



Safety Data Sheet

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

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : ArmorBlue DEF
CAS No : 57-13-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : NOx Abatement Solution

1.3. Details of the supplier of the safety data sheet

Ports Petroleum Company, Inc.
1337 Blachleyville Road
Wooster, Ohio 44691
T 1-800-562-0373
defsales@portspetro.com - www.portspetroleum.com

1.4. Emergency telephone number

Emergency number : Chemtrec: (800)424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Urea	(CAS No) 57-13-6	31 - 70	Not classified
Water	(CAS No) 7732-18-5	30-69	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Consult a doctor/medical service if you feel unwell.
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact : Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Avoid prolonged and repeated contact with skin.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion : Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact : May cause moderate irritation.
Symptoms/effects after eye contact : Mild eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Water fog. Foam. Dry powder. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Carbon oxides. Nitrogen oxides.

Reactivity : Stable under normal conditions.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Special protective equipment for fire fighters : Wear self-contained breathing apparatus and protective suit (see item 8).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid breathing (dust, vapor, mist, gas).

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable respiratory equipment in case of insufficient ventilation. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Emergency procedures : Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Stop leak if safe to do so.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment : Absorb remaining liquid with sand or inert absorbent and remove to safe place.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapors. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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 well-ventilated place. Keep cool.

Storage temperature : 2 - 8 °C

Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Armorblue (57-13-6)	
ACGIH	Not applicable
OSHA	Not applicable
Urea (57-13-6)	
ACGIH	Not applicable
OSHA	Not applicable
Water (7732-18-5)	
ACGIH	Not applicable
OSHA	Not applicable

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8.2. Exposure controls

Appropriate engineering controls	: General industrial hygiene practice.
Materials for protective clothing	: Impervious clothing. Footwear (shoes, boots).
Hand protection	: Protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: Respiratory protection not required under normal use. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless liquid.
Color	: Colorless
Odor	: Ammonia-like
Odor threshold	: No data available
pH	: 10
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 106 °C 50% Urea Solution
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: 130 °C
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • Urea: 590 g/l (at 20 °C)
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No additional information available.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

No additional information available.

10.5. Incompatible materials

Oxidizing materials.

10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NOx).

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Urea (57-13-6)	
LD50 oral rat	8471 mg/kg
ATE US (oral)	8471.000 mg/kg body weight

Skin corrosion/irritation : Not classified

pH: 10

Serious eye damage/irritation : Not classified

pH: 10

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/effects after skin contact : May cause moderate irritation.

Symptoms/effects after eye contact : Mild eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

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])

12.2. Persistence and degradability

Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Urea (57-13-6)	
BCF fish 1	< 10
Log Pow	-1.59 (at 25 °C)

Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer :

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : Avoid release to the environment. Dispose of contents/container to meet all regulations.

SECTION 14: Transport information

In accordance with DOT

UN-No.(DOT) : Not dangerous goods.

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ADR

No additional information available

Transport by sea

UN-No. (IMDG) : Not dangerous goods

Air transport

UN-No. (IATA) : Not dangerous goods

SECTION 15: Regulatory information

15.1. US Federal regulations

Urea (57-13-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Urea (57-13-6)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

EU-Regulations

Urea (57-13-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Water (7732-18-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

Urea (57-13-6)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals)
Water (7732-18-5)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

SECTION 16: Other information

GHS US SDS

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