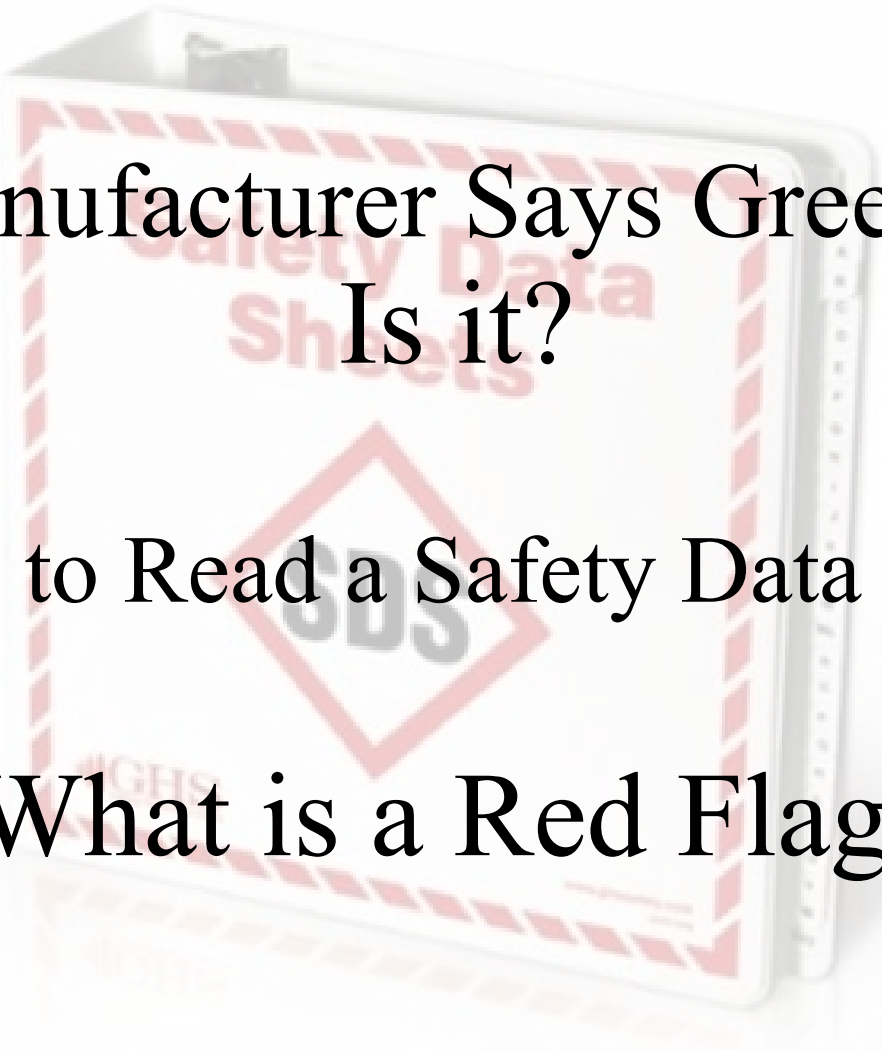


Manufacturer Says Green… Is it?

How to Read a Safety Data Sheet

What is a Red Flag?

OSHA® QUICK CARD™

Hazard Communication Safety Data Sheets

The Hazard Communication Standard (HCS) requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products. The HCS requires new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:

Section 1, Identification includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

Section 2, Hazard(s) identification includes all hazards regarding the chemical; required label elements.

Section 3, Composition/information on ingredients includes information on chemical ingredients; trade secret claims.

Section 4, First-aid measures includes important symptoms/effects, acute, delayed; required treatment.

Section 5, Fire-fighting measures lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6, Accidental release measures lists emergency procedures; protective equipment; proper methods of containment and cleanup.

Section 7, Handling and storage lists precautions for safe handling and storage, including incompatibilities.

(Continued on other side)

For more information:

U.S. Department of Labor

OSHA® Occupational Safety and Health Administration

www.osha.gov (800) 321-OSHA (6742)

OSHA 3493-01R 2016

OSHA® QUICK CARD™

Hazard Communication Safety Data Sheets

Section 8, Exposure controls/personal protection lists OSHA's Permissible Exposure Limits (PELs); ACGIH Threshold Limit Values (TLVs); and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the SDS where available as well as appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and chemical properties lists the chemical's characteristics.

