



# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

Revision Date : 01/30/20 Date of Issue : 01/30/2020 Supersedes Date : 01/30/2020 Version 2.2

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Name:** Urea Solution

**Synonyms:** Urea Solution

**Intended Use of the Product** Not available

#### Name, Address, and Telephone of the Responsible Party

##### **Company**

LSB Chemical L.L.C.

1080 Industrial Drive

Cherokee, AL 35616

T (256) 359-7000 – F (256) 359-4450

#### Emergency Telephone Number

**Emergency number** : (256) 359-7000, (800) 424-9300 (CHEMTREC, 24 hours)

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Skin Irrit. 2 H315

Eye Irrit. 2A H319

Aquatic Acute 3 H402

#### Label Elements

##### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**

:



GHS07

##### **Signal Word (GHS-US)**

: Warning

##### **Hazard Statements (GHS-US)**

: H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H402 - Harmful to aquatic life

##### **Precautionary Statements (GHS-US)**

: P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 - Specific treatment (see section 4).  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations.

#### Other Hazards

**Other Hazards Not Contributing to the Classification:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

**Unknown Acute Toxicity (GHS-US)** Not available

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

#### Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	47 - 51	Not classified
Urea	(CAS No) 57-13-6	48 - 52	Not classified
Ammonia	(CAS No) 7664-41-7	0.5 - 1	Flam. Gas 2, H221 Compressed gas, H280 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Biuret	(CAS No) 108-19-0	< 0.5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of H-phrases: see section 16

### SECTION 4: FIRST AID MEASURES

#### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

#### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Eye irritation. Skin irritation

**Inhalation:** May cause respiratory irritation.

**Skin Contact:** Causes skin irritation.

**Eye Contact:** Causes serious eye irritation.

**Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** Not available

#### Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

### SECTION 5: FIRE-FIGHTING MEASURES

#### Extinguishing Media

**Suitable Extinguishing Media:** Water spray.

**Unsuitable Extinguishing Media:** Dry chemical, carbon dioxide, or regular foam.

#### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

#### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

**Hazardous Combustion Products:** Ammonia. Nitrogen oxides.

**Other information:** Do not allow run-off from fire fighting to enter drains or water courses.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Handle in accordance with good industrial hygiene and safety practice. Avoid breathing (vapors, mist, spray). Do not get in eyes, on skin, or on clothing.

#### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Ventilate area.

### **Environmental Precautions**

Prevent entry to sewers and public waters.

### **Methods and Material for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill. Do not take up in combustible material such as: saw dust or cellulosic material.

### Reference to Other Sections

See section 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### **Precautions for Safe Handling**

**Additional Hazards When Processed:** When heated to decomposition, emits toxic fumes. Do not puncture or incinerate container.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### **Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from combustible materials, extremely high or low temperatures, direct sunlight, ignition sources, incompatible materials.

**Incompatible Materials:** May react with nitrates, alkali, oxidizing agents, hypochlorites, aldehydes and inorganic acids. Corrosive to copper and copper alloys, as well as galvanized metals. May react explosively with oxidizers such as nitrates when heated under certain undefined conditions.

**Specific End Use(s)** Not available

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### **Control Parameters**

<b>Ammonia (7664-41-7)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup>
Mexico	OEL TWA (ppm)	25 ppm
Mexico	OEL STEL (mg/m <sup>3</sup> )	27 mg/m <sup>3</sup>
Mexico	OEL STEL (ppm)	35 ppm
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (ppm)	35 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	35 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	25 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	27 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (ppm)	35 ppm

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

USA IDLH	US IDLH (ppm)	300 ppm
Alberta	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Alberta	OEL STEL (ppm)	35 ppm
Alberta	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Alberta	OEL TWA (ppm)	25 ppm
British Columbia	OEL STEL (ppm)	35 ppm
British Columbia	OEL TWA (ppm)	25 ppm
Manitoba	OEL STEL (ppm)	35 ppm
Manitoba	OEL TWA (ppm)	25 ppm
New Brunswick	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
New Brunswick	OEL STEL (ppm)	35 ppm
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
New Brunswick	OEL TWA (ppm)	25 ppm
Newfoundland & Labrador	OEL STEL (ppm)	35 ppm
Newfoundland & Labrador	OEL TWA (ppm)	25 ppm
Nova Scotia	OEL STEL (ppm)	35 ppm
Nova Scotia	OEL TWA (ppm)	25 ppm
Nunavut	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Nunavut	OEL STEL (ppm)	35 ppm
Nunavut	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Nunavut	OEL TWA (ppm)	25 ppm
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (ppm)	35 ppm
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (ppm)	25 ppm
Ontario	OEL STEL (ppm)	35 ppm
Ontario	OEL TWA (ppm)	25 ppm
Prince Edward Island	OEL STEL (ppm)	35 ppm
Prince Edward Island	OEL TWA (ppm)	25 ppm
Québec	VECD (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Québec	VECD (ppm)	35 ppm
Québec	VEMP (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Québec	VEMP (ppm)	25 ppm
Saskatchewan	OEL STEL (ppm)	35 ppm
Saskatchewan	OEL TWA (ppm)	25 ppm
Yukon	OEL STEL (mg/m <sup>3</sup> )	30 mg/m <sup>3</sup>
Yukon	OEL STEL (ppm)	40 ppm
Yukon	OEL TWA (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup>
Yukon	OEL TWA (ppm)	25 ppm

### Exposure Controls

**Appropriate Engineering Controls:** Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment:** Gloves. Insufficient ventilation: wear respiratory protection. Protective clothing. Protective goggles.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves. Butyl rubber recommended.

