



## Safety Data Sheet

### Urea

#### Section 1 - Chemical Product and Company Identification

##### 1.1 Product Identifiers

**Product Name:** Urea

**Catalog Numbers:** UR7201, UR5220, UR5205, UR5204, UR5203, UR5202, UR5201, UR4220, UR4205, UR3220, UR3201, UR2221, UR2220, UR7202

**CAS#:** 57-13-6

**EC#:** 200-315-5

**RTECS#:** YR6250000

##### 1.2 Recommended Use of the Chemical and restrictions of Use

Chemical manufacturing

##### 1.3 Company Identification:

BioSpectra, Inc.  
100 Majestic Way  
Bangor, PA 18013  
610.599.3400

##### 1.4 Emergency Numbers:

**US & Canada:** 1-800-424-9300

**Outside the US & Canada:** +1 703-527-3887

#### Section 2 - Hazards Identification

##### 2.1 Classification of substance or mixture

Not a hazardous substance or mixture

##### 2.2 GHS Label Elements Including Precautionary Statements

Not a hazardous substance or mixture

##### 2.3 Hazards not Classified or not Covered by the GHS

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

#### Section 3 - Composition, Information on Ingredients

Component	Classification	Concentration
Urea	NA	>99%

**Formula:** NH<sub>2</sub>CONH<sub>2</sub>

**Molecular Weight:** 60.06 g/mol

**Synonyms:** Carbamide, Carbonyldiamide

#### Section 4 - First Aid Measures

##### 4.1 Description of necessary first aid measures

**Eyes:** Immediately flush eyes with plenty of water.

**Skin:** Immediately flush skin with plenty of soap and water.

**Ingestion:** Do not induce vomiting unless instructed to by medical personnel. Never give anything by mouth to an unconscious person. If person is conscious, wash mouth out with water. Get medical aid.

**Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Get medical aid.

**4.2 Most Important symptoms/effects, acute and delayed:** Refer to Section 2.2 for Precautionary Statements if any are applicable

##### 4.3 Indication of Immediate Medical Attention and Special Treatment:

No information available

#### Section 5 - Firefighting Measures

**5.1 Extinguishing Media** Water spray, dry chemical, carbon dioxide, or appropriate foam.

**5.2 Specific Hazards Associated with this Chemical** Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

**5.3 Special Equipment/Precautions for Firefighters** May be combustible at high temperatures. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Explosion will appear as fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**5.4 Other Information** None available

#### Section 6 - Accidental Release Measures

##### 6.1 Personal Precautions, Protective Equipment and Emergency

**Procedures:** Use proper personal protective equipment as indicated in Section 8. Avoid formation of dust. Avoid breathing any vapours, mist or gas.

**6.2 Environmental Precautions:** Do not allow to enter drains

**6.3 Methods and Materials for Containment and Cleaning Up:**

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Use water spray to disperse the gas/vapor. Provide ventilation.

**6.4 Other Information:** None available

### Section 7 - Handling and Storage

**7.1 Precautions for safe handling:** Use with adequate ventilation. Avoid dust formation.

**7.2 Conditions for Storage Including any Incompatibilities:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**7.3 Other information:** None available

### Section 8 - Exposure Controls, Personal Protection

#### 8.1 Control parameters

Component	CAS-No.	Value	Control Parameters	Basis
Urea	57-13-6	TWA	10mg/m <sup>3</sup>	USA. Workplace Environmental Exposure Levels (WEEL)

**8.2 Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

#### 8.3 Personal Protective Equipment:

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure. Wear impervious gloves. Nitrile rubber with layer thickness 0.11mm. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Whenever protection from nuisance dust levels is wanted follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

### Section 9 - Physical and Chemical Properties

<b>Physical State:</b> Solid	<b>Freezing/Melting Point:</b> 132-135° C
<b>Appearance:</b> White Crystal	<b>Boiling Point:</b> 196° C
<b>Odor:</b> Not available	<b>Solubility:</b> 480 g/L @ 20 °C
<b>pH:</b> 7.2 (10% solution)	<b>Specific Gravity/Density:</b> 1.335 g/mL @ 25°C
<b>Vapor Pressure:</b> 0.007 mm Hg @ 20°C	<b>Molecular Formula:</b> NH <sub>2</sub> CONH <sub>2</sub>
<b>Vapor Density:</b> Not available.	<b>pK<sub>a</sub>:</b> 0.1 @ 21°C
<b>Viscosity:</b> 1.78 mPa-d 46% solution @ 20°C	<b>Molecular Weight:</b> 60.06 g/mol.

### Section 10 - Stability and Reactivity

**10.1 Chemical Stability:** Stable under normal temperatures and pressures.

**10.2 Conditions to Avoid:** Incompatible materials, excess heat.

**10.3 Incompatibilities with Other Materials:** Avoid strong oxidizing agents.

**10.4 Hazardous Decomposition Products:** Not available.

**10.5 Hazardous Polymerization:** Has not been reported.

### Section 11 - Toxicological Information

#### 11.1 Toxicological effects

**LD50/LC50:** LD50 Oral - rat - 8,471 mg/kg

**Germ cell mutagenicity:** No information available

**Carcinogenicity:** CAS# 57-13-6: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.

**Mutagenicity:** No information available.

**Other Studies:** No information available.

#### Potential Health Effects

**Eye:** Causes eye irritation.

**Skin:** Causes skin irritation.

**Ingestion:** Hazardous if swallowed.

**Inhalation:** Hazardous if inhaled.

**Chronic:** Prolonged or repeated exposure may cause adverse reproductive effects.

**Other information****RTECS#:** YR6250000

To the best of our knowledge the associated physical, chemical and toxicological properties of this chemical have not undergone thorough investigation, all known information is contained in this SDS.

**Section 12 - Ecological Information**

**12.1 Ecotoxicity:** Fish LC50: *Poecilia reticulata* (guppy) - 17,500 mg/L - 96 h; *Daphnia* and other aquatic invertebrates EC50: *Daphnia magna* (water flea) – 3910 mg/L – 48 h

**12.2 Persistence and degradability:** No information available

**12.3 Bioaccumulative Potential:** No information available

**12.4 Mobility in Soil:** No information available

**12.5 Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other Adverse Effects:** No information available

**Section 13 - Disposal Considerations**

**13.1 Disposal Methods:** Dispose of in a manner consistent with federal, state, and local regulations.

**Section 14 - Transport Information**

Regulations	US DOT	IATA	IMDG
Shipping Name	Not Dangerous Goods	Not Dangerous Goods	Not Dangerous Goods
Hazard Class			
UN Number			
Packing Group			

**Section 15 - Regulatory Information****15.1 EHS Chemical Specific Regulations**

**SARA Section 302:** Not Available

**Section 313:** Not Available

**SARA 311/312 Hazards:** No SARA hazards

**STATE**

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Urea CAS# 57-13-6

**New Jersey Right To Know Components**

Urea CAS# 57-13-6

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Section 16 - Additional Information****16.1 Hazard Ratings****NFPA Rating**

Health hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

*The information conveyed in this Safety Data Sheet is only a representation of what BioSpectra has found to be accurate based on the current information that is available in regards to this compound. BioSpectra makes no warranty, expressed or implied, with respect to such information, and therefore assumes no liability resulting from product usage. It is strongly recommended that users of this product perform their own investigations to determine the accuracy and suitability of the information for their specific purposes. In no way will BioSpectra assume liability for any claims, losses, damages to any third party, any lost profits or any special, indirect, incidental, consequential or exemplary damages that may arise, even if BioSpectra has been advised of the possibility of such damages.*