

Conforms: GHS (rev 3)(2009)  
(This Safety Data Sheet conforms to the requirements of the Hazard Communication Standard (HCS)  
(29 CFR 1910.1200(g)), revised in 2012.) - United States

Date of issue/ Date of revision : 11/25/2014  
Date of previous issue : 02/12/2014  
Version : 1.1



# SAFETY DATA SHEET

Air 1 DEF  
DEF Ultrapure Urea Sol 32.5%

## Section 1. Identification

Product name : DEF Ultrapure Urea Sol 32.5%  
Product type : Liquid  
Product code : PA5167

### Uses

Area of application : Industrial applications, Professional applications

### Supplier

Supplier's details : Yara North America, Inc.

### Address

Street : 100 North Tampa Street, Suite 3200  
Postal code : 33602  
City : TAMPA  
Country : United States

Telephone number : +1 813 222 5700  
Fax no. : +1 813 875 5735  
e-mail address of person  
responsible for this SDS : yna-hesq@yara.com

Emergency telephone number : US: Chemtrec 24-hours Emergency Response: 1-800-424-9300  
(with hours of operation) : Canada: 24 Hour Emergency Service, (Canutec 613-996-6666)

### National advisory body/Poison Center

Name : The National Poisons Emergency number  
Telephone number : 1 800 222 1222

## Section 2. Hazards identification

OSHA/HCS status : This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification and labelling have been performed following the guidelines and recommendation of GHS and the intended use.

Classification of the substance or mixture : Not classified.

### GHS label elements

**Signal word** : No signal word.

**Hazard statements** : Not applicable.

**Precautionary statements**

**General** : Not applicable.

**Hazards not otherwise classified** : None.

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

**Substance/mixture** : Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation. There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### **Section 4. First aid measures**

**Description of necessary first aid measures**

- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention if you feel unwell.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if adverse health effects persist or are severe.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None identified.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
ammonia  
Avoid breathing dusts, vapors or fumes from burning materials.  
In case of inhalation of decomposition products in a fire, symptoms may be delayed.

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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

- Remark** : Non-flammable.
- Remark** : None.

## Section 6. Accidental release measures

### 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. Put on appropriate personal protective equipment.

- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 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).

### Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in

**Large spill**

- an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- : Stop leak if without risk. Move containers from spill area. 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 container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

**Precautions for safe handling****Protective measures**

- : Put on appropriate personal protective equipment (see Section 8).

**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. See also Section 8 for additional information on hygiene measures.

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

- : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Bund storage facilities to prevent soil and water pollution in the event of spillage.

## Section 8. Exposure controls/personal protection

**Control parameters****Occupational exposure limits**

None.

**Appropriate engineering controls**


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

**Environmental exposure controls**

- : 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.

**Individual protection measures****Hygiene measures**

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. A washing facility or

- Eye/face protection** : water for eye and skin cleaning purposes should be present. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.  
> 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : In case of inadequate ventilation wear respiratory protection.
- Personal protective equipment (Pictograms)** : 

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid
- Color** : Colorless.
- Odor** : slight, ammoniacal
- Odor threshold** : Not determined.
- pH** : 9 - 10
- Melting/freezing point** : -11.5 °C (11.30 °F)
- Boiling/condensation point** : 100 °C  
(212.00 °F)
- Sublimation temperature** : Not determined.
- Flash point** : Not applicable
- Evaporation rate** : Not determined.
- Flammability** : Non-flammable.
- Lower and upper explosive (flammable) limits** : **Lower:** Not determined.  
**Upper:** Not determined.
- Vapor pressure** : Not determined.
- Density** : 1.09 g/cm<sup>3</sup>
- Relative density** : Not determined.
- Solubility** : Not determined.
- Solubility in water** : > 100 g/l
- Partition coefficient: n-octanol/water** : Not determined.
- Auto-ignition temperature** : Not determined.
- Decomposition temperature** : Not determined.

<b>Viscosity</b>	:	<b>Dynamic:</b> 1.4 mPa.s @ 20 °C (68.00 °F)
	:	<b>Kinematic:</b> Not determined.
<b>Explosive properties</b>	:	None.
<b>Oxidizing properties</b>	:	None.

## Section 10. Stability and reactivity

<b>Reactivity</b>	:	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	:	The product is stable.
<b>Possibility of hazardous reactions</b>	:	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	:	Avoid contamination by any source including metals, dust and organic materials.
<b>Incompatible materials</b>	:	Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.
<b>Remark</b>	:	Reactive or incompatible with the following materials: Oxidizing agents acids alkalis Nitrites and nitrates
<b>Hazardous decomposition products</b>	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

<b>Conclusion/Summary</b>	:	No known significant effects or critical hazards.
---------------------------	---	---

#### Irritation/Corrosion

#### **Conclusion/Summary**

<b>Skin</b>	:	No known significant effects or critical hazards.
<b>Eyes</b>	:	No known significant effects or critical hazards.
<b>Respiratory</b>	:	No known significant effects or critical hazards.

