



Safety Data Sheet

Section 1 - Identification

Product Identifier**Product Name**

F-500 Multi-Purpose Encapsulator Agent

Synonyms

F-500 Encapsulator Agent, F-500EA, #F500EA

Relevant identified uses of the substance or mixture and uses advised against**Recommended use**

Fire Suppression and Flammable Vapor Mitigation Agent

Contact Manufacturer for other applications and uses

Details of the supplier of the safety data sheet**Manufacturer**

Hazard Control Technologies, Inc.

150 Walter Way

Fayetteville, GA 30214

United States

www.hct-world.com

info@hct-world.com

Telephone (General)

770-719-5112

Emergency telephone number**Manufacturer**

770-719-5112

Section 2 - Hazard Identification

UN GHS Revision 4

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Fourth Revised Edition

Classification of the substance or mixture

- UN GHS
- Eye Irritation 2B
 - Hazardous to the aquatic environment, Acute 3

Label elements

UN GHS

WARNING**Hazard statements**

- Causes eye irritation
- Harmful to aquatic life

Precautionary statements**Prevention**

- Wear eye protection
 - Wash hands after handling
 - Avoid release to the aquatic waterway
- Response**
- EYES: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- Storage/Disposal**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Other hazards**
- None



United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 Eye irritation 2B

Label elements

OSHA HCS 2012

WARNING

Hazard Statements

Causes eye irritation

Precautionary Statements

Prevention

- Wear eye protection
- Wash hands after handling

Response

- EYES: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Other hazards

- None

Section 3 – Composition/Information on Ingredients

Mixtures

- This material is a mixture.

Composition

Chemical Name	CAS Numbers	%•	Classifications According to Regulations/Directive **
Fatty alkyl ethers reaction products with aliphatic acids	72245-02-4	40% - 50%	UN GHS Revision 4: Not Relevant OSHA HCS 2012: Not Relevant
Alcohols, C6-12	68603-15-6	5% - 8%	UN GHS Revision 4: Not Relevant OSHA HCS 2012: Not Relevant
2,2',2''-Nitrilotrisethanol aliphatic acid soap	38584-87-1	2% - 4%	UN GHS Revision 4: Not Relevant OSHA HCS 2012: Not Relevant

- Exact concentrations are withheld as a trade secret.
- Classification of individual ingredients within the mixture is Not Relevant as individual ingredients are not supplied separately and cannot be separated out by the end user. Further, all data presented in this SDS is based testing of the total composite mixture.

Mixture contains no PFOS, PFOA, or Fluorine Ingredients.

Section 4 - First-Aid Measures

Description of first aid measures

- | | |
|------------|--|
| Inhalation | • Move victim to fresh air. Obtain medical attention immediately for any breathing difficulties. |
| Skin | • Wash skin with soapy water. If irritation develops or persists, get medical attention. |
| Eye | • Flush eyes with running water for at least 10-15 minutes. If eye irritation persists: Get medical attention. |
| Ingestion | • Do NOT induce vomiting. Give milk or water to dilute stomach contents. Obtain medical attention immediately if ingested. |



Most important symptoms and effects, both acute and delayed

Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- Treat Symptomatically.

Section 5 – Fire Fighting Measures

Extinguishing media

Suitable Extinguishing Media

- Product is a fire fighting extinguishing agent. Product is a nonflammable liquid.

Unsuitable Extinguishing Media

- No data available

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- Product is a fire fighting extinguishing agent. Product is a nonflammable liquid; however, exposure of concentrate to high heat for extended period could cause combustion.

Hazardous Combustion Products

- No data available

Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus (SCBA).

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

- Personal Precautions
- Wear appropriate personal protective equipment.
- Emergency Procedures
- Isolate spill to avoid run off to waterways and storm sewers. Keep unauthorized personnel away.

Environmental precautions

Isolate spill to avoid run off to waterways and storm sewers.

Methods and material for containment and cleaning up

Containment/Cleanup Measures

- Stop leak if you can do it without risk.
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
LARGE SPILLS: Dike far ahead of spill for later disposal.
When product is used to mitigate a hazardous material, the resultant material must be handled in the same fashion as the hazardous material.

Section 7 – Handling and Storage

Precautions for safe handling

- Handling**
- Wear appropriate protective clothing. Prevent contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage

- Keep container closed. Store in a well-ventilated place away from incompatible materials. Protect material from direct sunlight. Storage temperature. 35°F-130°F



Section 8 – Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines

Exposure Limits/ Guidelines

- Exposure limits are not applicable for product.

Exposure controls

Engineering

- Good general ventilation should be used. Ventilation rates should be matched to conditions.

Measures/Controls

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear protective gloves and protective clothing.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills and release to waterways. Follow best practice for site management and disposal of waste.

Section 9 – Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Amber liquid with mild odor.
Color	Amber	Odor	Mild
Odor Threshold	No data available	Intentionally left blank	
General Properties			
Boiling Point	118°C (244.4°F)	Melting Point/Freezing Point	-3°C (26.6°F)
Decomposition Temperature	No data available	pH	6.9 to 7.1
Specific Gravity/Relative Density	0.98 - 1.0	Water Solubility	Soluble 100%
Viscosity	70 to 100 Centipoise (cPs, cP) or mPas	Intentionally left blank	
Volatility			
Vapor Pressure	26.66 hPa @ 25°C (77°F)	Vapor Density	No data available
Evaporation Rate	No data available	Intentionally left blank	
Flammability			
Flash Point	> 93°C (> 199.4°F)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available	Intentionally left blank	
Environmental			
Octanol/Water Partition coefficient	No data available	Intentionally left blank	

Section 10 - Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Incompatible materials.

