Safety Data Sheet According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations Date of Issue: 03/30/2020

SECTION 1: IDENTIFICATION

| SECTION 1: IDENTIFICATION | |
|---|--|
| 1.1. Product Identifier | |
| Product Form: Mixture | |
| Product Name: BlueRibbon DEF | |
| 1.2. Intended Use of the Product | |
| Use of the Substance/Mixture: Diesel ex | haust fluid. |
| 1.3. Name, Address, and Telepho | ne of the Responsible Party |
| Company | |
| Blue Ribbon DEF | |
| 1807 E Fox Farm Rd. | |
| Cheyenne, WY 82007 | |
| 307-632-7616 | |
| 1.4. Emergency Telephone Numb | er |
| Emergency Number | : 1-800-633-8253 (PERS) |
| SECTION 2: HAZARDS IDENTIFICAT | ION |
| 2.1. Classification of the Substand | ce or Mixture |
| Aquatic Acute 3 H402 | |
| Full text of hazard classes and H-stateme | nts : see section 16 |
| 2.2. Label Elements | |
| GHS-US Labeling | |
| Hazard Statements (GHS-US) | : H402 - Harmful to aquatic life. |
| Precautionary Statements (GHS-US) | : P273 - Avoid release to the environment. |
| | P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations. |
| 2.2 Other Hereite | |

2.3. Other Hazards

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

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

| Name | Synonyms | Product Identifier | % | GHS US classification |
|---------|--|---------------------|---------|---|
| Water | AQUA | (CAS-No.) 7732-18-5 | 60 - 68 | Not classified |
| Urea | Carbamide / Carbonyl diamide / UREA / Carbonic acid diamide | (CAS-No.) 57-13-6 | 32 - 40 | Comb. Dust |
| Ammonia | Ammonia, anhydrous / Ammonia (anhydrous) / Free ammonia / Anhydrous ammonia / Ammonia anhydrous / Gaseous ammonia / AMMONIA / Non-ionic ammonia / Ammonia Solutions | (CAS-No.) 7664-41-7 | < 0.1 | Flam. Gas 2, H221 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 |

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

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).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Version: 1.0

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects. Abdominal pain, nausea. Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Non-combustible, substance itself does not burn but may decompose upon heating.

Explosion Hazard: Product is not explosive. Containers may rupture when exposed to excessive heat. Contains substances that are combustible dusts. If dried and allowed to accumulate, may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

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

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. **Hazardous Combustion Products:** Nitrogen oxides. Ammonia.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Materials 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. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Contains substances that are combustible dusts. If dried and allowed to accumulate, may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions. Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. Use appropriate personal protective equipment (PPE).

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

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

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Nitric acid. Gallium. Perchlorates. Alkalis and caustic products.

7.3. Specific End Use(s)

Diesel exhaust fluid.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

| Urea (57-13-0 | 5) | |
|---------------|---------------------------------------|----------------------|
| USA AIHA | WEEL TWA (mg/m³) | 10 mg/m ³ |
| Ammonia (76 | 564-41-7) | |
| USA ACGIH | ACGIH TWA (ppm) | 25 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 35 ppm |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 18 mg/m ³ |
| USA NIOSH | NIOSH REL (TWA) (ppm) | 25 ppm |
| USA NIOSH | NIOSH REL (STEL) (mg/m ³) | 27 mg/m ³ |
| USA NIOSH | NIOSH REL (STEL) (ppm) | 35 ppm |
| USA IDLH | US IDLH (ppm) | 300 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 35 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 50 ppm |

8.2. Exposure Controls

Appropriate Engineering Controls

Personal Protective Equipment

Materials for Protective Clothing

- : Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.
- : Gloves. Protective clothing. Protective goggles.



- : Chemically resistant materials and fabrics.
- : Wear protective gloves.
- : Chemical safety goggles.
- : Wear suitable protective clothing.
- : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

Hand Protection

Eye and Face Protection Skin and Body Protection

Respiratory Protection

: When using, do not eat, drink or smoke.

| SECTION 9: PHYSICAL AND CHEIVIICAL P | ROPERTIES |
|--|---------------------|
| 9.1. Information on Basic Physical and | Chemical Properties |
| Physical State | : Liquid |
| Appearance | : Colorless |
| Odor | : No data available |
| Odor Threshold | : No data available |
| рН | : No data available |
| Evaporation Rate | : No data available |
| Melting Point | : No data available |
| Freezing Point | : No data available |
| Boiling Point | : No data available |
| | |

MICAL DOODEDTIES

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Flash Point | : No data available |
|--|---------------------|
| Auto-ignition Temperature | : No data available |
| Decomposition Temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapor Pressure | : No data available |
| Relative Vapor Density at 20°C | : No data available |
| Relative Density | : No data available |
| Solubility | : No data available |
| Partition Coefficient: N-Octanol/Water | : No data available |
| Viscosity | : No data available |
| · · · · | |

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

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

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

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

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers. Nitric acid. Gallium. Perchlorates. Alkalis and caustic products.

