

AUS40- Aqueous Urea Solution 40% (Marine)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacture/ Supplier: BlueOne Join Stock Company

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Product Name: BlueOne AUS40- Aqueous Urea Solution 40% (Marine)

Generic Name: Urea, Aqueous Solution

Chemical Family: Organic Salt Solution

Quality standard: ISO 18611-1

2. HAZARDS IDENTIFICATION

Physical Hazards: None Anticipated

Physical Form: Liquid

Appearance: Colorless, clear

Odor: None to slight ammonia

Hazard Rating NFPA 704M / HMIS:

No hazardous components identified per 29 CFR 1910.1200.

POTENTIAL HEALTH EFFECTS:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and burning. No harmful effects from skinabsorption have been reported.

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a lowdegree of toxicity by inhalation.



MATERIAL SAFETY DATA SHEET AUS40- Aqueous Urea Solution 40% (Marine)

Ingestion (Swallowing): No harmful effects reported from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the nose, throat and digestive tract, headaches, coughing, nausea, vomiting, and transient disorientation.

Cancer: Inadequate evidence available to evaluate the cancer hazard of this material.

Target Organs: No data available.

Developmental: Inadequate evidence available for this material.

Pre-Existing Medical Conditions: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS number	EC number	%
DI Water	7732-18-5	231-791-2	40-41
Urea	57-13-6	200-31 5-5	59-60

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consultan industrial hygienist or similar professional, or your local agencies, for further information.

4. FIRST AID MEASURES

- Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes withclean water. If symptoms persist, seek medical attention
- Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washingwith mild soap and water. If irritation or redness develops and persists, seek medical attention.
- Inhalation (Breathing): If respiratory develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygenshould be administered by qualified personnel. Seek immediate medical attention.
- Ingestion (Swallowing): First aid is not normally required; however, if swallowed and



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symptomsdevelop, seek medical attention.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: In case of fire, use water spray (fog), foam, dry chemical or CO2.

Specific Hazards:

- Non-flammable by decomposition product of carbon dioxide (CO2), carbon monoxide (CO), nitrogen oxides (NOx), ammonia (NH3).
- Ambient fire might occur hazard steam, and probably related Nitrogen Oxides is incurred once on fire.

Specific Fire Fighting Procedure:

- Move container away from fire area if it can be done without risk.
- Cool containers with water spray until well after the fire is out.
- Keep unnecessary people away, isolate hazard area and deny entry.

Specific Fire Fighting Equipment:

• Fire fighters should thermal protective clothing and self-contained breathing apparatus.

Fire fighters should not access airtight spaces without wearing self-contained breathing apparatus and thermal protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Stop the source of the release if it can be done without risk. Immediately isolate the hazard area and restrict access to authorized personnel only. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

To prevent spilled material from entering sewers, storm drains or natural watercourses, contain material with a dike or with appropriate absorbent materials such as sand, clay, soil or commercially available absorbent.

Place reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to Section 12 for appropriate disposal.



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7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 2 and 8). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

Storage: Keep container(s) tightly closed. Do not heat or contact with strong oxidizers. Use and store this material in cool, dry, well- ventilated areas. Do not store at temperatures below 40°F. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: If current ventilation practices are not adequate to minimize exposure, additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: Respiratory protection is not usually required. If significant spray or mist occurs, wear a NIOSH approved or equivalent dust respirator.

Skin: The use of gloves impermeable to the specific material handled is advised to prevent skin contact, possible irritation, and absorption (see glove manufacturer forinformation on permeability)

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: None to boiling

Flammable/Explosive Limits (%): Not Applicable



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Autoignition Temperature: Not Applicable

Appearance: Colorless, Clear Physical State: Liquid

Odor: None to slight ammonia

pH: 7.5 - 10

Vapor Pressure (mm Hg): Not Applicable

Vapor Density (air=1): 0.6 H2O, >1

Aerosol Boiling Point: >212°F

Crystallization Point: 35°F

Solubility in Water: 100%

Specific Gravity: 1.11

Evaporation Rate (nBuAc=1): <1

Bulk Density: 9.28lb/gaL

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of storage and handling.

Conditions To Avoid: None known

Incompatible Materials: Avoid contact with strong oxidizing agents such as chlorine (bleach), peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, and permanganates.

Contactcan generate heat, fire, explosions and release toxic fumes.

Hazardous Decomposition Products: If involved in a fire, oxides of carbon and nitrogen may be generated; exposure to heat may generate ammonia fumes.

Hazardous Polymerization: will not occur.

11. TOXICOLOGICAL INFORMATION

No definitive information available on carcinogenicity, mutagenicity, target organs or developmental toxicity.

12. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" or "characteristic" hazardous



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waste. Use resulting in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials consult state and local regulations regarding the proper disposal of this material.

Disposal: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D. As a non-hazardous liquid waste, it should be solidified with stabilizing agents such as sand, fly ash, or clay absorbent, so that no free liquid remains before disposal to an industrial waste landfill.

13. DISPOSAL CONSIDERATIONS

Method of disposal: Empty containers or liners may retain some product residues. Do not empty into drains; dispose of this material and its container in a safe way. Dispose of in accordance with all applicable local national regulations.

Hazardous waste: Disposal according to local regulations.

14. TRANSPORT INFORMATION

Transportation of dangerous goods

- Not regulated as dangerous goods.
- Not regulated as dangerous goods under IATA

15. REGULATORY INFORMATION

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

--None--

Warning: This material contains the following chemicals which are known to the State of Californiato cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 {CA Health & Safety Code Section 25249.5}

--None Known--

This material has not been identified as a carcinogen by NTP, IARC, or OSHA.

EPA {CERCLA) Reportable Quantity: --None--



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16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date: 01/07/2020 Edit date: 02/03/2023

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