



## SAFETY DATA SHEET – AMS#225

Hi-Combat®A

Class “A” Foam Concentrate

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### 1. IDENTIFICATION

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**Product Name**

Hi-Combat®A  
Class “A” Foam Concentrate

**Recommended use of the chemical and restrictions on use**

**Identified uses**

Firefighting Foam Concentrate

**Restrictions on Use**

Consult applicable fire protection codes

**Company Identification**

Angus Fire  
141 Junny Road  
Angier, NC 27501

**Customer Information Number**

(919) 331-6100

**Emergency Telephone Number**

Infotrac at (800) 535-5053

**Issue Date**

July 18, 2019

**Supersedes Date**

July 27, 2018

*Safety Data Sheet prepared in accordance with OSHA’s Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)*

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### 2. HAZARD IDENTIFICATION

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**Hazard Classification**

Eye Damage/Irritation – Category 1

**Label Elements**

Hazard Symbols



Signal Word: Danger

**Hazard Statements**

Causes serious eye damage.

**Precautionary Statements**

**Prevention**

Wear eye protection and face protection.

**Response**

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

Immediately call a poison center or doctor.

**Storage**

None

**Disposal**

None

**Other Hazards**

None identified.



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**2. HAZARD IDENTIFICATION**

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**Specific Concentration Limits**

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

Acute oral toxicity	10 - 20%
Acute dermal toxicity	20 - 30%
Acute inhalation toxicity	35 - 45%
Acute aquatic toxicity	25 - 35%

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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This product is a mixture.

<b>Component</b>	<b>CAS Number</b>	<b>Concentration</b>
Sodium decyl sulfate	142-87-0	10 - 20%*
Sodium alkyl ether sulfate	68585-34-2	7 - 13%*
Dipropylene Glycol Monomethyl Ether	34590-94-8	1 - 5%*
Methanol	67-56-1	0.05 – <0.12%

\*Exact concentration withheld as trade secret.

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**4. FIRST-AID MEASURES**

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**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.

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**5. FIRE - FIGHTING MEASURES**

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**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.

**Specific hazards arising from the chemical**

None known



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**5. FIRE - FIGHTING MEASURES**

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**Special Protective Actions for Fire-Fighters**

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

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures**

Wear appropriate protective clothing. Prevent skin and eye contact.

**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 and transfer into suitable containers for recovery or disposal.

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**7. HANDLING AND STORAGE**

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**Precautions for safe handling**

Wear appropriate protective clothing. Prevent skin and eye contact.

**Conditions for safe storage**

Store in original containers between 20°F and 120°F (-7°C and 49°C). Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Control parameters**

Exposure limits are listed below, if they exist.

**Dipropylene Glycol Monomethyl Ether**

ACGIH TLV: 100 ppm (606 mg/m<sup>3</sup>) 8hr TWA; 15 min STEL 150 ppm (909 mg/m<sup>3</sup>); Danger of cutaneous absorption.

OSHA PEL: 100 ppm (600 mg/m<sup>3</sup>) Danger of cutaneous absorption.

**Sodium decyl sulfate**

None established

**Sodium alkyl ether sulfate**

None established

**Methanol**

ACGIH TLV: 200ppm (262 mg/m<sup>3</sup>) 8h TWA; 250ppm (328 mg/m<sup>3</sup>)15-minute STEL. Danger of cutaneous absorption.

OSHA: 200ppm (260 mg/m<sup>3</sup>) 8h TWA.

**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.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Individual protection measures****Respiratory Protection**

Wear respiratory protection if there is a risk of exposure to high vapor concentrations, aerosols or if applied to hot surfaces. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

**Skin Protection**

Gloves

**Eye/Face Protection**

Chemical goggles or safety glasses with side shields.

**Body Protection**

Normal work wear.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

<b>Physical State</b>	Liquid
<b>Color</b>	Pale green
<b>Odor</b>	Mild, pleasant
<b>Odor Threshold</b>	No data available
<b>pH</b>	9.0
<b>Specific Gravity</b>	1.05
<b>Boiling Range/Point (°C/F)</b>	No data available
<b>Melting Point (°C/F)</b>	No data available
<b>Flash Point (°C/F)</b>	>200°F
<b>Vapor Pressure</b>	No data available
<b>Evaporation Rate (BuAc=1)</b>	No data available
<b>Solubility in Water</b>	Soluble
<b>Vapor Density (Air = 1)</b>	Not applicable
<b>VOC (%)</b>	No data available
<b>Partition coefficient (n-octanol/water)</b>	No data available
<b>Viscosity</b>	No data available
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	No data available
<b>Upper explosive limit</b>	Not applicable
<b>Lower explosive limit</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not applicable

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**10. STABILITY AND REACTIVITY**

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**Reactivity**

No data available.

**Chemical Stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**Conditions to Avoid**

Contact with incompatible materials



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**10. STABILITY AND REACTIVITY**

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**Incompatible Materials**

Water reactive materials – burning metals – electronically energized equipment

**Hazardous Decomposition Products**

Oxides of carbon – alkyl mercaptans – sulfides – sulfur oxides – sodium oxides

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**11. TOXICOLOGICAL INFORMATION**

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**Acute Toxicity**

Hi-Combat® A Concentrate

Oral LD50 (rat) >5000 mg/kg

Dermal LD50 (rabbit) >2000 mg/kg

Hi-Combat® A Mixed Fire Chemical

Oral LD50 (rat) >5000 mg/kg

Dermal LD50 (rabbit) >2000 mg/kg

**Specific Target Organ Toxicity (STOT) – single exposure**

No relevant studies identified.

