



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

1. IDENTIFICATION

| | |
|--|---|
| Product Name | Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized) |
| Other Names | Alcohol Resistant Aqueous Film Forming Foam |
| Recommended use of the chemical and restrictions on use | |
| Identified uses | Fire Extinguishing Agent |
| Restrictions on use | Do not use on electrically energized equipment. Consult applicable fire protection codes. |
| Company Identification | Badger Fire Protection 8767 Seminole Trail, Suite 202 Ruckersville, VA 22968 USA |
| Customer Information Number | (434)-964-3200 |
| Emergency Telephone Number | |
| CHEMTREC Number | (800) 424-9300 (703) 527-3887 (International) |
| Issue Date | November 23, 2016 |
| Supersedes Date | October 1, 2015 |

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

This SDS covers the product listed above as sold in pressurized and non-pressurized containers. GHS classifications for both forms are listed below.

GHS Classification – Pressurized

Hazard Classification

Gas under pressure – Compressed gas

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Contents under pressure; may explode if heated.

Precautionary Statements

Prevention

None



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

2. HAZARD IDENTIFICATION

Response

None

Storage

Protect from sunlight.

Store in well-ventilated place.

Disposal

None

GHS Classification: Non - pressurized**Hazard Classification**

This product is classified as not hazardous in accordance with the Globally Harmonized System of Classification and Labelling (GHS).

Label Elements

Hazard Symbols

None

Signal Word: None

Hazard Statements

None

Precautionary Statements**Prevention**

None

Response

None

Storage

None

Disposal

None

Other Hazards

Possible electrocution hazard if used on electrically energized equipment.

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity <5%

Acute dermal toxicity <5%

Acute inhalation toxicity <5%

Acute aquatic toxicity <5%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component

Water

Synthetic detergent

CAS Number

7732-18-5

NA

Concentration

>95%

<1%

Note: Pressurized product uses nitrogen or compressed air as the expellant.



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

4. FIRST- AID MEASURES

Description of necessary first-aid measures

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical

Pressurized containers may explode in heat of fire.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

Environmental Precautions

Prevent large quantities of the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Contain and absorb using appropriate inert material. Transfer into suitable containers for recovery or disposal.



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective clothing. Prevent skin and eye contact.

Conditions for safe storage

Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized or plastic container. Store pressurized and plastic containers away from high heat sources. Storage area should be:
- cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Synthetic Detergent

None

Appropriate engineering controls

Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

Individual protection measures

Respiratory Protection

Not normally required. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

Skin Protection

Gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Non- Pressurized

Appearance

| | | |
|-----------------------------------|-----------------------|-------------------|
| | Physical State | Liquid |
| | Color | Pale yellow |
| Odor | | Mild |
| Odor Threshold | | No data available |
| pH | | 7 - 8 |
| Specific Gravity | | ~1.0 |
| Boiling Range/Point (°C/F) | | ~100/212 |
| Melting Point (°C/F) | | No data available |
| Flash Point (PMCC) (°C/F) | | Not flammable |
| Vapor Pressure | | Not applicable |
| Evaporation Rate (BuAc=1) | | No data available |
| Solubility in Water | | Soluble |



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|-------------------|
| Vapor Density (Air = 1) | Not applicable |
| VOC (g/l) | No data available |
| VOC (%) | No data available |
| Partition coefficient (n-octanol/water) | No data available |
| Viscosity | No data available |
| Auto-ignition Temperature | Not applicable |
| Decomposition Temperature | Not applicable |
| Upper explosive limit | Not applicable |
| Lower explosive limit | Not applicable |
| Flammability (solid, gas) | Not applicable |