Incompatible materials

- Strong oxidizing agents

Hazardous decomposition products

- None identified.



Section 11 - Toxicological Information

Information on toxicological effects

<i>GHS Properties</i>	<i>Classification</i>
Acute toxicity	UN GHS 4 •Acute Oral LD ₅₀ (Rat) > 5,000 mg/kg OSHA HCS 2012 •Acute Oral LD ₅₀ (Rat) > 5,000 mg/kg
Skin corrosion/Irritation	UN GHS 4 •No data available OSHA HCS 2012 •No data available
Serious eye damage/Irritation	UN GHS 4 •Eye Irritation 2B OSHA HCS 2012 •Eye Irritation 2B
Skin sensitization	UN GHS 4 •No data available OSHA HCS 2012 •No data available
Respiratory sensitization	UN GHS 4 •No data available OSHA HCS 2012 •No data available
Aspiration Hazard	UN GHS 4 •No data available OSHA HCS 2012 •No data available
Carcinogenicity	UN GHS 4 •No data available OSHA HCS 2012 •No data available
Germ Cell Mutagenicity	UN GHS 4 •No data available OSHA HCS 2012 •No data available
Toxicity for Reproduction	UN GHS 4 •No data available OSHA HCS 2012 •No data available
STOT-SE	UN GHS 4 •No data available OSHA HCS 2012 •No data available
STOT-RE	UN GHS 4 •No data available OSHA HCS 2012 •No data available

Potential Health Effects

Inhalation

Acute (Immediate)

- No data available

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- Prolonged contact may cause minor irritation and drying of skin

Chronic (Delayed)

- No data available

Eye

Acute (Immediate)

- Causes eye irritation

Chronic (Delayed)

- No data available

Ingestion

Acute (Immediate)

- May cause gastrointestinal irritation/diarrhea.

Chronic (Delayed)

- No data available

Section 12 - Ecological Information

Toxicity

Product	CAS	Test & Result
F-500 Multi-Purpose Encapsulator Agent	NDA	Aquatic Toxicity-Fish: 96 Hour(s) LC ₅₀ <i>Golden ode (Leuciscus idus)</i> 75 mg/L Aquatic Toxicity-Crustacea: 48 Hour(s) EC ₅₀ <i>Daphnia magna</i> STRAUS 100 mg/L Aquatic Toxicity-Algae: 72 Hour(s) EC ₅₀ <i>Algae (Desmodesmus subspicatus)</i> 60 mg/L Microbial Toxicity-Activated Sludge Microorganism (EC₅₀) – 3,000 mg/L

- Harmful to aquatic life, Acute 3

**Persistence and degradability**

- Not persistent in the environment; fully biodegradable.

Bioaccumulative potential

- Not Bioaccumulative.

Mobility in Soil

- No data available.

Other adverse effects

- None known

Section 13 - Disposal Considerations**Waste treatment methods**

- Product waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Product is discarded as nonhazardous waste under RCRA CFR261. Product may be diluted to 0.25% solution with water and processed through a Municipal or Industrial Waste Water Treatment Plant containing Activated Sludge Microorganisms and fully biodegraded
- Packaging waste** • Dispose of container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

Special precautions for user • None specified

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Section 15 - Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

- This product does not contain any ingredients or reaction components within the mixture that has restricted use under the US EPA Toxic Substance Control Act.
- This product contains no ingredients or reaction components within the mixture reportable under Superfund Amendments and Reauthorization Act (SARA) Title III, Section 313 of 40 CFR-372 or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including chemicals added under Section 7321 of the National Defense Authorization Act for Fiscal Year 2020."



**United States
Labor**

U.S. – OSHA - Process Safety Management - Highly Hazardous Chemicals	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed
U.S. – OSHA – Specifically Regulated Chemicals	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

**United States – California
Environment**

U.S. - California - Proposition 65 - Carcinogens List	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed



U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	
This product does not contain any ingredients or reaction Components within the mixture that has any restricted use under this regulation.	All Ingredients Not Listed

Section 16 - Other Information

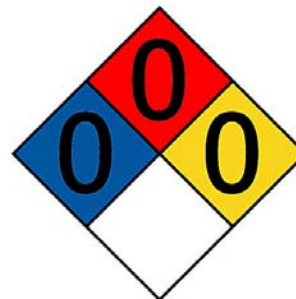
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NPCA-HMIS

HEALTH	/	0
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		np

NFPA 704



Compliance

This Safety Data Sheet complies with both UN Global Harmonized System (GHS) Revision 4; OSHA 29 CFR 1910.1200 HCS and OSHA 2012 Standards.

Disclaimer/ Statement of Liability

The information and recommendations presented in this SDS are based on sources, to the best of our knowledge, believed to be accurate and reliable as of the date this SDS was published. This SDS relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any process. We make no representation, warranty or guarantee expressed or implied with respect to such information and assume no liability resulting from its use. It is the user's responsibility to satisfy himself as to the suitability of such information for their own use. We do not accept liability for any loss or damage that may occur from the use of this information.

Key to abbreviations

NDA= No Data Available