#### Sensitization

#### **Conclusion/Summary**

<b>Skin</b>	:	No known significant effects or critical hazards.
<b>Respiratory</b>	:	No known significant effects or critical hazards.

#### Mutagenicity

<b>Conclusion/Summary</b>	:	No known significant effects or critical hazards.
---------------------------	---	---

**Carcinogenicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Reproductive toxicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Teratogenicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Specific target organ toxicity (single exposure)**

No known significant effects or critical hazards.

**Specific target organ toxicity (repeated exposure)**

No known significant effects or critical hazards.

**Aspiration hazard**

No known significant effects or critical hazards.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Potential chronic health effects**

**Conclusion/Summary** : No known significant effects or critical hazards.

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.

- Developmental effects : No known significant effects or critical hazards.  
 Fertility effects : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact : No specific data.  
 Inhalation : No specific data.  
 Skin contact : No specific data.  
 Ingestion : No specific data.

**Numerical measures of toxicity**

Acute toxicity estimates  
 Not available.

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

- Conclusion/Summary : No known significant effects or critical hazards.

**Persistence/degradability**

- Conclusion/Summary : No known significant effects or critical hazards.

**Bioaccumulative potential**

- Conclusion/Summary : No known significant effects or critical hazards.

**Mobility in soil**

- Soil/water partition coefficient (KOC) : Not available.  
 Mobility : This product may move with surface or groundwater flows because its water solubility is: high  
 Other adverse effects : No known significant effects or critical hazards.

**Section 13. Disposal considerations****Product**

- Methods of disposal : 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



**United States - RCRA Acute hazardous waste "P" List:**

Not listed

**United States - RCRA Toxic hazardous waste "U" List:**

Not listed

**Section 14. Transport information****Regulation: UN Class**

14.1 UN number Not regulated.

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards No.

14.6 Additional information  
Environmental hazards : No.**Regulation: IMDG**

14.1 UN number Not regulated.

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards

14.6 Additional information

**Regulation: IATA**

14.1 UN number Not regulated.

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards

14.6 Additional information

**Regulation: DOT Classification**

14.1 UN number Not regulated.

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards No.

14.6 Additional information

**Environmental hazards** : No.

**Regulation: TDG Class**

**14.1 UN number** : Not regulated.

**14.2 UN proper shipping name**

**14.3 Transport hazard class(es)**

**14.4 Packing group**

**14.5 Environmental hazards** : No.

**14.6 Additional information**  
**Environmental hazards** : No.

**Special precautions for user** : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.'

**IMSBC** : Not applicable.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**Proper shipping name** : Urea solution

**Ship type** : 3

**Pollution category** : Z

**Section 15. Regulatory information**

**United States**

**U.S. Federal regulations** :

- United States - TSCA 12(b) - Chemical export notification:** None of the components are listed.
- United States - TSCA 4(a) - Final Test Rules:** Not listed
- United States - TSCA 4(e) - ITC Priority list:** Not listed
- United States - TSCA 4(a) - Proposed test rules:** Not listed
- United States - TSCA 4(f) - Priority risk review:** Not listed
- United States - TSCA 5(a)2 - Final significant new use rules:** Not listed
- United States - TSCA 5(a)2 - Proposed significant new use rules:** Not listed
- United States - TSCA 5(e) - Substances consent order:** Not listed
- United States - TSCA 6 - Final risk management:** Not listed
- United States - TSCA 6 - Proposed risk management:** Not listed
- United States - TSCA 8(a) - Comprehensive assessment report (CAIR):** Not listed
- United States - TSCA 8(a) - Chemical risk rules:** Not listed
- United States - TSCA 8(a) - Dioxin/Furane precursor:** Not listed
- United States - TSCA 8(a) - Chemical Data Reporting (CDR):** Not determined

**United States - TSCA 8(a) - Preliminary assessment report (PAIR):** Not listed  
**United States - TSCA 8(c) - Significant adverse reaction (SAR):** Not listed  
**United States - TSCA 8(d) - Health and safety studies:** Not listed  
**United States - EPA Clean water act (CWA) section 307 - Priority pollutants:** Not listed  
**United States - EPA Clean water act (CWA) section 311 - Hazardous substances:** Listed Ammonia  
**United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances:** Not listed  
**United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances:** Not listed  
**United States - Department of commerce - Precursor chemical:** Not listed

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :** Not listed  
**Clean Air Act Section 602 Class I Substances :** Not listed  
**Clean Air Act Section 602 Class II Substances :** Not listed  
**DEA List I Chemicals (Precursor Chemicals) :** Not listed  
**DEA List II Chemicals (Essential Chemicals) :** Not listed

**SARA 302/304**

**SARA 304 RQ :** 111111.1 lbs

**SARA 311/312**

**Classification :** Not applicable.  
 No products were found.

**State regulations**

**Massachusetts :** None of the components are listed.  
**New York :** None of the components are listed.  
**New Jersey :** None of the components are listed.  
**Pennsylvania :** None of the components are listed.

