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**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

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**PRODUCT NAME:** CCS High Chemical Resistance, Part B  
**SYNONYMS:** 005B  
**PRODUCT CODES:** 109B

**MANUFACTURER:** ChemCo Systems Inc.  
**ADDRESS:** 2800 Bay Road  
Redwood City, CA. 94063  
**PHONE:** 650 261-3790

**EMERGENCY PHONE:**  
Chemtrec: Domestic: 800 424-9300  
International: +1 703 527-3887

**RECOMENDED USE:** Epoxy Resin, For further information refer to the Product Data Sheet.

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**SECTION 2: HAZARDS IDENTIFICATION**

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**GHS Hazard:**



**ROUTES OF ENTRY:**      **EYES:** YES      **SKIN:** YES      **INGESTION:** YES      **INHALATION:** YES

**SIGNAL WORD:** DANGER!

**PHYSICAL HAZARDS:**

**HEALTH HAZARDS (ACUTE AND CHRONIC)**

**EYES:** Serious Eye Damage Cat. 1.  
Serious Eye irritation Cat. 2A

**SKIN:** Acute toxicity dermal Cat.4  
Skin Irritant Cat. 4  
Skin Sensitization Cat. 1.  
Skin Corrosion Cat. 1A

**INGESTION:** Acute Oral Toxicity Cat. 4  
Reproductive Toxicity Cat. 2.  
Specific target organ toxicity- single exposure Cat.2

**INHALATION:** Acute inhalation Toxicity Cat. 4  
Reproductive Toxicity Cat. 2.  
Specific target organ toxicity- single exposure Cat.2

**ENVIRONMENTAL HAZARDS:**

Acute Aquatic Cat.1  
Chronic Aquatic Cat.1

**HAZARD STATEMENTS:**

H227 – Combustible Liquid.  
H302+H312+H332 - Harmful if swallowed, inhaled or in contact with skin  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H319 – Causes serious eye irritation.  
H332 – Harmful if inhaled.  
H335 – May cause respiratory irritation.  
H361 – Suspected of damaging fertility.  
H371 – May cause damage to organs(central nervous system (CNS)).  
H373 – May cause damage to organs through prolonged or repeated exposure.  
H410 – Very toxic to aquatic life with long lasting effects

# High Chemical Resistance, PART B

## Safety Data Sheet

### PRECAUTIONARY STATEMENTS:

- P201 - Obtain special instructions before use
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 - Wash...thoroughly after handling with soap and water
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment
- P280 - Wear Protective gloves/protective clothing/eye protection/face protection
- P301+P312 - IF SWALLOWED Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331 - IF SWALLOWED rinse mouth. DO NOT induce vomiting.
- P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P303+P361+P353 - If ON SKIN(or hair): Remove/ take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P310 - Immediately call a POISON CENTER or doctor/physician.
- P330 - Rinse mouth.
- P333+P337+P313 - If skin irritation or rash occurs and/or eye irritation persists: Get medical advice/attention.
- P362 - Take off all contaminated clothing and wash before reuse.
- P370+P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- P391 - Collect spillage.
- P403+P235 - Store in a well-ventillated place. Keep cool.
- P405 - Store locked up.
- P501 - Dispose of contents/container to an approved waste disposal plant.

### MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Persons with preexisting skin or respiratory disorders may have their conditions aggravated by over exposure to this material.

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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HAZARDOUS COMPONENTS	CAS #:	CAL-OSHA PEL TWA (8hours)	ACGIH TLV TWA (8 hours)	Other Limits RECOMMENDED	% BY WEIGHT
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	No Data	No Data		>16%
1,2-Diaminocyclohexane, Cyclohex-1,2-Ylenediamine	694-83-7	No Data	No Data		<30%
Ortho-sec-ButylPhenol	89-72-5	No Data	No Data		<20%
Para-sec-ButylPhenol	99-71-8	No Data	No Data		<0.5%
4,4'-Isopropylidenediphenol	80-05-7	No Data	No Data		<9%
2-Hydroxybenzoic acid	69-72-7	No Data	No Data		<5%
Benzyl alcohol	100-51-6	No Data	No Data	(WEEL) 10ppm 8hr TWA	<20%

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### SECTION 4: FIRST AID MEASURES

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- EYES:** Immediately flush eyes with water for a minimum of 15 minutes while holding eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, consult a physician.
  - SKIN:** Remove contaminated clothing and produc. Immediately wash affected area with soap and water. Do not apply greases or ointments. If skin irritation persists, consult a physician.
  - INGESTION:** Rinse mouth immediately. Give small amounts of water, only if person is conscious. Only induce vomiting at the instruction of medical personnel. consult a physician
  - INHALATION:** Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, consult a physician.
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**SECTION 5: FIRE-FIGHTING MEASURES**

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**SUITABLE EXTINGUISHING MEDIA:** Extinguish with foam, carbon dioxide, dry powder, or water fog.

