BLUE SKY Ultra Pure Solution 40%

Safety Data Sheet

Section 1	IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1	**Product Identifier**
Product Form:	Chemical Mixture
Trade Name:	BLUE SKY Ultra Pure Urea Solution 40%
SDS ID:	574766
1.2	**Identified Uses and Restrictions**
Use of the substance/mixture:	Selective Catalytic Reduction (SCR) nitrogen oxide emission-control solution optimized for marine vessels, commercial locomotive fleets, and stationary industrial diesel power systems.
Recommended Restrictions:	Use strictly in accordance with equipment manufacturer operating criteria. Do not introduce to non-approved injection systems.
1.3	**Supplier Details**
Company Name:	BLUE SKY East LLC
Address:	800 Roosevelt Avenue, Carteret, NJ 07008
Contact Line:	855-BluSkyDEF (855-258-7593), 1 732-969-9200
Official Website:	https://blueskydefna.com/
1.4	**Emergency Contact Systems**
24-Hour Emergency Dispatch:	855-BluSkyDEF (855-258-7593) or 1-732-969-9200
Technical Representative / Responsible Party:	Dru Soni | SDS@blueskydefna.com
Chemical Spill/Leak Emergency (CHEMTREC):	Domestic North America: 800-424-9300 / International: 703-527-3887 (collect calls accepted)

SECTION 2:	Hazards identification
2.1	**Classification of the substance or mixture**
GHS-US classification:	Not categorized as a hazardous substance or mixture under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)
2.2	**Label elements**
GHS-US Labeling:	Not Applicable
Hazard Pictograms:	Not Applicable
Core Signal Word:	Not Applicable
Hazard statements (GHS-US)	Not Applicable
2.3	**Precautionary Statements**
Precautionary statements (GHS-US):	P264: Wash hands and exposed skin thoroughly after handling. P280: Wear standard industrial protective gloves and safety eye protection. P302+P352: IF ON SKIN: Wash with plenty of fresh soap and water. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical advice/attention. P337+P313: If eye irritation persists: Get medical advice/attention. Avoid release to the environment if possible.
Unclassified Hazards:	Contact with eyes or skin may cause mild, temporary physiological irritation.

2.4 Other hazards which do not result in classification

Contact with eyes or prolonged skin contact may generate mild, temporary mechanical surface irritation

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable as this formulation represents a distinct liquid mixture.

3.2 Mixtures

Ingredient Name	CAS Number	Proportion (% by Weight)	GHS-US Classification
Water:	7732-18-5	60.0%	Unclassified / Pure Solvent Medium
Urea:	57-13-6	40.0%	Not Classified
Urea, N,N-methylenebis-:	13547-17-6	Less than or equal to 1.0%	Not Classified
Imidodicarbonic diamide / Biuret:	108-19-0	Less than or equal to 1.0%	Not Classified
Alkalinity, calculated as Ammonia:	—	Less than or equal to 0.1%	Not Classified

SECTION 4: FIRST AID MEASURES

4.1 First Aid Actions

General First Aid: If exposed or concerned, get medical attention or advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

Inhalation Exposure: Relocate the affected individual to an unpolluted outdoor space with fresh air. Seek clinical evaluation if breathing complications develop.

Dermal Contact: Flush the compromised skin zone using plenty of clean water followed by mild soap. Remove contaminated clothing items. Get medical oversight if localized irritation persists.

Ocular Contact: Remove contact lenses when present and uncomplicated to do so. Flush eyes immediately with gentle streams of clean water for a minimum threshold of fifteen minutes while holding eyelids open. Obtain ophthalmic evaluation if discomfort continues.

Ingestion Action: Rinse the oral cavity cleanly with water. If the person exhibits full cognitive awareness, provide plenty of water to drink. Do not induce vomiting unless explicitly directed by authorized medical professionals.

4.2 Acute and Delayed Symptoms

Symptoms after Inhalation: May cause minor, localized irritation to respiratory passages under heavy aerosol vapor mists.

Symptoms after Skin Contact: Prolonged surface contact may produce mild dermal drying or temporary irritation.

Symptoms after Eye Contact: Direct fluid contact may prompt immediate, mild temporary stinging, redness, or tearing.

Symptoms after Ingestion: Ingestion may cause mild gastrointestinal irritation, abdominal distress, or nausea.

4.3	Immediate Medical Interventions
Clinical Guidance:	Treat supportively based on the visible physiological symptoms displayed by the patient.

SECTION 5: FIREFIGHTING MEASURES

5.1	Extinguishing Media
Approved Agents:	Utilize extinguishing media appropriate for the surrounding structural fire environment, such as alcohol-resistant foam, carbon dioxide, dry chemical powder, or fine water spray.
Prohibited Methods:	Do not apply high-pressure, solid water streams, as this practice can scatter and distribute materials.

