



MATERIAL SAFETY DATA SHEET #AMS225

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier: HiCombat A

CAS #: Mixture, no single CAS number is available

Product use: Fire fighting foam.

Product description: Synthetic Detergent, Wetting Agent

Supplier name and address:

Angus Fire
150 Gordon Drive · P.O. Box 695
Exton, PA 19341 USA
Phone: (610) 363-1400 · Fax: (610) 524-9073
www.Kidde-Fire.com

Emergency Telephone #: 1-800-433-3626

SECTION 2 - CHEMICAL COMPOSITION/HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>% (weight)</u>	<u>LD50 mg/kg (rat, oral)</u>	<u>LC50 ppm (rat, ihl)</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Water	7732-18-5	49 –68%	N/Av	N/Av	None	None
Synthetic Detergent Mixture	No single CAS # applicable	20 - 30%	N/Av	N/Av	N/Av	N/Av
Propylene Glycol	57-55-6	10 – 15%	N/Av	N/Av	None	None
Dipropylene Glycol Monomethyl Ether	34590-94-8	2 –5%			100 ppm	100 ppm
Corrosion Inhibitors	No single CAS # applicable	0.2 – 1.0%	N/AV	N/Av	N/Av	N/Av

SECTION 3 - HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Target organs: Lungs, skin, eyes

Signs and symptoms of short-term (acute) exposure:

- Inhalation:* Vapors are minimal at room temperature. If product is heated or sprayed as an aerosol, airborne material may cause respiratory irritation.
- Skin contact:* Contact with liquid may cause moderate irritation or dermatitis due to removal of oils from the skin.
- Eye contact:* Can cause eye irritation, including stinging and pain, with excess redness and swelling of the conjunctiva (tissues of the eyes).
- Ingestion:* It is not likely that this product will be swallowed if used as intended. Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing large amounts may cause injury or irritation.

Other important hazards: None

SECTION 4 - FIRST AID MEASURES

- Inhalation:** No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of airborne mists, remove to fresh air. Seek medical attention if effects occur.
- Skin contact:** If product gets on skin, wash off with large amounts of water. Wash clothing before reuse.
- Eye contact:** If liquid is splashed in eyes, immediately flush eyes with lots of water for at least 15 minutes, including under the eyelids. Call a physician if irritation persists.
- Ingestion:** If swallowed, call a physician or Poison Control Center. DO NOT induce vomiting unless directed to do so by a physician. If vomiting does occur, position victim so that fluid does not drain back into lungs. Get medical attention as quickly as possible.

SECTION 5 - FIRE FIGHTING MEASURES

- Fire hazards/conditions of flammability:** Not flammable under normal conditions of use.
- Flash point (Method):** Not applicable. Product is not flammable under normal conditions.
- Lower/Upper flammable limit (% by volume):** Product is not flammable under normal conditions.
- Explosion data:**
- Sensitivity to mechanical impact:* Not sensitive to mechanical impact.
 - Sensitivity to static discharge:* Not sensitive to static discharge.
- Oxidizing properties:** Product is not an oxidizer.
- Auto-ignition temperature:** Not Applicable
- Suitable extinguishing media:** Product is an extinguishing media. Use media appropriate for surrounding materials.
- Special fire-fighting procedures/equipment:** Not Applicable
- Hazardous combustion products:** Not Applicable

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Wear appropriate protective equipment (see Section 8). Avoid contact with skin, eyes and clothing.
- Environmental precautions:** If in doubt about proper disposal, contact local, state or federal EPA (in USA) or municipal or provincial environmental authorities (in Canada).
- Spill response/Cleanup:** Wear appropriate protective equipment to collect spillage with an absorbent material. Flush area with water until foaming ceases, using caution as area may be slippery. Do not discharge concentrate into waterways. Obtain prior approval before discharge into sewer treatment systems. Disposal must be in accordance with federal, state or provincial, and local regulations.
- Prohibited materials:** None.

SECTION 7 - HANDLING AND STORAGE

- Safe handling procedures:** Product is for industrial and municipal fire department use only. Consult product literature for appropriate handling during fires.
- Storage requirements:** Store at 20°F – 120°F (-7°C – 49°C)
- Incompatible materials:** As with all aqueous solutions, HiCombat A should not be put in contact with any materials that react violently with water.
- Special packaging materials:** Use original container or store in stainless steel, high-density cross-linked polyethylene, or reinforced fiberglass polyester (isophthalic polyester resin) with a vinyl ester resin internal layer coating (50 -100 mils).