**California Prop. 65**

This product contains a chemical (or chemicals) known to the State of California to cause cancer and birth defects or other reproductive harm.

**International lists**

**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.  
**Korea inventory:** All components are listed or exempted.  
**Japan inventory:** All components are listed or exempted.  
**China inventory (IECSC):** All components are listed or exempted.  
**Australia inventory (AICS):** All components are listed or exempted.

Canada inventory (DSL and NDSL): All components are listed or exempted.  
 United States inventory (TSCA 8b): All components are listed or exempted.  
 EC INVENTORY (EINECS/ELINCS): All components are listed or exempted.

Safety, health and environmental regulations specific for the product : No known other specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	-	0
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

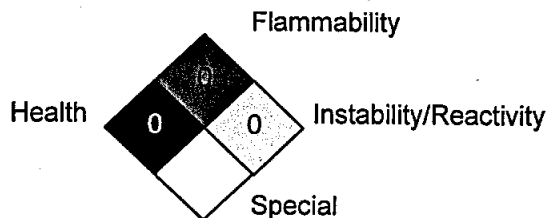
The customer is responsible for determining the PPE code for this material.

#### Chronic toxicity:

- : No data available.

\* : Carcinogen, Target organs, Reproductive effects, Sensitizer to lungs

### National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### Key to abbreviations

- : ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- bw = Body weight
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 NOHSC - National Occupational Health and Safety Commission  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons  
 UN = United Nations

**References**

- : EU REACH IUCLID5 CSR.  
 National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.  
 IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.

**History**

**Date of printing** : 12/22/2014  
**Date of issue/Date of revision** : 11/25/2014  
**Date of previous issue** : 02/12/2014  
**Version** : 1.1  
**Prepared by** : Yara Product Classifications & Regulations.

Indicates information that has changed from previously issued version.

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



# Safety Data Sheet

Issue Date: 22-Oct-2012

Revision Date: 26-June-2015

Version 1

## 1. IDENTIFICATION

### Product Identifier

Product Name LUBRIGUARD™ SKYBLUE™ DEF

### Other means of identification

SDS # LUB-004

CAS # Mixture

Product Use Diesel Exhaust NOx Reducing Agent

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

#### Supplier Address

Warren Oil Company  
915 E. Jefferson Ave.  
West Memphis, AR 72301

### Emergency Telephone Number

Company Phone Number 1-800-428-9284

Emergency Telephone (24 hr) CHEMTREC 1-800-424-9300 (North America) 1-703-527-3887 (International)

## 2. HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

Classification (GHS-US)

Not classified

### Label Elements

GHS-US Labeling No labeling applicable

### Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

Not applicable

### Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	67.5	Not classified
Urea	(CAS No) 57-13-6	32.5	Not classified

## 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.
- Ingestion:** Rinse mouth. DO NOT induce vomiting. Obtain medical attention.

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

- General:** Not expected to present a significant hazard under anticipated conditions of normal use.
- Inhalation:** Prolonged exposure to liquid may cause a mild irritation.
- Skin Contact:** May cause mild skin irritation.
- Eye Contact:** Prolonged exposure to liquid may cause a mild 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 exposed or concerned, get medical advice and attention.

**5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media** Ingestion is likely to be harmful or have adverse effects.
- Unsuitable extinguishing media** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**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:** Use water spray or fog for cooling exposed containers.
- Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.
- Hazardous Combustion Products:** Oxides of Carbon, Nitrogen, Ammonia

**Reference to Other Sections**

Refer to Section 9 for flammability properties.

**6. ACCIDENTAL RELEASE MEASURES**

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

**General Measures:** Avoid breathing (vapor, mist, spray). Avoid prolonged contact with eyes, skin and 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.
- Emergency Procedures:** Stop leak if safe to do so. Ventilate area.

**Environmental Precautions**

Prevent entry to sewers and public waters. Contact competent authorities after a spill.

**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.

**Reference to Other Sections**

See Section 8, Exposure Controls and Personal Protection.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

**Additional Hazards When Processed:** When heated to decomposition, emits toxic fumes.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safe 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 extremely high or low temperatures, incompatible materials.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Alkalis.

**Specific End User(s)**

Diesel Exhaust NOx Reducing Agent

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**

No additional information available.