5.2	Specific Substance Hazards
Thermal Decomposition:	The mixture itself is non-flammable and non-combustible. Under extreme fire conditions, evaporation of the water phase will occur, and thermal degradation of the residual solids can release toxic gases including ammonia and nitrogen oxides.

5.3	Firefighter Protocols
Operational Tactics:	Deploy water spray or fog streams to cool down adjacent or threatened storage vessels. Exercise deep safety precautions. Prevent fire control water runoff from entering public water systems or storm sewers.
Personal Protective Gear:	Do not approach the hot perimeter without full chemical-resistant turnout gear and an independent, positive-pressure self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal Protection & Emergency Operations
For Non-Emergency Personnel:	Immediately isolate the immediate leak area and clear out unauthorized or non-essential personnel.
For Emergency Responders:	Outfit cleanup crews with personal protective gear as detailed in Section 8. Avoid contact with eyes and skin. Ensure adequate localized ventilation across the spill zone.

6.2	Environmental Containment
Methods:	Prevent the fluid from migrating into municipal sewage grids, drainage ditches, surface waterways, or topsoil zones.

6.3	Recovery and Clean-Up
Spill Mitigation:	Absorb the liquid material using inert, solid mineral binding materials (such as clay, sand, or universal binders) as rapidly as possible. Gather the contaminated solid mixtures into approved, sealed disposal vessels. For minimal spills, flush residue cleanly with plenty of water.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Operational Measures:	Provide adequate ventilation across industrial filling and processing parameters. Wear appropriate personal protective gear. Avoid long-term direct exposure to skin and eyes. Do not ingest or inhale localized aerosols. Wash hands fully after shifts.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage Temperature:	Greater than 4.5 °C (Greater than 40 °F).
Technical Warning Note:	Critical Technical Storage Warning: At 40% concentration, this solution has a significantly higher crystallization/salting-out threshold of 4.5 °C (40 °F). It must be stored in temperature-controlled indoor facilities or with appropriate heat-tracing to prevent precipitation and maintain product integrity. Keep containers tightly sealed in a dry, cool, and structurally stable area.
Prohibitions:	Do not store alongside consumer food stocks, animal feed, medications, or municipal drinking water reservoirs. Keep isolated from strong acids, basic solutions, and powerful oxidizing agents. Avoid storage in containers composed of aluminum, copper, copper alloys, or galvanized steel.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Chemical Ingredients:	This liquid mixture contains no chemical components with occupational exposure limits established by regional or national regulatory bodies. Urea dust (if generated during handling) has an AIHA WEEL of 10 mg/m³ (TWA).

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8.2 Engineering Controls

Mechanical Systems:	General room ventilation is typically sufficient under normal use. Maintain functional eyewash infrastructure near hazardous processing stations.

8.3 Individual protection measures, such as personal protective equipment

General PPE Standard:	Minimize unnecessary direct exposure to all chemical mixtures.
Hand Protection:	Wear standard protective gloves (nitrile or rubber configurations).
Ocular Protection:	Use integrated safety glasses with wrap-around side shields or chemical splash goggles if splashing risk exists.
Respiratory Protection:	Not required during normal operational routines. If processing activities generate airborne mists or vapors, deploy an approved air-purifying respiratory device.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Fundamental Chemical Metrics

Metric Property	Value / Observed Data
Physical State:	Liquid
Coloration:	Clear, colorless
Odor Profile:	Mild, slight ammonia-like odor
pH Range:	9.0 to 10.5
Freezing Point Threshold:	4.5 °C (40 °F) (Crystallization / Salting-Out Limit)
Boiling Point Threshold:	106 °C (223 ºF)
Flash Point (Concentrate Base):	Non-flammable
Evaporation Rate	Not determined
Flammability (solid, gas):	Not applicable
Vapor Pressure Metric:	Not determined
Specific Gravity:	1.11 (equivalent to 9.26 lbs/gal)
Density Metric:	1.11 kg/l
Solubility:	Fully miscible and complete within water mediums
Volatile Organic Compound (VOC) Percentage:	0 percent

SECTION 10: STABILITY AND REACTIVITY

10.1 Chemical Reactivity

No hazardous reactions manifest when handled under standard operational profiles.

10.2 Structural Stability

Chemically stable under standard ambient temperature and storage parameters.

10.3 Hazardous Polymerization

Will not undergo hazardous polymerization or dangerous secondary reactions

10.4 Environments to Avoid

Exposure to extreme thermal peaks, open flame paths, or direct, continuous sunlight. Protect from extreme freezing conditions.

10.5 Incompatible Materials

Keep isolated from robust chemical acids, concentrated bases, active oxidizing chemicals, nitrates, and sodium hypochlorite. Corrosive to aluminum, copper, copper alloys, and galvanized steel surfaces.

