



**Issuing Date** December 29, 2009

**Revision Date** December 28, 2009

**Revision Number** 07

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name</b>	<b>AC-@350 Class A Base</b>
<b>Product Code(s)</b>	AC-350 Class A-1/2 and A-2 Base
<b>UN-No</b>	1866
<b>Recommended Use</b>	Adhesives and/or sealants.
<b>Company</b>	Advanced Chemistry & Technology, Inc. 7341 Anaconda Avenue Garden Grove, CA 92841
<b>Company Emergency Phone Number</b>	714-373-2837 (8 AM to 5 PM Pacific)
<b>Emergency Telephone Number</b>	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

<b>Appearance</b> White	<b>Physical State</b> Liquid	<b>Odor</b> 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**

<b>Eyes</b>	Contact with eyes may cause irritation. Vapor may cause irritation.
<b>Skin</b>	May cause irritation. Prolonged skin contact may defat the skin and produce dermatitis.
<b>Inhalation</b>	Inhalation of vapors in high concentration may cause irritation of respiratory system. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.
<b>Ingestion</b>	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

### 4. FIRST AID MEASURES

<b>General Advice</b>	Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
<b>Notes to Physician</b>	Treat symptomatically.
<b>Protection of First-aiders</b>	Use personal protective equipment.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Flammable.
<b>Flash Point Method</b>	9 °C / 48 °F Closed cup
<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray.
<b>Uniform Fire Code</b>	• Flammable Liquid: I-B
<b>Unsuitable Extinguishing Media</b>	Keep away from heat and sources of ignition. Cool containers / tanks with water spray.
<b>Hazardous Combustion Products</b>	Carbon monoxide, Carbon dioxide (CO <sub>2</sub> )
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	May be ignited by heat, sparks or flames.
<b>Specific Hazards Arising from the Chemical</b>	
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 at temperatures below 28°C.. Keep away from heat and sources of ignition. Ensure that leaks or spills cannot reach drains, sewers or surface waters.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium carbonate 471-34-1		TWA: 5 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm	IDLH: 500 ppm TWA: 375 mg/m <sup>3</sup> TWA: 100 ppm STEL: 560 mg/m <sup>3</sup> STEL: 150 ppm
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup>	IDLH: 5000 mg/m <sup>3</sup>
Phenol 108-95-2	TWA: 5 ppm	TWA: 5 ppm TWA: 19 mg/m <sup>3</sup>	IDLH: 250 ppm Ceiling: 60 mg/m <sup>3</sup> Ceiling: 15.6 ppm TWA: 5 ppm TWA: 19 mg/m <sup>3</sup>
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 <sup>3</sup> TWA: 200 ppm	IDLH: 3000 ppm TWA: 590 mg/m <sup>3</sup> TWA: 200 ppm STEL: 885 mg/m <sup>3</sup> STEL: 300 ppm

**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

<b>Appearance</b>	White	<b>Odor</b>	Solvent, Ketones
<b>Physical State</b>	Liquid	<b>pH</b>	Not applicable
<b>Flash Point</b>	9 °C / 48 °F	<b>Method</b>	Closed cup
<b>Autoignition Temperature</b>	No data available	<b>Boiling Point/Range</b>	No data available
		<b>Flammability Limits in Air</b>	No data available
<b>Explosion Limits</b>	No information available		
<b>Specific Gravity</b>	1.27	<b>Solubility</b>	No information available
<b>Evaporation Rate</b>	No data available	<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	Heavier than air	<b>Weight per Gallon (lbs)</b>	10.6
<b>Actual VOC (lb/gal)</b>	1.25	<b>EPA VOC (lb/gal)</b>	1.25
<b>EPA VOC (g/l)</b>	149	<b>Viscosity</b>	Thixotropic paste

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible Products</b>	Incompatible with strong acids and bases. Strong oxidizing agents. Strong reducing agents.
<b>Conditions to Avoid</b>	Heat, flames and sparks.
<b>Hazardous Decomposition Products</b>	May emit small amounts of toxic fumes under fire conditions.
<b>Hazardous Reactions</b>	None under normal processing.
<b>Hazardous Polymerization</b>	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 )	
---------------------	--------------------	-----------------------	--

**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

Chemical Name	Log Pow
Toluene	= 2.65
Phenol	= 1.47
Formaldehyde	= 0.35 25 °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				

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** Resin Solution, Flammable  
**Hazard Class** 3  
**UN-No** 1866  
**Packing Group** II

**IATA**

**UN-No** 1866

<b>Proper Shipping Name</b>	Resin Solution, Flammable
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>ERG Code</b>	127

**IMDG/IMO**

<b>Proper Shipping Name</b>	Resin Solution, Flammable
<b>Hazard Class</b>	3.3
<b>UN-No</b>	1866
<b>Packing Group</b>	II
<b>EmS No.</b>	F-E, S-E

15. REGULATORY INFORMATION
----------------------------

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	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

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	Yes
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	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		

**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

**International Regulations****Mexico - Grade**

Moderate risk, Grade 2

Chemical Name	Carcinogen Status	Exposure Limits
Calcium carbonate		Mexico: TWA= 10 mg/m <sup>3</sup>
Toluene		Mexico: TWA= 50 ppm Mexico: TWA= 188 mg/m <sup>3</sup>
Titanium dioxide		Mexico: TWA= 10 mg/m <sup>3</sup>
Phenol		Mexico: TWA= 5 ppm Mexico: TWA= 19 mg/m <sup>3</sup>
Formaldehyde	A2	
Methyl ethyl ketone		Mexico: TWA= 590 mg/m <sup>3</sup> Mexico: TWA= 200 ppm

## 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

## 16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>HEALTH</td> <td>2</td> </tr> <tr> <td>FLAMMABILITY</td> <td>3</td> </tr> <tr> <td>REACTIVITY</td> <td>0</td> </tr> </table>	HEALTH	2	FLAMMABILITY	3	REACTIVITY	0		
HEALTH	2								
FLAMMABILITY	3								
REACTIVITY	0								

## Prepared By

David Jordan  
Director of R&D

## Issuing Date

December 29, 2009

## Revision Date

December 28, 2009

## Revision Note

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