**Exposure Controls**

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** In case of splash hazard: safety glasses



**Materials for Protective Clothing:** Not applicable.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** In case of splash hazard: chemical goggles or safety glasses.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

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



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Colorless, clear
<b>Odor:</b>	Slight Ammonia
<b>Odor Threshold:</b>	Not available
<b>pH:</b>	9.8 – 10
<b>Evaporation Rate:</b>	Not available
<b>Melting Point:</b>	Not available
<b>Freezing Point:</b>	-12°C (11°F)
<b>Boiling Point:</b>	104°C (219°F)
<b>Flash Point:</b>	Not available
<b>Auto-ignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Flammability (solid, gas):</b>	Not available
<b>Lower Flammable Limit:</b>	Not available
<b>Upper Flammable Limit:</b>	Not available
<b>Vapor Pressure:</b>	Not available
<b>Relative Vapor Density at 20°C:</b>	Not available
<b>Relative Density:</b>	Not available
<b>Specific gravity / density:</b>	9.0909 lbs. / USG – 4.13 kg / 3.785L @ 20°C (68°F)
<b>Specific Gravity:</b>	1.087-1.093 @ 20°C (68°F)
<b>Solubility:</b>	100%
<b>Partition Coefficient: N-Octanol/ Water :</b>	Not available
<b>Viscosity:</b>	Not available
<b>Explosion Data – Sensitivity to Mechanical Impact:</b>	Not expected to present an explosion hazard due to mechanical impact.
<b>Explosion Data – Sensitivity to Static Discharge:</b>	Not expected to present an explosion hazard due to static discharge.

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Hazardous reactions will not occur under normal condition.
<b>Chemical Stability:</b>	Stable under recommended handling and storage conditions (see Section 7).
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization will not occur.
<b>Conditions to Avoid:</b>	Extremely high or low temperatures. Incompatible materials.
<b>Incompatible Materials:</b>	Strong acids. Strong bases. Strong oxidizers. Alkalis.
<b>Hazardous Decomposition Products:</b>	Nitrogen oxides. Irritating fumes. Ammonia. Carbon oxides. (CO, CO <sub>2</sub> )

## 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects – Product

<b>Acute Toxicity:</b>	Not classified
<b>LD50 and LC50 Data:</b>	Not available
<b>Skin Corrosion/Irritation:</b>	Not classified
<b>pH:</b>	9.8 – 10
<b>Respiratory or Skin Sensitization:</b>	Not classified
<b>Germ Cell Mutagenicity:</b>	Not classified
<b>Teratogenicity:</b>	Not classified
<b>Carcinogenicity:</b>	Not classified
<b>Specific Target Organ Toxicity (Single Exposure):</b>	Not classified
<b>Aspiration Hazard:</b>	Not classified
<b>Symptoms/Injuries After Inhalation:</b>	Prolonged exposure to liquid may cause a mild irritation.
<b>Symptoms/Injuries After Skin Contact:</b>	May cause mild skin irritation.

**Symptoms/Injuries After Eye Contact:** Prolonged exposure to liquid may cause a mild 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>	
LD50 Oral Rat	8471 mg/kg

**12. ECOLOGICAL INFORMATION**

**Toxicity**

No additional information available

<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))

**Persistence and Degradability**

<b>Diesel Exhaust Fluid</b>	
Persistence and Degradability	Not established

**Bioaccumulative Potential**

<b>Diesel Exhaust Fluid</b>	
Bioaccumulative Potential	Not established
<b>Urea (57-13-6)</b>	
BCF Fish 1	< 10
Log Pow	-1.59 (at 25°C)

**Mobility in Soil** Not available

**Other Adverse Effects**  
**Other Information:** Avoid release to the environment

**Other adverse effects** Not available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

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

**14. TRANSPORT INFORMATION**

**In Accordance with DOT:** Not regulated for transport  
**In Accordance with IMDG:** Not regulated for transport  
**In Accordance with IATA:** Not regulated for transport  
**In Accordance with TDG:** Not regulated for transport

**15. REGULATORY INFORMATION**

**US Federal Regulations**

<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	

**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	

**Canadian Regulations**

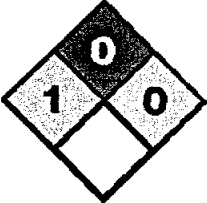
<b>Diesel Exhaust Fluid</b>	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

<b>Water (7732-18-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

<b>Urea (57-13-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPF) and the SDS contains all of the information required by CPR.