**Eye Protection:** Chemical goggles

**Skin and Body Protection:** Not available

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

**Respiratory Protection:** Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear
Odor	: Slight odor of ammonia
Odor Threshold	: Not available
pH	: 7-9
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: 62 deg F
Boiling Point	: 115.56 - 132.22 °C (240°F-270°F)
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: 90 mm Hg @37.8°C (100°F)
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.2-1.3 (Water = 1.0)
Solubility	: Soluble.
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not available
Explosion Data – Sensitivity to Static Discharge	: Not available
Volatility	: Not available

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**Chemical Stability:** Stable at standard temperature and pressure.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Heat. Sources of ignition. Incompatible materials.

**Incompatible Materials:** May react with nitrates, alkali, oxidizing agents, hypochlorites, aldehydes and inorganic acids. Corrosive to copper and copper alloys, as well as galvanized metals. May react explosively with oxidizers such as nitrates when heated under certain undefined conditions.

**Hazardous Decomposition Products:** Ammonia. Nitrogen oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Causes skin irritation.

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Causes serious eye irritation.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

### **Information on Toxicological Effects - Ingredient(s)**

#### **LD50 and LC50 Data:**

<b>Water (7732-18-5)</b>	
LD50 Oral Rat	> 90000 mg/kg
<b>Urea (57-13-6)</b>	
ATE (oral)	8471.000 mg/kg
<b>Ammonia (7664-41-7)</b>	
LC50 Inhalation Rat (mg/l)	5.1 mg/l (Exposure time: 1 h)
LC50 Inhalation Rat (ppm)	2000 ppm/4h (Exposure time: 4 h)

## **SECTION 12: ECOLOGICAL INFORMATION**

### **Toxicity**

**Ecology - General:** Harmful to aquatic life.

<b>Urea (57-13-6)</b>	
LC50 Fish 1	16200 - 18300 mg/l (Exposure time: 96 h - Species: Poecilia reticulata)
EC50 Daphnia 1	3910 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
<b>Ammonia (7664-41-7)</b>	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	0.26 - 4.6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

### **Persistence and Degradability**

<b>Urea Solution</b>	
Persistence and Degradability	Not established.

### **Bioaccumulative Potential**

<b>Urea Solution</b>	
Bioaccumulative Potential	Not established.
<b>Urea (57-13-6)</b>	
BCF fish 1	< 10
Log Pow	-1.59 (at 25 °C)
<b>Ammonia (7664-41-7)</b>	
Log Pow	-1.14 (at 25 °C)

**Mobility in Soil** Not available

### **Other Adverse Effects**

**Other Information:** Avoid release to the environment.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Additional Information:** Clean up even minor leaks or spills if possible without unnecessary risk.

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

### SECTION 14: TRANSPORT INFORMATION

**14.1 In Accordance with DOT** Not regulated for transport; recommended shipping name: Urea Solution

**14.2 In Accordance with IMDG** Not regulated for transport

**14.3 In Accordance with IATA** Not regulated for transport

**14.4 In Accordance with TDG** Not regulated for transport

### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<b>Urea Solution</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Urea (57-13-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Ammonia (7664-41-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 302 (Specific toxic chemical listings)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	500
<b>SARA Section 311/312 Hazard Classes</b>	Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)
<b>Biuret (108-19-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>EPA TSCA Regulatory Flag</b>	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

#### US State Regulations

<b>Urea (57-13-6)</b>	
U.S. - Minnesota - Hazardous Substance List	
U.S. - Texas - Effects Screening Levels - Long Term	
U.S. - Texas - Effects Screening Levels - Short Term	
<b>Ammonia (7664-41-7)</b>	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic	
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)	
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)	
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)	
U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria	
U.S. - Connecticut - Water Quality Standards - Acute Saltwater Aquatic Life Criteria	
U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria	
U.S. - Connecticut - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria	
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities	
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities	
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints	
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities	
U.S. - Florida - Essential Chemicals List	
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations	
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)	

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maine - Air Pollutants - Criteria Pollutants  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
RTK - U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELEs)  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - STELs  
U.S. - Michigan - Polluting Materials List  
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
U.S. - New Mexico - Precursor Chemicals  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Oregon - Precursor Chemicals  
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
RTK - U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - Rhode Island - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Tennessee - Occupational Exposure Limits - STELs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - STELs  
U.S. - Virginia - Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Acute Saltwater Aquatic Life



# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

U.S. - Virginia - Water Quality Standards - Chronic Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits  
U.S. - Virginia - Water Quality Standards - Surface Waters Not Used for the Public Water Supply Effluent Limits  
U.S. - Washington - Permissible Exposure Limits - STELS  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet  
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Marine Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Marine Water  
U.S. - Alaska - Ambient Air Quality Standards

### Canadian Regulations

#### Urea Solution

WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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#### Urea (57-13-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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#### Ammonia (7664-41-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
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#### Biuret (108-19-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

# Urea Solution

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations and According to the Hazardous Products Registration (February 11, 2015)

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision date** : 01/30/2020

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

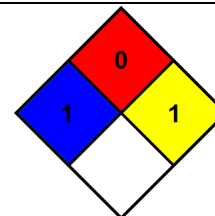
#### GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Compressed gas	Gases under pressure Compressed gas
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Gas 2	Flammable gases Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H221	Flammable gas
H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

**NFPA Health Hazard** : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

**NFPA Fire Hazard** : 0 - Materials that will not burn.

**NFPA Reactivity** : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



#### Party Responsible for the Preparation of This Document

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*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.*

North America GHS US 2012 & WHMIS 2