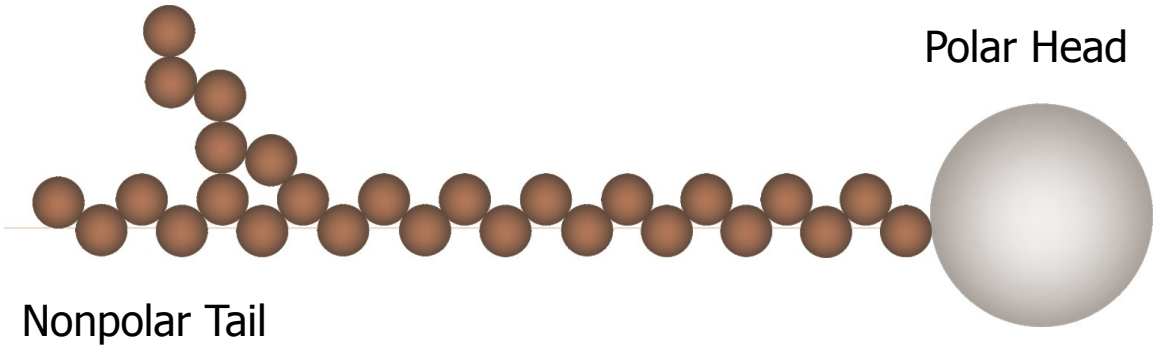
HAZARD CONTROL TECHNOLOGIES, INC.

ENCAPSULATOR AGENT INTRODUCTION

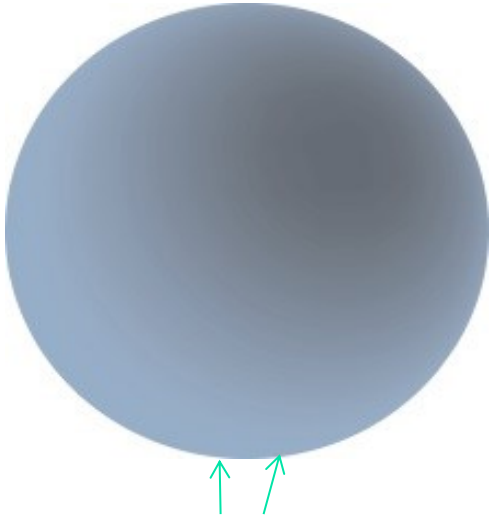
www.hct-world.com

F-500 Encapsulator Agent Characteristics

- Amphipathic Molecules
  - Large molecule with a polar end and a nonpolar end with sufficient distance between so each end acts independently
    - Polar end (hydrophilic - “loves water”)
      - Soluble; it dissolves in water
    - Nonpolar end (hydrophobic - “fears/hates water”)
      - Protrudes out of the water droplet and seeks out molecules other than water (such as hydrocarbon)

