



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 05/22/2024

Reviewed on 05/22/2024

### \* 1 Identification

#### Product Identifier

**Trade Name: Buckeye 3% Mil Spec AFFF (BFC-3MS)****Relevant identified uses of the substance or mixture and uses advised against:**

Fire suppression, not for human or animal drug use

**Product Description:** 3% Mil Spec Concentrate, Mil Spec Aqueous Film Forming Foam

#### Details of the Supplier of the Safety Data Sheet:

**Manufacturer/Supplier:**

Buckeye Fire Equipment Company

110 Kings Road

Kings Mountain, NC 28086

P: 704-739-7415

www.buckeyefire.com

bfec@buckeyef.com

**Emergency telephone number:**

CHEMTREC, 24 hours

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1-703-527-3887 (collect calls accepted)

### 2 Hazard(s) Identification

**Classification of the substance or mixture:**

Eye Irritation 2B H320 Causes eye irritation.

**Label elements:****Hazard pictograms:** Non-Regulated Material**Signal word:** Warning**Hazard statements:**

H320 Causes eye irritation.

**Precautionary statements:**

P264+P265 Wash thoroughly after handling. Do not touch eyes.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P317 If eye irritation persists: Get medical help.

**Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.

0 % of the mixture consists of component(s) of unknown toxicity.

**Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme**NFPA ratings (scale 0 - 4)**Health = 1  
Fire = 0  
Reactivity = 0**HMIS-ratings (scale 0 - 4)**Health = 1  
Fire = 0  
Physical Hazard = 0**Hazard(s) not otherwise classified (HNOC):** None known

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### \* 3 Composition/Information on Ingredients

**Non-hazardous components:**

7732-18-5	Water, distilled water, deionized water	>56%
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**Chemical characterization: Substance****Description:** Mixture of substances listed below with non-hazardous additions.**Dangerous Components:**

	Proprietary mixture of fluorosurfactants and hydrocarbon surfactants Eye Irritation 2B, H320	<25%
CAS: 107-41-5 RTECS: SA 0810000	Hexylene Glycol Skin Irritation 2, H315; Eye Irritation 2A, H319; Flammable Liquids 4, H227	<19%

**Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

Buckeye 3% Low Temperature AFFF does not degrade into nor does it contain PFOS.

### 4 First-Aid Measures

**Description of first aid measures****General information:** If symptoms persist, call a physician.**After inhalation:** In case of unconsciousness place patient stably in the side position for transportation.**After skin contact:**

Wash with plenty of soap and water. If irritation develops or persists, seek medical attention.

**After eye contact:**

Flush eyes at eye wash station for 15 minutes and repeat until pain-free. If irritation develops or persists or vision changes occur, seek medical attention.

**After swallowing:**

If victim is conscious and alert, give 2-3 glasses of water to drink. Do not leave victim unattended. Seek immediate medical attention. On the advice of medical personnel, induce vomiting.

If vomiting occurs and the victim is conscious, give additional water to further dilute the chemical. Prevent aspiration of swallowed product by laying victim on side with head lower than their waist.

**Information for doctor****Most important symptoms and effects, both acute and delayed:**

Skin contact may aggravate existing chronic skin conditions.

**Indication of any immediate medical attention and special treatment needed:**

Treat symptomatically.

### \* 5 Fire-Fighting Measures

**Extinguishing media****Suitable extinguishing agents:**

Use fire fighting measures that suit the environment.

This product is an extinguishing agent. It is nonflammable and noncombustible.

**For safety reasons unsuitable extinguishing agents:** No further relevant information.**Special hazards arising from the substance or mixture:**

This product may decompose in fire and release oxides of sulfur and nitrogen (Refer to Section X)

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### Advice for firefighters

**Special protective equipment for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

## \* 6 Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Not required.

**Environmental precautions:** Dilute with plenty of water.

**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Dispose of the collected material according to regulations.

**Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

<b>PAC-1:</b>		
107-41-5	Hexylene Glycol	2.3 ppm
<b>PAC-2:</b>		
107-41-5	Hexylene Glycol	25 ppm
<b>PAC-3:</b>		
107-41-5	Hexylene Glycol	150 ppm

## 7 Handling and Storage

### Handling

**Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Avoid eye, respiratory, and skin exposure. Use the appropriate personal protective equipment when handling. Wash thoroughly after handling (Refer to Section VIII).

**Information about protection against explosions and fires:** No special measures required.

**Conditions for safe storage, including any incompatibilities**

**Storage**

**Requirements to be met by storerooms and receptacles:**

Product should be stored in its original container or extinguisher. Use in well-ventilated areas. Do not mix with other extinguishing agents.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**Specific end use(s):** No further relevant information available.

## \* 8 Exposure Controls/Personal Protection

**Additional information about design of technical systems:** No further data; see section 7.

**Control parameters:**

**Components with occupational exposure limits:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituents have no known exposure limits.



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<b>107-41-5 Hexylene Glycol</b>	
REL	Ceiling limit value: 125 mg/m <sup>3</sup> , 25 ppm
TLV	Short-term value: 10** mg/m <sup>3</sup> , 50* ppm Long-term value: 25* ppm *vapor **inh. fraction, aerosol only

**Additional information:**

The lists that were valid during the creation of this SDS were used as basis.