**16. OTHER INFORMATION**

<b>Other Information:</b>	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.	
<b>NFPA Health Hazard:</b>	1 – Exposure could cause irritation but only minor residual injury even if not treatment is given	
<b>NFPA Fire Hazard:</b>	0 – Materials that will not burn.	
<b>NFPA Reactivity:</b>	0 – Normally stable, even under fire exposure conditions, and are not reactive with water.	
<b>HMIS III Rating</b>		
<b>Health:</b>	1 Slight Hazard – Irritation or minor reversible injury possible	
<b>Flammability:</b>	0 Minimal Hazard	
<b>Physical:</b>	0 Minimal Hazard	

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

<b>Issue Date:</b>	22-Oct-2012
<b>Revision Date:</b>	27-April-2015
<b>Revision Note:</b>	New format

End of Safety Data Sheet


# Safety Data Sheet

Revision Issued: 05/20/2015


Supersedes: 03/01/2014

First Issued: 6/15/2010

## Section I – Product and Company Identification

Product Name:	 <b>VICTORYBLUE</b>
Common Name:	Urea, Liquor 32.5%
Company Name:	Victory Blue, LLC
Address:	1670 Keller Parkway Suite 245, Keller, TX 76248
Phone Number:	(817) 337-3311
Email:	customerservice@govictoryblue.com www.govictoryblue.com
Emergency Phone Number:	Chemtrec: (800) 424-9300
Recommended Use:	NOx Abatement Solution
Recommended Restrictions:	None Known

## Section II – Hazard Identification

Hazard Classification:	Health Category 1, Non-flammable Liquid		
Signal Word:	<b>CAUTION!</b>		
Hazard Statement:	WARNING: May cause skin irritation and eye irritation.		
Pictogram:			
Precautionary Statements:	Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.		
Potential Acute Health Effects:	<b>Skin:</b> Repeated or prolonged contact may cause reddening, itching and inflammation. <b>Ingestion:</b> A single dose of 100 grams has reportedly caused mild symptoms of Central Nervous System depression e. g. drowsiness and slow reflexes.		
Eyes and Skin:	<b>Eyes:</b> Liquid contact may irritate mildly. Mist contact may also irritate mildly. Contact with heated material may cause thermal burns. <b>Skin:</b> Liquid contact may irritate mildly with repeated or prolonged exposure.		
Inhalation:	In the unlikely event that mist is formed, respiratory tract irritation may occur.		
Ingestion:	A single dose of 100 grams has reportedly caused mild symptoms of Central Nervous System depression (e.g. drowsiness, slow reflexes, and slurred speech). May cause gastrointestinal disturbances (symptoms may include irritation, nausea, vomiting and diarrhea). Call a doctor if you fell unwell. Rinse mouth.		
Potential Chronic Health Effects:	No potential chronic effects known. Urea is a naturally occurring chemical in the body. It is an end product of protein metabolism and is excreted in the urine.		
CARCINOGENICITY LISTS	IARC Monograph: No	NTP: No	OSHA: No

### Section III – Composition / Information On Ingredients

Chemical Name	CAS No.	Exposure Limits								
		OSHA PEL		TLV – TWA		STEL		IDLH		% by Weight
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
Urea (CO(NH <sub>2</sub> ) <sub>2</sub> )	57-13-6		50		25		35		300	31 - 70
Water	7732-18-5	---None established---								30 - 69
Common Name:	Aqueous solutions of Urea (30%-70%)									
Synonym:	Urea Solution									
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.										

### Section IV – First Aid Measures

Eyes:	Check for and remove contact lenses. Promptly flush with water, continuing for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. If irritation persists, consult a physician immediately.
Skin:	Wash area of contact thoroughly with soap and water. Flush skin immediately with cold water. Take off contaminated clothing and launder clothing before reuse. Clean shoes thoroughly before use. If irritation persists, consult a physician immediately.
Ingestion:	Rinse mouth. Do not induce vomiting unless directed by medical personnel. Keep affected person warm and treat for shock. A single dose of 100 grams has reportedly caused mild symptoms of Central Nervous System depression (drowsiness, etc.). Consult a physician immediately if you feel unwell.
Inhalation:	Remove affected person from source of exposure. If not breathing, ensure open airway and initiate CPR. If breathing is difficult, administer oxygen by trained personnel; seek medical attention. Loosen tight clothing such as belts or ties.
Physician:	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.

### Section V – Fire Fighting Measures

Flash Point:	Not Applicable	Auto ignition Temperature:	Not Applicable
Lower Explosive Limit:	Not Applicable	Upper Explosive Limit:	Not Applicable
Flammability of Product:	Non-Flammable, however in a fire or if heated a pressure increase will occur and the container may burst.		
Special exposure hazards:	See Hazardous Decomposition Products, Section X.		
Extinguishing Media:			
Suitable:	Use an extinguishing agent suitable for the surrounding fire. Water recommended. All standard agents are acceptable.		
Not Suitable:	None known.		
Special Firefighting Procedures and Equipment:	Wear sufficient self-contained breathing apparatus approved by NIOSH. Use water spray to keep containers cool.		