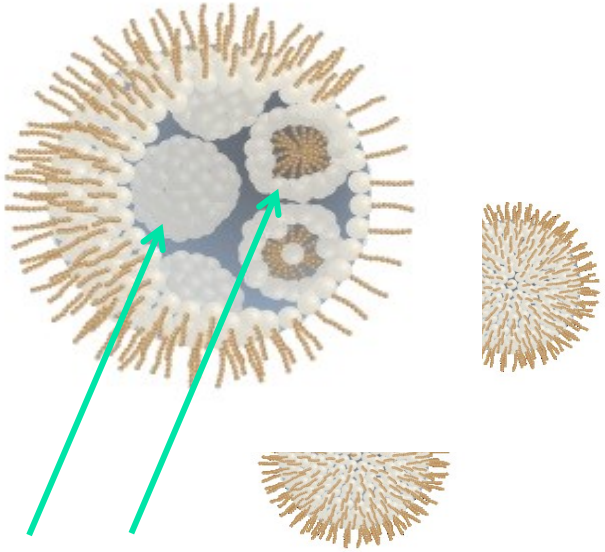


Water Droplet



H_2O Molecules

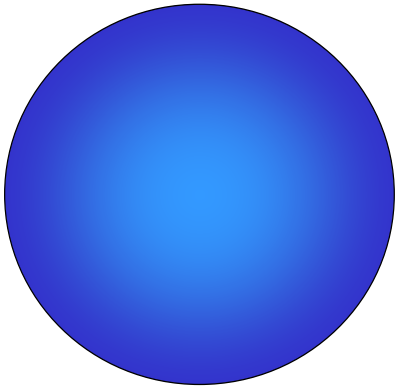
F-500 EA Droplet



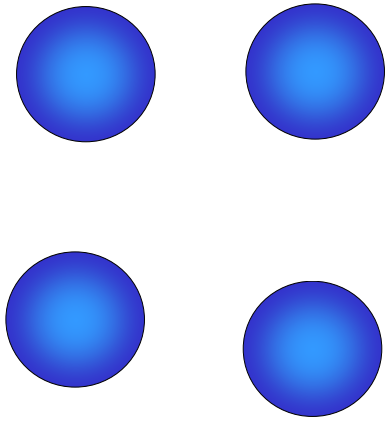
F-500 EA Molecules

Droplet	Molecular Weight	Boiling Point	Thermal Conveyance
Water	18 g/mol	212°F (100°C)	Inefficient
F-500 EA	>1000 g/mol	248°F (120°C)	Highly Efficient

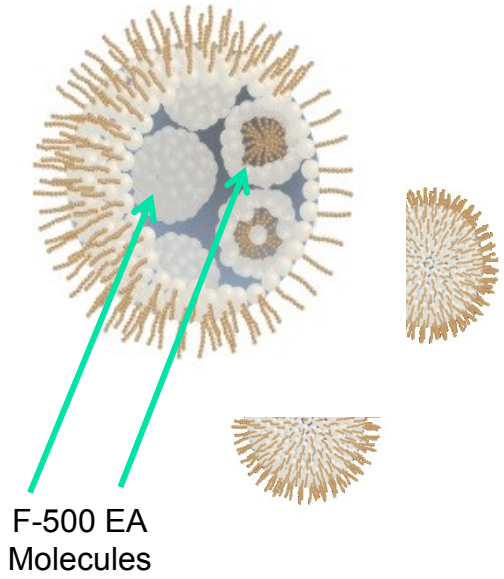
Droplet Comparison



Plain Water



Wetting Agent



F-500 Encapsulator Agent

HAZARD CONTROL TECHNOLOGIES, INC.
FIRE, VAPOR, AND CONTAMINATION CONTROL SOLUTIONS

F-500 ENCAPSULATOR TECHNOLOGY

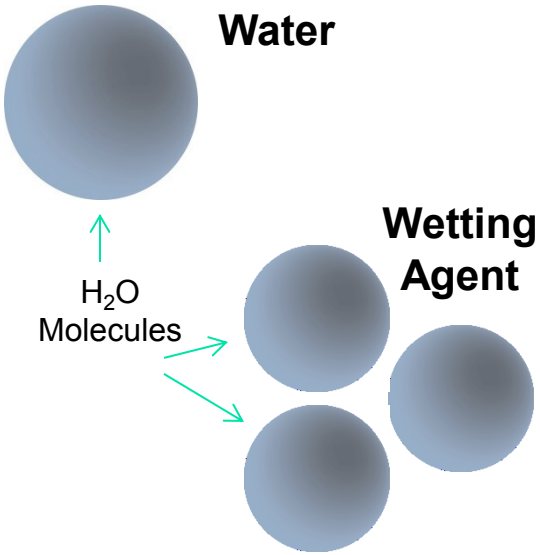
WETTING AGENT

Surface Tension Reduction

- Spreads
- Penetrates

Heat Reduction

- Same mechanism as water
- Converts H_2O to Steam



FOAM

Surface Tension Reduction

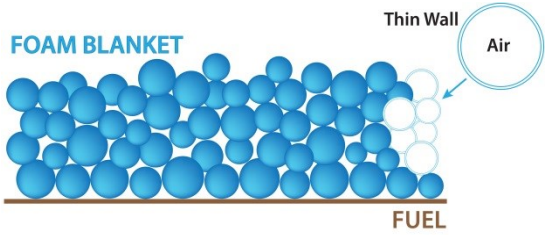
- Aids in spreading the blanket

Blankets

- Separates fuel from oxygen to smother the fire

Heat Reduction

- Blanket insulates and traps the heat
- Counterproductive to heat reduction
- Requires maintenance of separation for extended period until heat slowly dissipates