**Specific Target Organ Toxicity (STOT) – repeat exposure**

No relevant studies identified.

**Serious Eye damage/Irritation**

Hi-Combat® A

Primary Eye Irritation (rabbit, unwashed eyes): EPA Toxicity Category I - Corrosive

Primary Eye Irritation (rabbit, washed eyes): EPA Toxicity Category III - Moderately irritating

Hi-Combat® A Mixed Fire Chemical

Primary Eye Irritation (rabbit, unwashed eyes): EPA Toxicity Category IV - Minimally irritating

Primary Eye Irritation (rabbit, washed eyes): EPA Toxicity Category IV - Practically non-irritating

**Skin Corrosion/Irritation**

Hi-Combat® A Concentrate

Primary Dermal Irritation (rabbit): EPA Toxicity Category IV – Slightly Irritating

Hi-Combat® A Mixed Fire Chemical

Primary Dermal Irritation (rabbit): EPA Toxicity Category IV – Non-irritating

**Respiratory or Skin Sensitization**

No relevant studies identified.

**Carcinogenicity**

Not considered carcinogenic by NTP, IARC, and OSHA.

**Germ Cell Mutagenicity**

No relevant studies identified.

**Reproductive Toxicity**

Methanol: Some teratogenic and fetotoxic effects were observed in animal studies but are inconclusive.

**Aspiration Hazard**

Not an aspiration hazard.



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**12. ECOLOGICAL INFORMATION**

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**Ecotoxicity**

Hi-Combat® A Concentrate: LC50 Rainbow trout 28 mg/l 96h

**Mobility in soil**

No relevant studies identified.

**Persistence/Degradability**

Hi-Combat® A Concentrate

BOD<sub>5</sub>: 389,000 mg/kg

COD: 782,000 mg/kg

Hi-Combat® A - 0.5% Solution

BOD<sub>5</sub>: 2,140 mg/kg

COD: 3,900 mg/kg

Hi-Combat® A - 1% Solution

BOD<sub>5</sub>: 4,220 mg/kg

COD: 7,960 mg/kg

This product meets the criteria for Readily Biodegradable when tested in accordance to EPA OPPTS 835-3110, Section 0, Ready Biodegradability (greater than 60% biodegradation in 28 days)

**Bioaccumulative Potential**

No relevant studies identified.

**Other adverse effects**

No relevant studies identified.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal Methods**

This product, as sold, is not a RCRA-listed waste or hazardous waste as characterized by 40 CFR 261. However, state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Therefore, applicable local and state regulatory agencies should be contacted regarding disposal of waste foam concentrate or foam/foam solution.

Concentrate

Prevent foam concentrate from entering ground water, surface water or storm drains. Small quantities of foam concentrate may be collected on absorbents which can then be disposed of. Disposal should be made in accordance with local, state and federal regulations.

Foam/Foam Solution

Prevent foam/foam solution from entering ground water, surface water or storm drains. Small quantities of foam solution may be collected on absorbents which can then be disposed of. Disposal should be made in accordance with local, state and federal regulations.

**NOTE:** Please consult Angus Fire for additional information regarding the disposal of foam concentrates and foam solutions.

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**14. TRANSPORT INFORMATION**

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**Shipping Information**

**Shipping Description**

**National Motor Freight Code**

Fire Extinguisher Charges or Compounds N.O.I., Class 70

69160 Sub 0

This information is not intended to convey all transportation classifications that may apply to this product. Classifications may vary by container volume and by regional regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules when transporting this material.



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**15. REGULATORY INFORMATION**

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**United States TSCA Inventory**

All components of this product are in compliance with the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

**Canada DSL Inventory**

All ingredients in this product have been verified for listing on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

**SARA Title III Sect. 311/312 Categorization**

Serious eye damage

**SARA Title III Sect. 313**

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

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**

None

**California Proposition 65**



**WARNING:** This product can expose you to chemicals including formaldehyde, 1,4 dioxane and ethylene oxide, which are known to the State of California to cause cancer, and ethylene oxide and methanol, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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**16. OTHER INFORMATION**

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**NFPA Ratings**

NFPA Code for Health - 2

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

**Legend**

ACGIH: American Conference of Governmental Industrial Hygienists

BOD<sub>5</sub>: Biochemical Oxygen Demand (5 day)

CAS#: Chemical Abstracts Service Number

COD: Chemical Oxygen Demand

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

RQ: Reportable Quantity

STEL: Short Term Exposure Limit

N/A: Denotes no applicable information found or available

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RQ: Reportable Quantity

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act



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**16. OTHER INFORMATION**

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Revision Date: July 18, 2019  
Replaces: July 27, 2018  
Changes made: Changes to sections 8 and 15.

**Information Source and References**

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

**Prepared By:** EnviroNet LLC.

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