### Section VI – Accidental Release Measures

Personal Precautions:	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 P.P.E (see Section 8).
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802. In case of accident or road spill notify: CHEMTREC IN USA at 800-424-9300; CANUTEC in Canada at 613-996-6666 CHEMTREC in other countries at (International code) 1-703-527-3887.
Small Spill:	Promptly absorb with commercial or other absorbent (to include sand) and shovel into container for disposal. Dilute with water and mop up and pour into container for disposal via licensed waste contractor.
Large Spill:	Stop leak if without risk. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage using commercial or other absorbent (to include sand) and place in container for disposal according to local regulations. Dispose of via a licensed waste contractor.
Comments:	See Section XIII for disposal information and Section XV for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

## Section VII – Handling and Storage

<b>Handling:</b>	Avoid contact with eyes. Avoid prolonged or repeated contact with skin or clothing. Avoid breathing mist. Eating, drinking, or smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash face and hands before eating, drinking, or smoking. Remove contaminated clothing and P.P.E. before entering eating areas. Do not ingest. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor or mist. Keep in original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container.
<b>Storage:</b>	Protect from physical damage. This material is vented in storage. Avoid containers, piping or fittings made of iron, brass, bronze, or other copper-bearing alloys, or galvanized metal. Store original container protected from sunlight in a dry, cool, and well ventilated area away from incompatible materials and food and drink. Do not store in unlabeled containers.

## Section VIII – Exposure Controls/ Personal Protection

### United States and Canada

Chemical Name	CAS No.	Exposure Limits								% by Weight
		OSHA PEL		TLV – TWA (8 hours)		STEL		IDLH		
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
Urea ( CO(NH <sub>2</sub> ) <sub>2</sub> )	57-13-6		50	10	25		35		300	31 - 70
Water	7732-18-5	--None established--								30 - 69
<b>Engineering Controls:</b>	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.									
<b>Hygiene measures:</b>	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.									
<b>Personal Protection:</b>										
<b>Respiratory Protection:</b>	<b>Not generally required.</b> If misty condition prevails, wear a NIOSH approved mist respirator. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.									
<b>Hand Protection:</b>	<b>Impervious gloves.</b> Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is									
<b>Eye Protection:</b>	<b>Wear chemical safety goggles or face shield.</b> Do NOT wear contact lenses. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.									
<b>Protective Clothing and Skin Protection:</b>	<b>Not generally required.</b> Personal protective equipment for the body should be selected based on the task being performed and the risks involved.									

## Section IX – Physical and Chemical Properties

<b>Appearance/Physical State/Color/Odor:</b>	This material at normal conditions is colorless liquid; mildly ammonia type odor.	<b>Boiling Point (50% urea solution):</b>	106°C
<b>Melting Point/Range:</b>	Salt Out Temperature: 50% @ 63°F 17°C 65% @ 115°F 46°C 70% @ 135°F 57°C	<b>Specific Gravity:</b>	50%: 1.14 @ 75°F 65%: 1.165 @ 135°F 70%: 1.175 @ 155°F 32.5%: 1.090 @ 68°F (20°C)
<b>Solubility in Water:</b>	100%	<b>Vapor Pressure (mmHg):</b>	220 mmHg at 20°C
<b>Boiling Point Range:</b>	Not Applicable	<b>Molecular Weight:</b>	60.07 (100% Urea)
<b>Vapor Density:</b>	1.07 g/cm <sup>3</sup>	<b>% Volatiles:</b>	Not Applicable
<b>(lb./gal): Density:</b>	9.2 - 9.7 @ 100°F (40-70%) 32.78°C 9.5 @ 75°F (Foliar 50) 23.89°C 9.7 @ 115°F (65% Agricultural) 46.12°C 9.7 @ 145°F (70% Industrial) 62.78°C 9.09 @ 68°F 20°C (32.5%)	<b>Decomposition Temperature</b>	ABOVE 266°F
<b>pH:</b>	Typically 10.0 [7.2 (100 g/L)]	<b>Freezing Point:</b>	See Melting Point
<b>Flash Point</b>	Not Applicable (Does not Sustain combustion)	<b>Partition Coefficient:</b>	Not available
<b>Flammability:</b>	Not Applicable (Does not Sustain combustion)	<b>Viscosity:</b>	Not Applicable
<b>Explosive Limits:</b>	Not Applicable	<b>Evaporation Rate:</b>	Not Applicable
<b>Auto Ignition Temperature:</b>	Not Applicable (Does not Sustain combustion)		

