

# SAFETY DATA SHEET

## Section 1. Identification

**Product name :** Amine C6

**Relevant identified uses of the substance or mixture and uses advised against**

**Identified uses :** Manufacture of Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine residues. The use of Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine residues as an intermediate.

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**Supplier's details :** Deep South Chemical, Inc. 229 Millstone Road, Broussard LA 70518  
For Product Information/MSDSs Call: 337-837-9931

**Emergency telephone number (with hours of operation) :** CHEMTREC 800-424-9300 (U.S. 24 hour)  
(001)281-276-5400  
CANUTEC 613-996-6666 (Canada 24 hours)  
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

## Section 2. Hazards identification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### 2.1 Classification of the substance or mixture

Ser. Eye Irritation 2A H319 Causes serious eye irritation  
Aquatic hazard 3 H412 Harmful to aquatic life with long-lasting effects

### 2.2 GHS label elements



**Hazard pictograms :**

**Signal Word :** Warning

### Hazard statements

H319 Causes serious eye irritation  
H412 Harmful to aquatic life with long-lasting effects

### Precautionary statements

P234 Wear eye or face protection  
P264 Wash hands thoroughly after handling  
P273 Avoid release to the environment  
P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337+313 If eye irritation persists: get medical attention

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system**

**NFPA ratings:** Health (2)      Fire (1)      Reactivity (0)      Special ()  
**HMIS ratings:** Health (2)      Fire (1)      Reactivity (0)

**Hazards not otherwise classified** : No additional information.

**Section 3. Composition/information on ingredients**

**Substance/mixture** : Substance

Ingredient name	%	CAS number
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	60-100	68909-77-3

**Section 4. First aid measures****4.1 Description of necessary first aid measures**

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Immediately call a Poison Center or doctor/physician..
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. Immediately call a poison center or physician. If unconscious, place in a recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt, or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Skin contact</b>	Flush contaminated skin with water for 15 minutes. Do not apply chemical neutralizing agents. Remove contaminated clothing and shoes while washing. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Drink plenty of water. If victim is drowsy or unconscious, place on left side with head down. Seek medical attention. DO NOT INDUCE VOMITING.

**4.2 Most important symptoms/effects, acute and delayed****Potential acute health effects**

<b>Symptoms/injuries</b>	Causes serious eye irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	Irritating to mouth, throat and stomach.

**Chronic symptoms** : Pain or irritation, watering, and redness of eyes.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary**

No additional information available

**Section 5. Fire-fighting measures**

### 5.1 Extinguishing media

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** No unsuitable extinguishing media known.

### 5.2 Specific hazards arising from the chemical

**Fire Hazard** Decomposition products may include carbon dioxide, carbon monoxide, and nitrogen oxides.

**Explosion Hazard** Pressure increase may burst container.

### 5.3 Advice for firefighters

**Precautionary measures** Keep upwind. Consider evacuation. Have neighborhood close doors and windows.

**Firefighting instructions** Cool tanks/drums with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face-plate operated in positive pressure mode.

## **Section 6. Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** Equip cleanup crew with proper protection. Ventilate area.

### 6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in containers for disposal according to local regulations.

## **Section 7. Handling and storage**

### 7.1 Precautions for safe handling

**Protective measures** Keep container tightly closed when not in use. Ensure good ventilation/exhaustion at the workplace. Keep ignition sources away. Protect against electrostatic charges.

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

**7.2 Conditions for safe storage, including incompatibilities**

Comply with applicable regulations. Keep only in the original container in a cool, well ventilated area away from direct sunlight. Separate from acids. Keep container tightly closed and sealed until ready for use.

**Section 8. Exposure controls/personal protection****8.1 Control parameters****Appropriate engineering controls**

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**8.2 Exposure controls****Eye/face protection**

Wear chemical safety goggles. When transferring material, wear face-shield in addition to chemical safety goggles.

**Hand protection**

Chemical-resistant gloves: rubber gloves/Neoprene gloves.

**Skin protection**

Splash proof clothing.