Expellant - Nitrogen

Appearance

| | |
|---|---|
| Physical State | Compressed gas |
| Color | Colorless |
| Odor | None |
| Odor Threshold | No data available |
| pH | Not applicable |
| Specific Gravity | 0.075 lb/ft ³ @70°F as vapor |
| Boiling Range/Point (°C/F) | -196°C/-321 °F |
| Melting Point (°C/F) | No data available |
| Flash Point (PMCC) (°C/F) | Not flammable |
| Vapor Pressure | No data available |
| Evaporation Rate (BuAc=1) | No data available |
| Solubility in Water | No data available |
| Vapor Density (Air = 1) | Not applicable |
| VOC (g/l) | None |
| VOC (%) | None |
| Partition coefficient (n-octanol/water) | No data available |
| Viscosity | Not applicable |
| Auto-ignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Upper explosive limit | Not explosive |
| Lower explosive limit | Not explosive |
| Flammability (solid, gas) | Not flammable |

10. STABILITY AND REACTIVITY

Reactivity

Pressurized containers may rupture or explode if exposed to heat.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Exposure to direct sunlight - contact with incompatible materials



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

10. STABILITY AND REACTIVITY

Incompatible Materials

Water reactive materials

Hazardous Decomposition Products

Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Available data indicates this product is not expected to be acutely toxic.

Synthetic detergent:

LD50 Oral rat >5000 mg/kg

Nitrogen

Simple asphyxiant

Specific Target Organ Toxicity (STOT) – single exposure

Nitrogen: Exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.

Specific Target Organ Toxicity (STOT) – repeat exposure

Available data indicates this product is not expected to cause target organ effects after repeated exposure.

Serious Eye damage/Irritation

Synthetic detergent: A 50% solution was found to be severely irritating to eyes in a rabbit study.

Skin Corrosion/Irritation

Synthetic detergent: A 50% solution was found to be non-irritating to skin a rabbit study.

Respiratory or Skin Sensitization

No data available.

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity

Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity

Available data indicates this product is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Synthetic detergent

LC50 Fish > 1 – 10 mg/l (based on similar substance)

EC0 Microorganisms >100 mg/l (based on similar substance)



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

12. ECOLOGICAL INFORMATION

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of container in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment.

Special Precautions for Shipping:

Individuals must be certified as Hazardous Material Shipper for all transportation modes.

Pressurized Fire Extinguishers are considered a hazardous material by the US Department of Transportation and Transport Canada.

| | |
|---|--|
| DOT CFR 172.101 Data | Fire extinguishers, 2.2, UN1044 |
| UN Proper Shipping Name | Fire extinguishers |
| UN Class | (2.2) |
| UN Number | UN1044 |
| UN Packaging Group | Not applicable |
| Classification for AIR Transportation (IATA) | Consult current IATA Regulations prior to shipping by air. |
| Classification for Water Transport IMDG | Consult current IMDG Regulations prior to shipping by water. |

When shipping via ground, portable fire extinguishers pressurized to less than 241 psi and of less than 1100 cubic inches in size meet the requirements of "Limited Quantity" as referenced in 49 CFR 173.309 (2010). There is no limited quantity designation for fire extinguishers when shipped by air or water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product contains an ingredient that has not been verified for listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution (Fire Extinguishing Agent, Pressurized and Non-pressurized)

15. REGULATORY INFORMATION

Canada DSL Inventory

This product contains ingredients that are not listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

SARA Title III Sect. 311/312 Categorization: Pressurized

Pressure hazard

SARA Title III Sect. 311/312 Categorization: Non-pressurized

None

SARA Title III Sect. 313

This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Physical Hazard - 0

HMIS Code for Personal Protection - See Section 8

*Chronic

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

CAS#: Chemical Abstracts Service Number

EC50: Effect Concentration 50%

IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Revision Date: November 23, 2016

Replaces: October 1, 2015

Changes made: Update to company address

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By:

EnviroNet LLC.



SAFETY DATA SHEET

Universal Ultra AR-AFFF Solution

(Fire Extinguishing Agent, Pressurized and Non-pressurized)

16. OTHER INFORMATION

The information and recommendations presented in this SDS are based on sources believed to be accurate. Badger Fire Protection assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make **NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED**, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.