**SPECIAL FIRE FIGHTING PROCEDURES:** Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of a fire and / or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products may occur when material polymerizes at temperatures above 500 °F (260 °C). Irritating and toxic gases/fumes may be released during a fire. Do not allow run-off from fire-fighting to enter drains or water courses.

**FLASH POINT:** 205 °F / 95 °C

**METHOD USED:** (DACH) TCC

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**PERSONAL PROTECTION:** Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Do not touch containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillage cannot be contained.

**ACCIDENTAL RELEASE MEASURES:** In case of spill, clean up using absorbent material such as earth or sand. Small quantities can be wiped up with cloth, place cloth in leak proof container and dispose of properly.

**WASTE DISPOSAL:** Observe Federal, State and local regulations covering chemical waste spills.

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**SECTION 7: HANDLING AND STORAGE**

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**PERSONAL PROTECTION:** Use personal protective equipment to ensure product does not contact eyes or skin when handling materials.

**HANDLING AND STORAGE:** Store in cool dry place out of direct sunrays. Keep from freezing. Recommend storage temperatures range: between 40° and 95 °F (4° - 35 °C)

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**PROTECTIVE MEASURE:** Wear appropriate personal protective equipment.

**EYE PROTECTION:** Wear appropriate safety glasses with side shields, goggles or full face shield. When working on a overhead application a full face shield is recommended.

**HAND PROTECTION:** Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.

**SKIN AND BODY PROTECTION:** Wear long sleeve shirts/long pants and other clothing as required to minimize contact.

**RESPIRATORY PROTECTION:** Do not breathe gas/fumes/vapour/ or spray. The use of a respirator is not required during general use of this product provided adequate ventilation. If grinding or cutting cured product the use of an approved respirator is recommended.

**WORK HYGIENIC PRACTICES:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**ENGINEERING CONTROLS:** When using indoors, good ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Ready access to running water is required. Provide eyewash station.

**EXPOSURE LIMITS**

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH (Pocket Guide)
Benzenediamine,ar,ar-diethyl-ar-methyl-1 68479-98-1	No Data	No Data	No Data
1,2-Diaminocyclohexane, Cyclohex-1,2-Ylenediamine 694-83-7	No Data	No Data	No Data
Ortho-sec-ButylPhenol 89-72-5	No Data	No Data	TWA 5ppm skin
Para-sec-ButylPhenol 99-71-8	No Data	No Data	No Data
4,4'-Isopropylidenediphenol 80-05-7	TWA 5 mg/m3	TWA 5 mg/m3	No Data
2-Hydroxybenzoic acid 69-72-7	No Data	No Data	No Data
Benzyl alcohol 100-51-6	No Data	No Data	No Data

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Clear Amber

**ODOR:** Ammonia

**PHYSICAL STATE:** Liquid

**pH AS SUPPLIED:** Basic

**BOILING POINT:** N/D

**MELTING POINT:** N/D

**FREEZING POINT:** N/D

**VAPOR PRESSURE (mm Hg):** <1 mm

**VAPOR DENSITY (AIR = 1):** Heavier than air

**SPECIFIC GRAVITY (H2O = 1):** 0.99

**EVAPORATION RATE:** Negligible

**SOLUBILITY IN WATER:** Partial

**PERCENT SOLIDS BY WEIGHT:** No Data

**PERCENT VOLATILE:** <1%

**VOLATILE ORGANIC COMPOUNDS (VOC):** No Data

**MOLECULAR WEIGHT:** N/D

**VISCOSITY:** 7 poise

**SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID (STABILITY):** Exposure to excessive heat and open flame

**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong acids, peroxides and other oxidizing agents.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Normal combustion forms carbon dioxide, carbon monoxide, oxides of carbon and other organic compounds,