**Respiratory protection**

Wear a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

**Section 9. Physical and chemical properties**

Physical state	: Liquid
Color	: Brown
Odor	: Ammonia
pH	: 12
Melting/freezing point	: < -4 °F
Boiling point	: 449.6 to 719.6 °F
Flash point	: Closed cup: 314.6°F
Evaporation rate	: No data available (butyl acetate = 1)
Flammability	: No data available
Lower and upper explosive limits	: No data available
Vapor pressure	: No data available
Vapor density	: > 1 (Air = 1.0)
Relative density	: 1.09
Density	: 9.09 lbs/gal
Solubility in water	: No data available
Partition coefficient n-octanol/water	: 0.565
Auto-ignition temp.	: 536°F
Decomposition temp.	: Not determined
Viscosity	: Kinematic: 0.36458 cm <sup>2</sup> /s (36.458 cSt)
VOC	: Not applicable

**Section 10. Stability and reactivity****10.1 Reactivity**

No specific test data related to reactivity available for this product.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

### 10.4 Conditions to avoid

No specific data.

### 10.5 Incompatible materials

Strong acids.

### 10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products will not be produced.

## Section 11. Toxicological Information

### Information on toxicological effects

#### Toxicological Data:

#### Acute Toxicity

Ingredient	Test	Endpoint	Species	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat-Male, female	>2000 mg/kg
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 420 Acute Oral Toxicity-Fixed Dose Method	LD50 Oral	Rat-Male, Female	5000 mg/kg

#### Irritation/Corrosion

Ingredient	Test	Species	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin- mild irritant
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	EPA OPPTS	Rabbit	Eyes- irritant

#### Sensitization

Ingredient	Test	Route of exposure	Species	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 406 Skin Sensitization	Skin	Guinea pig	Not sensitizing

#### Mutagenicity

Ingredient	Test	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
Ethanol, 2,2'-oxybis-, reaction products	Experiment: In vitro Subject: Mammilian-animal	Negative

with ammonia, morpholine derivs. residues	Metabolic activation: +/-	
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	Experiment: In vivo Subject: Mammilian-animal Cell: Somatic	Negative

**Reproductive toxicity**

Ingredient	Test	Species	Maternal toxicity	Fertility	Developmental effects
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Rat- Male, Female	Negative	Negative	Negative

**Teratogenicity**

Ingredient	Test	Species	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Rat- Male, Female	Negative- Oral

**Potential chronic health effects**

Ingredient	Test	Endpoint	Species	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 407 Repeated Dose 28-day Oral Toxicity Study in Rodents	Sub-acute NOAEL Oral	Rat- Male, female	1000 mg/kg

**Section 12. Ecological information****Toxicity**

Ingredient	Test	Endpoint	Exposure	Species	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 209 Activated Sludge	Acute EC50	3 hr static	Bacteria	>1000 g/L
	OECD	Acute EC50	48 hr static	Daphnia	>100 g/L
	OECD	Acute ErC50	72 hr static	Algae	45 mg/kg
	OECD	Acute LC50	96 hr semi-static	Fish	>45 g/L
	OECD 209 Activated Sludge	Chronic NOEC	3 hr static	Bacteria	1000 g/L

	OECD 201 Alga growth inhibition	Chronic NOECr	72 hr static	Algae	3.2 mg/L
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**Persistence and degradability**

Ingredient	Test	Period	Result
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	OECD 301B Ready Biodegradability CO <sub>2</sub> Evolution Test	28 days	21%
		48 days	18%

**Bioaccumulative potential**

Ingredient	Log Pow	BCF	Potential
Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	0.565	-	Low

**Section 13. Disposal considerations**

**Disposal methods** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

**DOT Transport Information:** Not regulated

**Section 15. Regulatory information**

**Toxic Substances Control Act (TCSA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**CERCLA RQ-40 CFR 302.4(a)**

Component

None

CERCLA RQ (lbs)

**SARA 302 Components-40 CFR 355 Appendix A**

Component

None

TPQ(Threshold Planning Quantity) (lbs)

**Section 311/312 Hazard Class-40 CFR 370.2**

**Immediate (X)**  
**Delayed ( )**  
**Fire ( )**  
**Reactive ( )**  
**Sudden Release of Pressure ( )**

**SARA 313-40 CFR 372.65**

<u>Component</u>	<u>CAS Number</u>	<u>%(by weight)</u>
None		

**Section 16. Other information**

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