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering controls:	Special ventilation is not required
Respiratory protection:	Recommended exposure limits have not been determined for this material. A qualified health specialist should evaluate the need for respiratory protection.
Protective gloves:	Rubber or PVC gloves recommended.
Eye protection:	Wear safety glasses, chemical goggles or a face shield of an approved type. Contact lenses should not be worn. Eye wash facilities are recommended.
Other protective equipment:	Body-covering clothing is recommended.
Permissible exposure levels:	None established for this product. See Section 2, Hazardous Ingredients.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical form, color and odor:	Light green liquid, with a bland odor.
Odor threshold:	Not available.
pH @ 68°F (20°C):	9.0
Boiling point:	Not Available
Melting/freezing point:	6°F (-14°C)
Vapour pressure:	Not available.
Solubility in water:	100%
Coefficient of oil/water distribution:	Not available.
Specific gravity (water = 1):	1.05
Vapour density:	Not available
% Volatiles:	Not Available
Evaporation rate (Butyl acetate = 1):	< 1

SECTION 10 - REACTIVITY AND STABILITY DATA

Stability and reactivity:	Stable. Hazardous polymerization will not occur.
Conditions to avoid:	None known.
Materials to avoid:	Avoid contact with chemicals that react violently on contact with water, such as sodium metal, and high concentrations of alkalis (bases) at elevated temperatures.
Hazardous decomposition products:	Carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION/HEALTH EFFECTS

Mammalian Toxicity

	<u>Concentrate</u>	<u>Mixed Fire Chemical</u>
Acute Oral Toxicity – Sprague-Dawley Rats	LD ₅₀ >5050 mg/kg	LD ₅₀ >5050 mg/kg
Acute Dermal Toxicity – New Zealand White Rabbits	LD ₅₀ >2020 mg/kg	LD ₅₀ >2020 mg/kg
Primary Dermal Irritation – New Zealand White Rabbits	Slightly Irritating (Toxicity Category IV)	Slightly Irritating (Toxicity Category IV)
Primary Eye Irritation – Unwashed Eyes – New Zealand White Rabbits	Moderately Irritating (Toxicity Category III)	Minimally Irritating (Toxicity Category IV)
Primary Eye Irritation – Washed Eyes – New Zealand White Rabbits	Moderately Irritating (Toxicity Category IV)	Practically Non-Irritating (Toxicity Category IV)

SECTION 12 - ECOLOGICAL INFORMATION

Environmental effects: No data available.

Important environmental characteristics: None known.

Biodegradability: This product meets the criteria for Readily Biodegradable when tested in accordance to OECD301B OPPTS 835-3110, Section 0, Ready Biodegradability (greater than 60% biodegradation in 28 days).

Aquatic toxicity: 96 hr. LC50 for Rainbow Trout (*oncorhynchus mykiss*) is reported to be 28 mg/liter.

SECTION 13 - WASTE DISPOSAL

Handling for disposal: Avoid contact with eyes and skin, and excessive inhalation. Do not ingest. Rinse skin and eyes thoroughly in case of contact.

Methods of disposal: Do not discharge into biological sewer treatment systems without prior approval. Specific concerns are high BOD load and foaming tendency. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Transportation of Dangerous Goods (TDG) information:

Shipping description: Not regulated as dangerous goods according to TDG Regulations.

49 CFR information:

Shipping description: Not regulated as hazardous material according to 49 CFR Hazardous Materials Regulations.

International Dangerous Goods information:

IMO: Not regulated as dangerous goods according to IMDG Code.

ICAO: Not regulated as dangerous goods according to ICAO Technical Instructions or IATA Regulations.

Other information: None.

SECTION 15 - REGULATORY INFORMATION

WHMIS information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR. WHMIS classification is D2B, Toxic and Infectious Substances, Toxic Material.

CEPA information: All ingredients are listed on the DSL.

SARA information: This product does not contain any chemical components subject to Section 313 reporting requirements.

TSCA information: All ingredients are listed in TSCA

RCRA information: Not a regulated waste

CERCLA information: Under U.S. EPA CERCLA regulations, releases to air, land or water which exceed the reportable quantity must be reported to the National Response Center (1-800-424-8802). There is no reportable quantity (RQ) for this product. There are no reportable materials in this product.

Pennsylvania : This product contains the following PA Hazardous Substances present at levels greater than 1%: Propylene Glycol (57-55-6), (2-Methoxymethylethoxy)Propanol (34590-94-8).

California Proposition 65 Information: To the best of our knowledge, this product does not contain any California Proposition 65 designated chemicals.

SECTION 16 - OTHER INFORMATION

Prepared for: Angus Fire
Telephone number: (919) 639-6151
Preparation date/revision number: February 27, 2004, Revision 2
Additional notes or references:

Abbreviations:

ACGIH:	American Conference of Governmental Industrial Hygienists
CEPA:	Canadian Environmental Protection Act
CERCLA:	Comprehensive Environmental Response Compensation and Liability Act
DOT:	Department of Transport
DSL:	Domestic Substance List
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods Code
OSHA:	Occupational Safety and Health Administration
N/Ap	Not applicable
N/Av:	Not available
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
RCRA:	Resource Conservation and Recovery Act
TSCA:	Toxic Substances Control Act
WHMIS:	Workplace Hazardous Materials Information System

References:

1. Van Nostrand Reinhold, Dangerous Properties of Industrial Materials, Seventh Edition, N. Irving Sax.
 2. Canadian Centre for Occupational Health and Safety. RTECS (Registry of Toxic Effects) and CHEMINFO databases.
 3. ACGIH, Threshold Limit Values and Biological Exposure Indices for 1997.
 4. International Agency for Research on Cancer Monographs.
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