**HAZARDOUS POLYMERIZATION:** Will not occur

**SECTION 11: TOXICOLOGICAL INFORMATION**

	CAS #	
<b>Acute Oral Toxicity:</b>		No data available on the product itself
<b>Oral-Components</b>		
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	LD50 All animals: 738 mg/kg.
1,2-Diaminocyclohexane, Cyclohex-1,2-	694-83-7	LD50 1170 mg/kg
Ylenediamine		
Ortho-sec-ButylPhenol	89-72-5	LD50 >200 mg/kg Species:Rat M/F
4,4'-Isopropylidenediphenol	80-05-7	LD50 3250 mg/kg Species:Rat
2-Hydroxybenzoic acid	69-72-7	LD50 891 mg/kg Species: Rat M
Benzyl alcohol	100-51-6	LD50 Oral Rat: 1230mg/kg
<b>Acute Dermal Toxicity:</b>		No data available on the product itself
<b>Dermal-Components</b>		
1,2-Diaminocyclohexane, Cyclohex-1,2-	694-83-7	LD50 1870 mg/kg
Ylenediamine		
4,4'-Isopropylidenediphenol	80-05-7	LD50 3000 mg/kg Species: Rabbit
2-Hydroxybenzoic acid	69-72-7	LD50 >2000 mg/kg Species: Rat M/F
<b>Acute Inhalation Toxicity:</b>		No data available on the product itself
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	LC50(1hr) Rats M/F: >1226 mg/m3
2-Hydroxybenzoic acid	69-72-7	LC50(1hr) >900 mg/m3
Benzyl alcohol	100-51-6	LC50 (4hr): >4.178 mg/L Species:Rat OECD Test Guideline 403
<b>Skin Corrosion/ Irritation:</b>		Severe Skin Irritation/Corrosion
<b>Corrosion/Irritation Components</b>		
1,2-Diaminocyclohexane, Cyclohex-1,2-	694-83-7	Cat. 1A skin corrosion in all animals.
Ylenediamine		
Ortho-sec-ButylPhenol	89-72-5	Corrosive
<b>Eye Damage/Irritation:</b>		Severe eye damage/irritation
<b>Damage/Irritaion Components</b>		
1,2-Diaminocyclohexane, Cyclohex-1,2-	694-83-7	Cat.1 (Irreversible effect on the eye)
Ylenediamine		
4,4'-Isopropylidenediphenol	80-05-7	Score 1-2 : Species:Rabbit (Edema of the conjunctivae)
2-Hydroxybenzoic acid	69-72-7	Risk of serious damage to eyes
Benzyl alcohol	100-51-6	Irritant (eye)
<b>Respiratory Damage/Irritation:</b>		Severe respiratory damage/irritation.
<b>Damage/irritation Components</b>		
4,4'-Isopropylidenediphenol	80-05-7	Respiratory tract irritation Cat.3
<b>Sensitization:</b>		May cause sensitization by inhalation and skin contact.
<b>Sensitization Componenets</b>		
<b>Germ Cell Mutagenicity</b>		The product or a component may be mutagenic, the data is inconclusive.
<b>Targeted organs</b>		
4,4'-Isopropylidenediphenol	80-05-7	Cat.2 (Bladder,kidneys,liver)
<b>Maternal Toxicity:</b>		No data available on the product itself
<b>Carcinogenicity:</b>		This product contatins no listed carcinogens according to IARC,ACGIH,NTP and/or OSHA in concentrations of 0.1 percent or greater.
<b>ACGIH:</b>		No data
<b>IARC:</b>		No data
<b>NTP</b>		No data
<b>OSHA</b>		No data

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**SECTION 12: ECOLOGICAL INFORMATION**