**Exposure controls:**

**Personal protective equipment**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing and wash before reuse.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

**Breathing equipment:**

During the use of this product on fires, exhaust gases and products of incomplete combustion are the main respiratory hazards. In the manufacture of this product, employers and employees must use their collective judgment in determining the on-the-job settings where the use of a respirator is prudent. The need for respiratory protection is not likely for short-term use in well-ventilated areas. Use air-purifying respirators or powered air-purifying respirators with organic vapor and amine cartridges for acute short-term exposures. Long term exposures may require the use of positive pressure supplied air respirators or self-contained breathing apparatus.

**Protection of hands:**



Protective gloves

**Material of gloves:** Nitrile rubber, NBR

**Penetration time of glove material:** Not applicable.

**Eye protection:**



Tightly sealed goggles

**Limitation and supervision of exposure into the environment:** None

**\* 9 Physical and Chemical Properties**

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:**

Liquid

**Color:**

Pale yellow

**Odor:**

Mild, sweet

**Odor threshold:**

Not determined.

**pH-value:**

Not determined.



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**Change in condition**

**Melting point/Melting range:** Not determined.  
**Boiling point/Boiling range:** 97 °C (206.6 °F)

**Flash point:** None

**Flammability (solid, gaseous):** Not applicable.

**Auto igniting:** Not applicable

**Decomposition temperature:** Not determined.

**Ignition temperature:** Product is not self-igniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

**Vapor pressure:** Not determined.

**Density @ 20 °C (68 °F):** 1.02 g/cm<sup>3</sup> (8.5119 lbs/gal)

**Relative density:** Not determined.

**Vapor density:** Not determined.

**Evaporation rate:** Not determined.

**Solubility in / Miscibility with:**

**Water:** Fully miscible.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

**Other information:** No further relevant information available.

## 10 Stability and Reactivity

**Reactivity:** No further relevant information available.

**Chemical stability:** Product is stable under normal conditions.

**Thermal decomposition / conditions to be avoided:**

Not known, but oxides of sulfur and nitrogen may be formed.

**Possibility of hazardous reactions:** No dangerous reactions known.

**Conditions to avoid:** No further relevant information available.

**Incompatible materials:**

Strong acids, bases, and oxidizers. Reactive metals. Any material reactive with water.

**Hazardous decomposition products:** No dangerous decomposition products known.

## \*11 Toxicological Information

**Information on toxicological effects:**

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:**

**107-41-5 Hexylene Glycol**

Oral LD50 3,700 mg/kg (Rat)

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Dermal	LD50	8,560 mg/kg (rabbit)
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**Primary irritant effect:**

**On the skin:** Irritant to skin and mucous membranes.

**On the eye:** Irritating effect.

**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

**Carcinogenic categories:**

<b>IARC (International Agency for Research on Cancer):</b>		
None of the ingredients are listed.		

<b>NTP (National Toxicology Program):</b>		
None of the ingredients are listed.		

<b>OSHA-Ca (Occupational Safety &amp; Health Administration):</b>		
None of the ingredients are listed.		

## \* 12 Ecological Information

**Toxicity:**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

**Additional ecological information:**

**General notes:** Not known to be hazardous to water.

**Results of PBT and vPvB assessment:**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects:** No further relevant information available.

## 13 Disposal Considerations

**Waste treatment methods**

**Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.

**Uncleaned packaging**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport Information

**UN-Number:**

**DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

**UN proper shipping name:**

**DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

**Transport hazard class(es):**

**DOT, ADR/ADN, ADN, IMDG, IATA**

**Class:**

Non-Regulated Material



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**Packing group:**

**DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

**Environmental hazards:**

Not applicable.

**Special precautions for user:**

Not applicable.

**Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code:**

Not applicable.

**UN "Model Regulation":**

Non-Regulated Material

**\*15 Regulatory Information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

No further relevant information available.

**SARA (Superfund Amendments and Reauthorization):**

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act):**

7732-18-5	Water, distilled water, deionized water	ACTIVE
107-41-5	Hexylene Glycol	ACTIVE

**Hazardous Air Pollutants**

None of the ingredients are listed.

**California Proposition 65:**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**New Jersey Right-to-Know List:**

107-41-5 Hexylene Glycol

**New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

**Pennsylvania Right-to-Know List:**

107-41-5 Hexylene Glycol

**Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

**Carcinogenic categories:**

**EPA (Environmental Protection Agency):**

None of the ingredients are listed.



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None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

**GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms:** Non-Regulated Material**Signal word:** Warning**Hazard statements:**

H320 Causes eye irritation.

**Precautionary statements:**

P264+P265 Wash thoroughly after handling. Do not touch eyes.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P317 If eye irritation persists: Get medical help.

**National regulations:**

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other Information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**Contact:****Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety &amp; Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Liquids 4: Flammable liquids – Category 4

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Eye Irritation 2B: Serious eye damage/eye irritation – Category 2B

**\* Data compared to the previous version altered.**

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106