10.6 Hazardous Decomposition Yields

Thermal breakdowns under fire conditions can generate toxic gases including ammonia, biuret, carbon oxides, and nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity Data

Urea (CAS: 57-13-6):	Dermal LD50 (Rabbit): Greater than 21,000 mg/kg bodyweight.
Water (CAS: 7732-18-5):	Oral LD50 (Rat): Greater than 90,000 mg/kg bodyweight.

11.2 Information on Toxicological Effects

Skin Corrosion/Irritation:	Classification criteria not met. Not categorized as a primary dermal corrosive or irritant. Prolonged exposure may prompt mild, localized skin drying.
Serious Eye Damage/Eye Irritation:	Classification criteria not met. Not categorized as a primary eye hazard, though direct contact may prompt temporary irritation.
Respiratory or Skin Sensitization:	Classification criteria not met. No data available.
Germ Cell Mutagenicity:	Classification criteria not met. No components present at thresholds greater than or equal to 0.1 percent are identified as potential mutagens by IARC, ACGIH, NTP, or OSHA.
Carcinogenicity:	Classification criteria not met. No components present at thresholds greater than or equal to 0.1 percent are identified as potential carcinogens by IARC, ACGIH, NTP, or OSHA.
Reproductive Toxicity:	Classification criteria not met. No classified reproductive structural hazards.
Specific Target Organ Toxicity – Single Exposure (STOT-SE):	Classification criteria not met. No data available.
Specific Target Organ Toxicity – Repeated Exposure (STOT-RE):	Not classified as causing specific target organ damage through single or repeated exposure.
Aspiration Hazard:	Classification criteria not met. Not applicable (product is a low-viscosity aqueous solution).

11.3 Other Toxicological Information

Systemic effects are not anticipated under normal handling conditions. High-concentration mist inhalation may cause minor upper respiratory tract irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity Data

Urea (CAS: 57-13-6):	
EC50 Crustacea 1:	Greater than 10000 mg/l over 24 hours (Static assessment via Daphnia magna)

12.2 Persistence and Degradability

Highly biodegradable within water systems and breaks down rapidly across topsoil matrixes into ammonia and carbon dioxide.

12.3 Bioaccumulative Potential

This formulation displays non-bioaccumulative traits due to its chemical characteristics and high water solubility.

12.4 Mobility in Soil

Highly mobile within soil layers due to complete water miscibility characteristics.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Material Disposal: Dispose of contents and containers through an authorized, licensed chemical waste disposal contractor. This restriction does not apply to empty, thoroughly rinsed containers, which may be safely managed, crushed, and repurposed as standard non-hazardous industrial packaging waste. Do not discard large bulk quantities down civil municipal sewer frameworks or water tables.

SECTION 14: TRANSPORT INFORMATION

14.1 Department of Transportation (DOT)

Regulatory Status: Not regulated as a dangerous good or hazardous material for domestic land transit across the United States.
Not regulated under IMDG Code, IATA DGR, ADR, RID, or ADN.

14.2 UN Proper Shipping Name

Not Applicable

14.3 Transport Hazard Class(es):

Not Applicable

14.4 Packing Group

Not Applicable

14.5 Environmental Hazards

No

SECTION 15: REGULATORY INFORMATION

15.1 United States Federal Rules

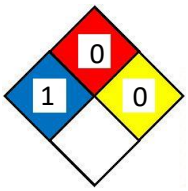
Toxic Substances Control Act (TSCA) Inventory Status: All chemical elements are actively listed or explicitly exempted on the Toxic Substances Control Act (TSCA) inventory core registry.

SARA Section 313 Emissions Reporting: This mixture contains no components that are subject to the reporting obligations specified under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and Title 40 of the Code of Federal Regulations, Part 372.

15.2 State Specific Rules

California Proposition 65: This formulation contains no chemical ingredients known to the State of California to cause cancer, birth defects, or alternative reproductive developmental harm.

SECTION 16:	OTHER INFORMATION
Template Revision Effective Date:	May 19, 2026
Revision Summary:	Version 1.0 created to map BLUE SKY Ultra Pure Urea Solution 40% parameters under OSHA HazCom 2024 / GHS Revision 7 standards. This SDS complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) as amended and GHS Revision 7.
	NFPA 704 Rating: Health: 1 Fire: 0 Reactivity: 0 Special: None
Health Hazard:	Level 1 (Materials that can cause temporary irritation or minor residual injury).
Fire Hazard:	Level 0 (Materials that will not burn under typical fire conditions).
Reactivity Hazard:	Level 0 (Compounds that remain completely structurally stable under standard fire environments).
HMIS Rating:	Health: 1 Flammability: 0 Physical Hazard: 0 Personal Protection: B



Document Control: Revision 0205192026-UUREA40 | Region: US / EN

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