## Section X – Stability and Reactivity

<b>Reactivity:</b>	Materials to avoid: SODIUM NITRITE, PHOSPHORUS PENTACHLORIDE, and NITROSYLPERCHLORATE. May react with NITRATES, ALKALIES, OXIDIZING AGENTS, HYPOCHLORITE, ALDEHYDES, INORGANIC ACIDS, ALEFINS, and POLYMERIZABLE ESTERS. CORROSIVE TO COPPER and COPPER ALLOYS.
<b>Chemical Stability:</b>	This product is stable under normal ambient conditions of temperature and pressure.
<b>Hazardous Polymerization:</b>	Will not occur
<b>Conditions to Avoid:</b>	The evaporation residue should not be heated above its melting point, 133°C: Decomposes to hazardous products.
<b>Materials to Avoid (Incompatibles):</b>	Avoid contact with strong oxidizers (e.g. chlorine, peroxide, chromates, nitric acid, perchlorates, concentrated oxygen, and permanganates) which can generate heat, fire or explosions or release toxic fumes.
<b>Hazardous Decomposition Products:</b>	If the evaporation residue is heated to the melting point or above, Ammonia and Carbon Dioxide are formed. Some Ammonia and CO <sub>2</sub> are given off on heating the aqueous product. Under some conditions of pressure and temperature, some Ammonium Cyanate has also been reported.

## Section XI – Toxicological Information

<b>Significant Routes of Exposure:</b>	Eyes, Digestive Tract, Respiratory Tract, Skin	
<b>Toxicity to Animals:</b>	<b>Acute Oral Toxicity:</b>	(rat): LD <sub>50</sub> = 14,300 – 15,000 mg/kg; (mouse) 11,500 – 13,000 mg/kg.; (cattle): LD <sub>50</sub> = 510 mg/kg
	<b>Acute Inhalation Toxicity:</b>	No data available.
	<b>Acute Toxicity: Other Routes:</b>	No data available
	<b>Acute Dermal Toxicity:</b>	No data available
	<b>Repeated Dose Toxicity:</b>	(rat) 24 weeks; dermal - NOAEL = 40% in ointment
	<b>Eye &amp; Skin Irritation/Corrosion:</b>	Skin Irritation/Corrosion: Mouse – Not irritating (10% solution) Eye Irritation/Corrosion: Rabbit – Not irritating (50% solution)
<b>Special Remarks on Toxicity to Animals:</b>	Not found to be toxic by oral exposure as defined by OSHA. Based on toxicity data for another compound (i.e., ammonium nitrate), not expected to be toxic by dermal and inhalation exposure as defined by OSHA.	
	<b>Developmental Toxicity/Teratogenicity:</b>	Not teratogenic.
	<b>Bacterial Genetic Toxicity In-Vitro: Gene Mutation:</b>	( <i>Salmonella typhimurium</i> ) – Bacterial reverse mutation assay-Negative; Chinese Hamster -- Chromosomal aberration test – Positive (very high dose); Mouse – Mouse lymphoma TK locus assay - Positive (very high dose).
	<b>Non-Bacterial Genetic Toxicity In-Vitro: Chromosomal Aberration:</b>	Mouse – Bone marrow cytogenetic test – Positive (extremely high dose).
	<b>Toxicity to Reproduction:</b>	No toxic effects on mouse gonads up to 6,750-mg/kg day. No toxic effects on rat gonads up to 2,250-mg/kg day.
	<b>Carcinogenicity:</b>	No data available
<b>Other Effects on Humans:</b>	May cause gastrointestinal disturbances (symptoms may include irritation, nausea, vomiting and diarrhea).	
<b>Special Remarks on Chronic Effects on Humans:</b>	No chronic effects known.	
<b>Special Remarks on Other Effects on Humans:</b>	May be irritating at > 10% concentration; not a skin sensitizer. Despite extensive medical use, no significant side effects on humans have been noted.	

Section XII – Ecological Information		
Eco toxicity	EPA Ecological Toxicity rating :	
	Acute Toxicity to Fish:	96 -h: ( <i>Barillius bama</i> ) LC <sub>50</sub> (96 hr.) > 9,100 mg/L.
	Chronic Toxicity to Fish:	No data available
	Acute Toxicity to Aquatic Invertebrates:	( <i>Daphnia magna</i> ): 24 - h EC <sub>50</sub> = > 10,000 mg/L. [DIN 38412 Part II modified]
	Chronic Toxicity to Aquatic Invertebrates:	No data available
	Acute Toxicity to Aquatic Plants:	( <i>Scenadesmus quadricauda</i> ) 192-hr cell multiplication inhibition test-TT > 10,000 mg/L. [Call multiplication inhibitor test]
	Toxicity to Other Non-Mammalian Terrestrial Species:	(Pigeon)-Subcutaneous-LDLO=16,000 mg/kg.
	Toxicity to Terrestrial Plants:	No data available
Environmental Fate:	Stability in Water:	T <sub>1/2</sub> > 1 year. Since Urea is a fertilizer, it may promote eutrophication in waterways. Non-toxic to aquatic organisms as defined by USEPA.
	Stability in Soil:	( <i>Glycine max</i> (L.) Merr.: Leaf tip necrosis [7 day exposure to 9 mg urea/leaf])
	Transport and Distribution:	Transport: 0.16% in air; 99.84% in water [Calculated fugacity Level 1 type]
Toxicity:	No known toxicity	
Degradation Products:	Biodegradation:	Ultimately biodegradable. [OECD Guideline 302B]
	Photo degradation:	No data available