Section 10, Stability and reactivity lists chemical stability and possibility of hazardous reactions.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information*
Section 13, Disposal considerations*
Section 14, Transport information*
Section 15, Regulatory information*

Section 16, Other information, includes the date of preparation or last revision.

*Note: Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through 15 (29 CFR 1910.1200(g)(2)).

Employers must ensure that SDSs are readily accessible to employees.
See Appendix D of 29 CFR 1910.1200 for a detailed description of SDS contents.

For more information:

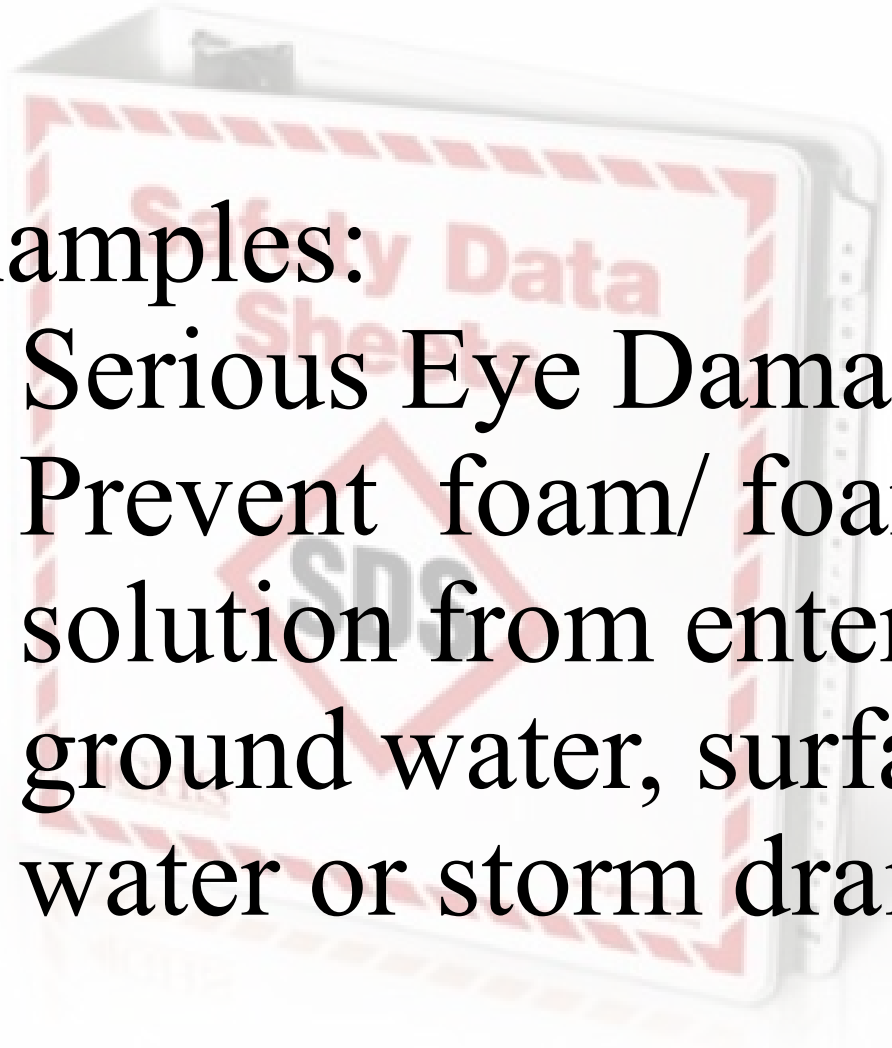
U.S. Department of Labor

OSHA® Occupational Safety and Health Administration

www.osha.gov (800) 321-OSHA (6742)

What is a Red Flag?

Questioning The Manufacturer's Green Claim.



Examples:

- Serious Eye Damage
- Prevent foam/ foam solution from entering ground water, surface water or storm drains.

How is this Green?