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ECOTOXICITY:	CAS #	
<b>Aquatic toxicity:</b>		Exposure at low concentrations may kill fish
<b>Toxicity to Fish-Components</b>		
Benzyl Alcohol	100-51-6	LC50(96hr): 10 mg/l Species Bluegill sunfish (Lepomis macrochirus)
Benzyl Alcohol	100-51-6	LC50(96hr): 460 mg/l Species Fathead minnow (Pimephales promelas)
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	LC50(48hr): 200 mg/L Species: Fish (Leuciscus idus)
Ortho-sec-ButylPhenol	89-72-5	LC50(96hr): >1mg/l Species: Oncorhynchus mykiss
4,4'-Isopropylidenediphenol	80-05-7	LC50(96hr): 4.6mg/l Species: Fish ( Fathead minnow)
2-Hydroxybenzoic acid	69-72-7	EC50(48hr): >500 mg/l Species: Lepomis macrochirus
<b>Toxicity to algae-Components</b>		
Benzyl Alcohol	100-51-6	IC50(72hr): 700mg/l Species: Algae
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	NOEC(72hr) 100mg/l Species: Algae
Ortho-sec-ButylPhenol	89-72-5	EC50(72hr) 10 mg/l Species:Pseudokirchnerella subcapitata
4,4'-Isopropylidenediphenol	80-05-7	EC50(96hr) 2.73 mg/l Species: Micro Algae
2-Hydroxybenzoic acid	69-72-7	EC50(72hr) 100 mg/l Species:Desmodesmus subspicatus (Scenedesmus subspicatus)
<b>Toxicity-AquaticInvertebrates</b>		
Benzyl Alcohol	100-51-6	EC50(48hr) 230 mg/l
Benzenediamine,ar,ar-diethyl-ar-methyl-	68479-98-1	EC50(48hr) 0.5 mg/l Species: (Daphnia magna)
Ortho-sec-ButylPhenol	89-72-5	EC50(48hr) 3.7mg/l Species: (Daphnia magna)
4,4'-Isopropylidenediphenol	80-05-7	EC50(48hr) 16mg/l Species: Water flea
2-Hydroxybenzoic acid	69-72-7	EC50(48hr) 870 mg/l Species: (Daphnia magna) water flea
<b>Toxicity to other organisms:</b>		
<b>PERSISTENCE &amp; DEGRADABILITY:</b>		
<b>BIODEGRADABILITY:</b>		
<b>Biodegradability-Components</b>		
2-Hydroxybenzoic acid	69-72-7	90% inherently biodegradable (aerobic Exposure time 4d)
<b>BIOACCUMULATIVE POTENTIAL:</b>		
<b>BioAccumulative-Components:</b>		
Benzyl Alcohol	100-51-6	BCF 1.37
4,4'-Isopropylidenediphenol	80-05-7	BCF 73 low
<b>MOBILITY IN SOIL:</b>		NDA
<b>Mobility- Components</b>		
Benzyl Alcohol	100-51-6	15.7 (calculated) Koc/Kow
<b>OTHER ADVERSE EFFECTS:</b>		An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.Harmful to aquatic life with long lasting effects.
<b>AQUATIC RELEASE:</b>		Advise authorities if product has entered or may enter watercourses or sewer drains.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**WASTE DISPOSAL METHOD:** Do not allow this material to drain into sewers / waterways, ditches, containment pools or water supplies. Dispose of contents / containers in accordance with local/regional/international regulations.

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**SECTION 14: TRANSPORT INFORMATION**

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**U.S. DEPARTMENT OF TRANSPORTATION (DOT)**

**PROPER SHIPPING NAME:** Amines, liquid, corrosive, n.o.s. (1,2 cyclohexane diamine/alkylphenol mixture)  
**HAZARD CLASS:** 8  
**ID NUMBER:** UN2735  
**PACKING GROUP:** III  
**LABEL STATEMENT:** Corrosive, Hazard Class 8, Packing Group: PG III

**WATER TRANSPORTATION (IMDG)**

**PROPER SHIPPING NAME:** Amines, liquid, corrosive, n.o.s. (1,2 cyclohexane diamine/alkylphenol mixture), Marine Pollutant  
**HAZARD CLASS:** 8  
**ID NUMBER:** UN2735  
**PACKING GROUP:** III  
**LABEL STATEMENT:** Corrosive, Hazard Class 8, Packing Group: PG III

**AIR TRANSPORTATION (IATA / ICAO)**

**PROPER SHIPPING NAME:** Amines, liquid, corrosive, n.o.s. (1,2 cyclohexane diamine/alkylphenol mixture)  
**HAZARD CLASS:** 8  
**ID NUMBER:** UN2735  
**PACKING GROUP:** III  
**LABEL STATEMENT:** Corrosive, Hazard Class 8, Packing Group: PG III

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**SECTION 15: REGULATORY INFORMATION**

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**U.S. FEDERAL REGULATIONS**

**TSCA (TOXIC SUBSTANCE CONTROL ACT):**  
**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):** Not Listed

**OSHA:** 29 CFR 1910.1200 (Hazard Communication required)  
**WHMIS:** Class E: Corrosive, Class D-2A Material Causing other toxic effects

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):**

**302/304:** No  
**311/312 HAZARD CATEGORIES:**  
 Acute Health Hazard: Yes  
 Chronic Health Hazard: Yes  
 Fire Hazard: No  
 Pressure Release Hazard: No  
 Reactivity Hazard: No  
**313 REPORTABLE INGREDIENTS:** None

**STATE REGULATIONS:**

**CALIFORNIA PROPOSITION 65 (THE SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT)**

This product contains chemicals in trace quantities that are on the California Proposition 65 carcinogens list.

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**SECTION 16: OTHER INFORMATION**

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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM	
HMIS HAZARD RATING	
HEALTH	3
FLAMMABILITY	1
REACTIVITY	1
PERSONAL PROTECTION	C
4 – Severe, 3 – Serious, 2 – Moderate, 1 - Slight	
C – (Safety glasses, gloves, apron)	

The information provided herein was believed by ChemCo Systems to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use.