ENCAPSULATOR AGENT

Surface Tension Reduction

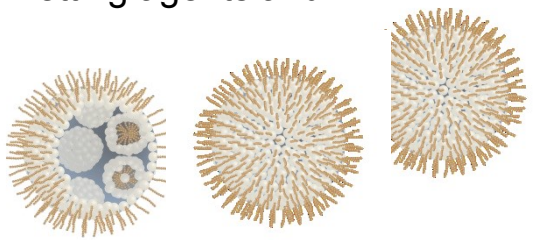
- Aids in spreading MEA

Encapsulation

- Encapsulates fuel and vapor molecules and renders them nonflammable and nonignitable

Heat Reduction

- Changes the heat reduction mechanism of water droplet
- 10-20 times faster heat reduction than plain water, wetting agents and f[illegible]



Market-Applications

- **Municipal Fire Departments**
  - Class A and B Fire Suppression
  - Class B Spill Control
- **Power Companies**

  (Fixed Systems and Hand line)
  - Coal Handling Systems (PRB Coal)
  - Turbine/Generator/Boiler/Transformer
- **Petro-Chemical**
  - Class B Spill Control
  - Tank Degassing and Cleaning
  - Pipeline Cleaning and Devaporization
  - Soil Washing
- **Rubber Tire Industry**

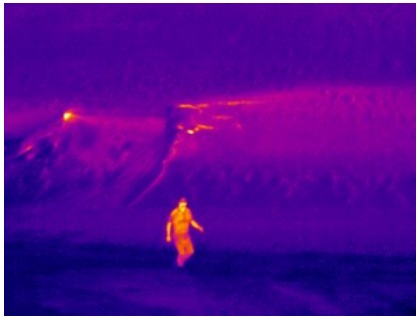
  (Fixed Systems and Hand line)
  - Production Lines and Areas
  - Warehouse Storage
  - Scrap Pile Storage
- **Paper Industry**

  (Fixed Systems and Hand line)
  - Raw Material Stock Piles
  - Recycling Stock Piles
  - Hydraulic Pit Press Areas
  - Warehouse Storage
- **Military**
  - Structural Firefighting
  - Spill Control






Industrial Hazards and HCT Solutions









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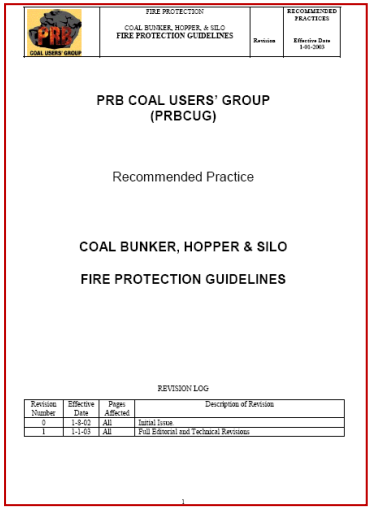
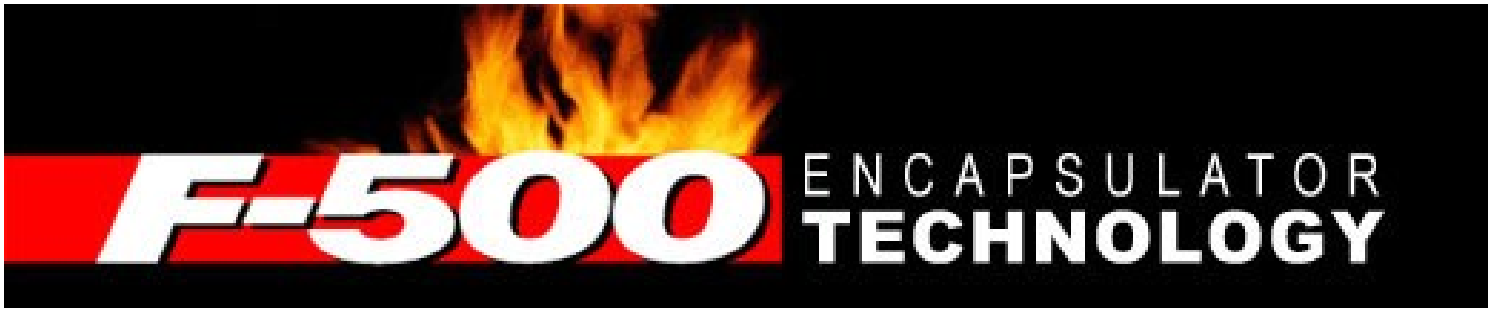
FIRE, VAPOR, AND CONTAMINATION CONTROL SOLUTIONS

F-500 ENCAPSULATOR TECHNOLOGY

HCT Proven Solutions



Any questions?



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