Code	• Flammable Liquid: I-B
Unsuitable Extinguishing Media	Keep away from heat and sources of ignition. Cool containers / tanks with water spray.
Hazardous Combustion Products	Carbon monoxide, Carbon dioxide (CO ₂)
Explosion Data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	May be ignited by heat, sparks or flames.
Specific Hazards Arising from the Chemical	
Flammable.	

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. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ensure adequate ventilation. All equipment used when handling the product must be grounded.

Methods for Containment

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Methods for Cleaning Up

Use personal protective equipment. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically and collect in suitable container for disposal.

Other Information

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

7. HANDLING AND STORAGE

Handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Keep away from open flames, hot surfaces and sources of ignition. Ensure adequate ventilation. Do not eat, drink or smoke when using this product.

Storage

Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat and sources of ignition. Ensure that leaks or spills cannot reach drains, sewers or surface waters. Keep at temperature not exceeding -40°C.

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
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
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³	IDLH: 5000 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
Methyl ethyl ketone 78-93-3	= 300 ppm STEL TWA: 200 ppm	TWA: 590 mg/m ³ TWA: 200 ppm	IDLH: 3000 ppm TWA: 590 mg/m ³ TWA: 200 ppm STEL: 885 mg/m ³ STEL: 300 ppm
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

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
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Engineering Measures Ensure adequate ventilation, especially in confined areas. Eyewash stations.

Personal Protective Equipment

Eye/Face Protection

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

Skin and Body Protection

Wear protective gloves/clothing.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Hygiene Measures

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. General industrial hygiene practice. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray	Odor	Solvent, Ketones
Physical State	Liquid	pH	Not applicable
Flash Point	9 °C / 48 °F	Method	Closed cup
Autoignition Temperature	No data available	Boiling Point/Range	No data available
Explosion Limits	No information available	Flammability Limits in Air	No data available
Specific Gravity	1.30	Solubility	Soluble in aromatic hydrocarbons and ketones
Evaporation Rate	No data available	Vapor Pressure	No data available
Vapor Density	Heavier than air	Weight per Gallon (lbs)	10.8
Actual VOC (lb/gal)	1.17	EPA VOC (lb/gal)	1.17
EPA VOC (g/l)	140	Viscosity	Thixotropic paste

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Incompatible with strong acids and bases. Strong oxidizing agents. Strong reducing agents.
Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	May emit small amounts of toxic fumes under fire conditions.
Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Causes skin, eye and respiratory tract irritation.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium carbonate	6450 mg/kg (Rat)		
Toluene	636 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h 26700 ppm (Rat) 1 h

Titanium dioxide	10000 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
Methyl ethyl ketone	2600 mg/kg (Rat)	6400 mg/kg (Rabbit)	
Manganese dioxide	9000 mg/kg (Rat)		
Hydrogenated terphenyls	10200 mg/kg (Rat)	6800 mg/kg (Rabbit)	4.3 mg/L (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. This product contains titanium dioxide which is classified as an IARC 2B carcinogen based on laboratory studies where animals were exposed to titanium dioxide dust. This is not a relevant route of exposure for this product since it is a moist solid material with little to no chance of producing dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Titanium dioxide		Group 2B		X
Formaldehyde	A2	Group 1	Reasonably Anticipated	X

Legend:**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, and respiratory system, Central nervous system (CNS), Skin, Eyes

Other Adverse Effects

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

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)
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

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
Methyl ethyl ketone		LC50= 1690 mg/L Lepomis macrochirus 96 h LC50= 3220 mg/L Pimephales promelas 96 h	EC50 = 3403 mg/L 30 min EC50 = 3426 mg/L 5 min	EC50 = 5091 mg/L 48 h EC50 = 520 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
Toluene	= 2.65
Phenol	= 1.47
Formaldehyde	= 0.35 25 °C
Manganese dioxide	< 0 20 °C

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with local regulations.

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				
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	
Titanium dioxide - 13463-67-7				
Phenol - 108-95-2				
Formaldehyde - 50-00-0				
Methyl ethyl ketone - 78-93-3				
Manganese dioxide - 1313-13-9				

Hydrogenated terphenyls - 61788-32-7				
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Chemical Name	California Hazardous Waste Status
Toluene	Toxic; Ignitable
Phenol	Toxic; Corrosive
Formaldehyde	Toxic; Ignitable
Methyl ethyl ketone	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 limited

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 %
Toluene	108-88-3	5-10	1.0
Phenol	108-95-2	0.01 - 0.03	1.0
Formaldehyde	50-00-0	0.01-0.04	0.1
Manganese dioxide	1313-13-9	1 - 5	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

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3 (5-10)	1000 lb	X	X	X
Phenol 108-95-2 (0.01 - 0.03)	1000 lb	X	X	X
Formaldehyde 50-00-0 (0.01-0.04)	100 lb			X

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

This product contains the following HAPs: .

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Toluene	108-88-3	5-10	Present	Group I		
Phenol	108-95-2	0.01 - 0.03	Present	Group III		
Formaldehyde	50-00-0	0.01-0.04	Present	Group I		
Methyl ethyl ketone	78-93-3	1-5		Group V		
Manganese dioxide	1313-13-9	1 - 5	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)			

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Toluene	1000 lb	
Phenol	1000 lb	1000 lb
Formaldehyde	100 lb	100 lb
Methyl ethyl ketone	5000 lb	

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

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Toluene	108-88-3	Developmental
Formaldehyde	50-00-0	Carcinogen

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island

Calcium carbonate	X		X		X
Toluene	X	X	X	X	X
Titanium dioxide	X	X	X		X
Phenol	X	X	X	X	X
Formaldehyde	X	X	X	X	X
Methyl ethyl ketone	X	X	X	X	X
Manganese dioxide		X	X	X	
Hydrogenated terphenyls	X		X		

International Regulations

Mexico - Grade

Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Calcium carbonate		Mexico: TWA= 10 mg/m ³
Toluene		Mexico: TWA= 50 ppm Mexico: TWA= 188 mg/m ³
Titanium dioxide		Mexico: TWA= 10 mg/m ³
Phenol		Mexico: TWA= 5 ppm Mexico: TWA= 19 mg/m ³
Formaldehyde	A2	
Methyl ethyl ketone		Mexico: TWA= 590 mg/m ³ Mexico: TWA= 200 ppm
Manganese dioxide		Mexico: TWA= 0.2 mg/m ³
Hydrogenated terphenyls		Mexico: TWA= 0.5 ppm Mexico: TWA= 5 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
Toluene	X
Phenol	X
Formaldehyde	X
Methyl ethyl ketone	X
Manganese dioxide	X

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
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HEALTH	2								
FLAMMABILITY	3								
REACTIVITY	0								

Prepared By David Jordan
Director of R&D

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Revision Note (M)SDS sections updated. 1. 3. 11. 12. 13. 14. 15. 16.

Disclaimer
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End of MSDS