

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : Di-(3-aminopropyl) ether of diethylene glycol, DCA 221  
 Product form : Mixture  
 Product code : DCA 221

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Chemical intermediate

#### 1.3. Details of the supplier of the safety data sheet

Dixie Chemical Company, Inc.  
 10601 Bay Area Blvd  
 Pasadena TX 77507  
 Phone: 281-474-3271  
 Email: msds@dixiechemical.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC® (800) 424-9300 Domestic, (703) 527-3887 International

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin Corr. 1B H314  
 Skin Sens. 1 H317

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) :

**Danger**

Hazard statements (GHS-US) :

H314 - Causes severe skin burns and eye damage  
 H317 - May cause an allergic skin reaction

Precautionary statements (GHS-US) :

P260 - Do not breathe vapours  
 P261 - Avoid breathing vapours  
 P264 - Wash hands, forearms and face thoroughly after handling  
 P272 - Contaminated work clothing must not be allowed out of the workplace  
 P280 - Wear eye protection, face protection, protective clothing, protective gloves  
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
 P302+P352 - If on skin: Wash with plenty of soap and water  
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P310 - Immediately call a doctor, a poison center  
 P321 - Specific treatment (see first aid instructions on this label)  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P362+P364 - Take off contaminated clothing and wash it before reuse  
 P363 - Wash contaminated clothing before reuse  
 P405 - Store locked up  
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%
Diethylene glycol bis(3-aminopropyl) ether	(CAS No) 4246-51-9	90 - 100
Ethanol, 2-[2-(3-aminopropoxy)ethoxy]-	(CAS No) 112-33-4	0.5 - 1.5
<i>Chemical components disclosed above are those requiring disclosure in accordance with the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)</i>		

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention. If breathing is difficult, supply oxygen. If breathing has stopped, give artificial respiration.
- First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. Get medical attention immediately.
- First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes severe skin burns and eye damage. May cause an allergic skin reaction.
- Symptoms/injuries after eye contact : Causes severe eye damage.
- Symptoms/injuries after ingestion : May cause gastrointestinal irritation.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Carbon dioxide. Alcohol-resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : No data available.
- Explosion hazard : No data available.
- Reactivity : On exposure to high temperature, may decompose, releasing toxic/flammable vapours.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use cold water spray to cool fire-exposed containers to minimize risk of rupture. Do not dispose of fire-fighting water in the environment. Dispose of in accordance with relevant local regulations. Prevent human exposure to fire, fumes, smoke and products of combustion.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

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

- General measures : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

##### 6.1.1. For non-emergency personnel

- Protective equipment : Wear protective equipment as described in Section 8.
- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters. Avoid release to the environment.

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### 6.3. Methods and material for containment and cleaning up

- For containment : Stop leak if safe to do so. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Vapors may be suppressed by water fog.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

### 6.4. Reference to other sections

See Sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Wear personal protective equipment. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a cool dry place.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Diethylene glycol bis(3-aminopropyl) ether (4246-51-9)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established
Ethanol, 2-[2-(3-aminopropoxy)ethoxy]- (112-33-4)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established

### 8.2. Exposure controls

- Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.
- Personal protective equipment : Gloves. Wear chemical goggles and face shield in combination. Protective clothing.



- Hand protection : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Be aware that the chemical may penetrate the gloves. Frequent changes are advisable. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.
- Eye protection : Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.
- Skin and body protection : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.
- Respiratory protection : Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear
- Color : No data available
- Odor : amine-like
- Odor Threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : -32 °C
- Freezing point : No data available
- Boiling point : 181 °C @ 8 mm Hg (258 °F)

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Flash point	: 166 °C PMCC, ASTM D93 (331 °F)
Auto-ignition temperature	: 260 °C (500 °F)
Decomposition temperature	: > 250 °C (482 °F)
Flammability (solid, gas)	: No data available
Vapour pressure	: < 0.001 @ 25 °C (77 °F)
Relative vapour density at 20 °C	: 7.6 (AIR = 1)
Relative density	: 1.002 @ 25 °C (WATER = 1)
Solubility	: Water: 100 %
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1.1 - 4.5 vol %
Volatility/Vol (%)	: 39, ASTM D2369-90

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On exposure to high temperature, may decompose, releasing toxic/flammable vapours.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Ignition sources. Incompatible materials.

### 10.5. Incompatible materials

Strong acids. Mineral acids.

### 10.6. Hazardous decomposition products

No data available.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Di-(3-aminopropyl) ether of diethylene glycol, DCA 221	
LD50 oral rat	4290 mg/kg
LD50 dermal rabbit	2515 mg/kg

Ethanol, 2-[2-(3-aminopropoxy)ethoxy]- (112-33-4)	
LD50 oral rat	6500 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes severe skin burns and eye damage. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: Causes severe eye damage.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : No information available.

#### 12.2. Persistence and degradability

Di-(3-aminopropyl) ether of diethylene glycol	
Persistence and degradability	No data available.

#### 12.3. Bioaccumulative potential

Di-(3-aminopropyl) ether of diethylene glycol	
Bioaccumulative potential	No information available.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods : Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

### SECTION 14: Transport information

In accordance with DOT

Transport document description : UN2735 Polyamines, liquid, corrosive, n.o.s. (Diethylene glycol bis(3-aminopropyl) ether), 8, III

UN-No.(DOT) : 2735

DOT NA no. : UN2735

Proper Shipping Name (DOT) : Polyamines, liquid, corrosive, n.o.s. (Diethylene glycol bis(3-aminopropyl) ether)

Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : III - Minor Danger

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 52 - Stow "separated from" acids

#### Additional information

Other information : No supplementary information available.

#### Transport by sea

UN-No. (IMDG) : 2735

Proper Shipping Name (IMDG) : POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Diethylene glycol bis(3-aminopropyl) ether)

Class (IMDG) : 8 - Corrosive substances

Packing group (IMDG) : III - substances presenting low danger

#### Air transport

UN-No.(IATA) : 2735

Proper Shipping Name (IATA) : POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Diethylene glycol bis(3-aminopropyl) ether)

Class (IATA) : 8 - Corrosives

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Packing group (IATA) : III - Minor Danger

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

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All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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#### 15.2. International regulations

All chemical substances in this product are listed on the Canadian Domestic Substances List (DSL) or are exempt  
All chemical substances in this product are listed on the European EINECS Inventory or the ELINCS list or are exempt  
All chemical substances in this product are listed on the Japanese Existing and New Chemical Substances Inventory (ENCS) or are exempt  
All chemical substances in this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or are exempt  
All chemical substances in this product are listed on the Taiwan Chemical Substance Inventory (TSCI) or are exempt  
All chemical substances in this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or are exempt  
One or more of the chemical substances in this product is not listed on the Australian Inventory of Chemical Substances (AICS)  
One or more of the chemical substances in this product is not listed on the Korean Existing Chemicals Inventory (KECI)  
One or more of the chemical substances in this product is not listed on the Chinese Chemical Inventory of Existing Chemical Substances (IECSC)

#### 15.3. US State regulations

##### California Proposition 65

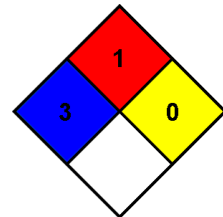
This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

### SECTION 16: Other information

Indication of changes : Revision 1.0: New SDS Created.  
: 07/16/2015

Other information : Author: ANF.

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.  
NFPA fire hazard : 1 - Must be preheated before ignition can occur.  
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



#### HMIS III Rating

Health : 3\*  
Flammability : 1  
Physical : 0  
Personal Protection :

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product