Section XIII – Disposal Considerations	
Product Disposal:	Disposal of Urea may be subject to federal, state or local regulations. 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.
General Comments:	Users of this product should review their operations in terms of applicable federal, state and local laws and regulations. Consult with appropriate regulatory agencies before discharging or disposing of waste material. The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Empty containers or liners may retain some product residues.
Sewer Statement:	Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.


Section XIV – Transportation Information		
	USDOT	TDG - Canada
Proper Shipping Name:	Not regulated	Not regulated
Hazard Class:		
Identification Number:		
Packing Group (Technical Name):		
Labeling / Placarding:		
Authorized Packaging:		
Notes:		
European Transportation:		



## Section XV – Regulatory Information

<b>UNITED STATES: SARA Hazard Category:</b>	This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of the Superfund Amendment and reauthorization Act of 1986 (SARA title III) and is considered, under applicable definitions, to meet the following categories:									
	<b>Fire:</b>	No	<b>Pressure Generating:</b>	No	<b>Reactivity:</b>	No	<b>Acute:</b>	Yes	<b>Chronic:</b>	No
	<b>40 CFR Part 355 - Extremely Hazardous Substances:</b>						None Applicable			
	<b>40 CFR Part 370 - Hazardous Chemical Reporting:</b>						None Applicable			
<b>All intentional ingredients listed on the TSCA inventory.</b>										
<b>SARA Title III Information:</b>	This product contains the following substances subject of the reporting requirements of Title III (EPCRA) of the Superfund amendments and Reauthorization Act of 1986 and 40 CFR Part 372:									
<b>Chemical</b>	<b>CAS NO.</b>	<b>Percent by Weight</b>	<b>CERCLA RQ (lbs.)*</b>	<b>SARA (1986) Reporting</b>						
				<b>311</b>	<b>312</b>	<b>313</b>				
Urea	57-13-6	97.5 - 99.7	NA	Yes	Yes	NA				
<b>CERCLA/Superfund, 40 CFR Parts 117, 302:</b>	If this product contains components subject to substances designated as CERCLA reportable Quantity (RQ) Substances, it will be designated in the above table with the RQ value in pounds. If there is a release of RQ Substance to the environment, notification to the National Response Center, Washington D.C. (1-800-424-8802) is required.									
<b>CANADA:</b>	<b>WHMIS Hazard Symbol and Classification:</b>				This product is not WHMIS controlled					
	<b>Ingredient Disclosure List:</b>				This product does contain ingredient(s) on this list.					
	<b>Environmental Protection:</b>				All intentional ingredients are listed on the DSL (Domestic Substance List).					
<b>EINECS#:</b>	(Urea) 200-315-5									
<b>California: Prop 65:</b>	This is not a chemical known to cause cancer, nor is it listed.									

## Section XVI – Other Information

<b>NFPA Hazard Ratings:</b>	0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme	Health: 1 Flammability: 0 Instability: 0 Special Hazards: 0	
<b>COMMENTS:</b>	This product is TSE/BSE (Transmissible Spongiform Encephalopathy/Bovine Spongiform Encephalopathy) free. There are no animal constituents used in the manufacture of Urea, liquor for Victory Blue LLC. Our product is created through a chemical process.		
<b>Section(s) changed since last revision:</b>	Changed format to comply with OSHA GHS requirements. Now named Safety Data Sheet (SDS) formerly named Material Safety Data Sheet (MSDS). Changed Date: 20 MAY 2015		
Although the information contained is offered in good faith, SUCH INFORMATION IS EXPRESSLY GIVEN WITHOUT ANY WARRANTY (EXPRESS OR IMPLIED) OR ANY GUARANTEE OF ITS ACCURACY OR SUFFICIENCY and is taken at the user's sole risk. User is solely responsible for determining the suitability of use in each particular situation. Victory Blue LLC specifically DISCLAIMS ANY LIABILITY WHATSOEVER FOR THE USE OF SUCH INFORMATION, including without limitation any recommendation which user may construe and attempt to apply which may infringe or violate valid patents, licenses, and/or copyright.			