10.6. Hazardous Decomposition Products: Nitrogen oxides. Ammonia.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

| Acute Toxicity (initialation). Not classified | |
|---|----------------------------------|
| Urea (57-13-6) | |
| LD50 Oral Rat 8471 mg/kg | |
| Ammonia (7664-41-7) | |
| LD50 Oral Rat | 350 mg/kg |
| LC50 Inhalation Rat | 5.1 mg/l (Exposure time: 1 h) |
| LC50 Inhalation Rat | 2000 ppm/4h (Exposure time: 4 h) |

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects. Abdominal pain, nausea.

Chronic Symptoms: None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

| Ecology - General | : Harmful to aquatic life. | |
|---------------------|---|--|
| Urea (57-13-6) | | |
| 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]) | |
| Ammonia (7664-41-7) | | |
| LC50 Fish 1 | 0.083 mg/l | |
| | | |

Safety Data Sheet

| According to Federal Register / Vol. 77, No. 58 / Monday, M | arch 26, 2012 / Rules ar | 1d Regulations |
|--|--|---|
| EC50 Daphnia 1 | 25 4 mg/l (Fx | posure time: 48 h - Species: Daphnia magna) |
| LC50 Fish 2 | 0.26 - 4.6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus) | |
| 12.2. Persistence and Degradabil | | <u>/ (</u> |
| BlueRibbon DEF | | |
| Persistence and Degradability | Not estab | alished |
| | | |
| 12.3. Bioaccumulative Potential BlueRibbon DEF | | |
| Bioaccumulative Potential | Not estab | aliched |
| | NOTESTAL | |
| Urea (57-13-6) | < 10 | |
| BCF Fish 1 | < 10 | |
| Log Pow | -1.59 (at 2 | 25 () |
| Ammonia (7664-41-7) | | 25.40 |
| Log Pow | -1.14 (at 2 | 25°C) |
| 12.4. Mobility in Soil | | |
| BlueRibbon DEF | | |
| Ecology - Soil | Not estab | blished. |
| 12.5. Other Adverse Effects | | |
| Other Information | | d release to the environment. |
| SECTION 13: DISPOSAL CONSIDER | ATIONS | |
| 13.1. Waste Treatment Methods | | |
| Waste Disposal Recommendations: Disposal Recommendations: Disposal Recommendations Disposal Recommendations Disposed Recommendation Statement Provide Recomment Provide Recommendation Statement Provi | oose of contents, | /container in accordance with local, regional, national, and internationa |
| regulations. | | |
| Additional Information: Container may | remain hazardov | us when empty. Continue to observe all precautions. |
| | e to the environr | ment. This material is hazardous to the aquatic environment. Keep out |
| of sewers and waterways. | | |
| SECTION 14: TRANSPORT INFORM | | |
| | | in accordance with certain assumptions at the time the SDS was |
| - | | hat may or may not have been known at the time the SDS was issued. |
| | Not regulated fo | · |
| | Not regulated fo | - |
| 14.3. In Accordance with IATA | Not regulated fo | r transport |
| SECTION 15: REGULATORY INFORM | ΜΑΤΙΟΝ | |
| 15.1. US Federal Regulations | | |
| Water (7732-18-5) | | |
| Listed on the United States TSCA (Toxic S | ubstances Contr | ol Act) inventory |
| Urea (57-13-6) | | |
| Listed on the United States TSCA (Toxic S | ubstances Contr | ol Act) inventory |
| Ammonia (7664-41-7) | | ······ |
| Listed on the United States TSCA (Toxic S | ubstances Contr | ol Act) inventory |
| Listed on the United States SARA Section | | |
| Subject to reporting requirements of Uni | | Section 313 |
| CERCLA RQ | | 100 lb |
| SARA Section 302 Threshold Planning Q | uantity (TPQ) | 500 lb |
| SARA Section 313 - Emission Reporting | | 1 % (includes anhydrous Ammonia and aqueous Ammonia from water |
| | | dissociable Ammonium salts and other sources, 10% of total aqueous |
| | | Ammonia is reportable under this listing) |
| 15.2. US State Regulations | | |
| Ammonia (7664-41-7) | | |
| U.S Massachusetts - Right To Know List | | |
| U.S New Jersey - Right to Know Hazard | | ist |

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| CETION 10. OTHER INFORMATION, INC. | LUDING DATE OF PREPARATION OR LAST REVISION |
|--|--|
| Date of Preparation or Latest Revision | : 03/30/2020 |
| Other Information | : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 |
| 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 Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| | |

| Aqualle Acule 5 | hazardous to the aquatic environment - Acute hazard category 5 |
|-------------------|--|
| Aquatic Chronic 2 | Hazardous to the aquatic environment - Chronic Hazard Category 2 |
| Comb. Dust | Combustible Dust |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Flam. Gas 2 | Flammable gases Category 2 |
| Skin Corr. 1B | Skin corrosion/irritation Category 1B |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H221 | Flammable gas |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H331 | Toxic if inhaled |
| H335 | May cause respiratory irritation |
| H400 | Very toxic to aquatic life |
| H402 | Harmful to aquatic life |
| H411 | Toxic to aquatic life with long lasting effects |

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.

SDS US (GHS HazCom)