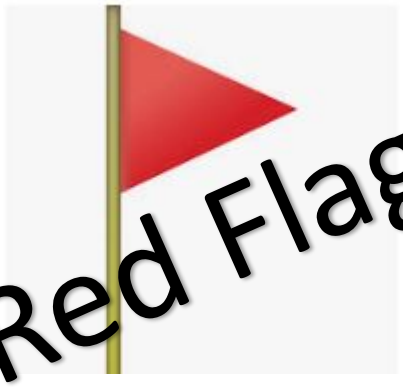
2. HAZARD IDENTIFICATION

Hazard Classification
Eye Damage/Irritation - Category 2A
Skin Corrosion/Irritation - Category 2

Label Elements
Hazard Symbols

Signal Word: Warning

Hazard Statements
Causes serious eye irritation.
Causes skin irritation.



6. ACCIDENTAL RELEASE MEASURES

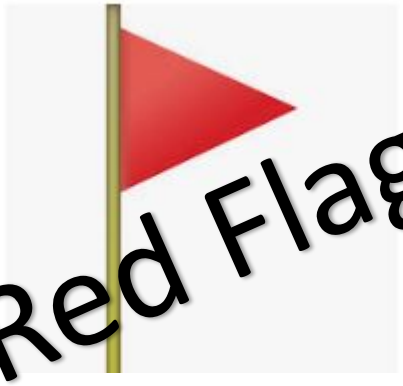
Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing. Prevent skin and eye contact.

Environmental Precautions
Prevent foam concentrate or foam solution from entering ground water, surface water, or storm drains. Discharge and disposal of concentrate or foam solution should be made in accordance with federal, state, and local regulations.

Methods and materials for containment and cleaning up
Contain and absorb using appropriate inert material and transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective clothing. Prevent skin and eye contact.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical State	Liquid
Color	Light yellow
Odor	Characteristic
Odor Threshold	No data available
pH	7 - 8
Relative Density	1 - 1.04
Boiling Range/Point (°C/F)	No data available
Melting Point (°C/F)	-6°C/21.2°F
Flash Point (°C/F)	>100°C/212°F

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Propylene Glycol Monobutyl Ether

LD50 (Rat, male and female) 3,300 mg/kg

LD50 (Rat, male and female) > 2,000 mg/kg

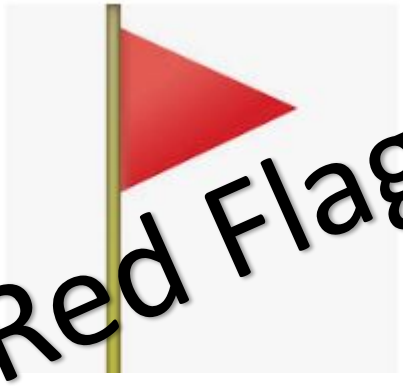
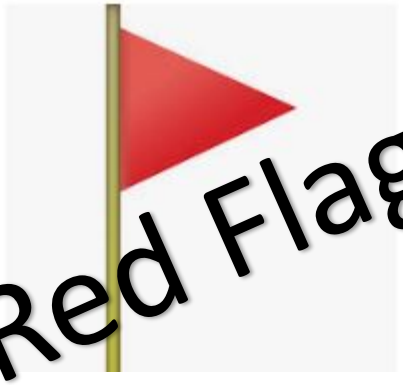


Table 1: Toxicity Classes: Hodge and Sterner Scale

		Routes of Administration	
		Oral LD_{50}	
Toxicity Rating	Commonly Used Term	(single dose to rats) mg/kg	(e
1	Extremely Toxic	1 or less	10 or
2	Highly Toxic	1-50	10-1(
3	Moderately Toxic	50-500	100-1
4	Slightly Toxic	500-5000	1000
5	Practically Non-toxic	5000-15,000	10,0(
6	Relatively Harmless	15,000 or more	100,(

12. ECOLOGICAL INFORMATION

Ecotoxicity
Zebra Fish: Toxicity >100 mg/l
EC50 daphnia magna 139 mg/l 24 hr
EC50 daphnia magna 100 mg/l 48 hr
ErC50 Algae 348 mg/l 72 hr
ErC20 Algae 238 mg/l 72 hr
NOEC Algae 100 mg/l 72hr



Category: Acute I	**Acute toxicity**	
	96 hr LC_{50} (for fish)	≤1 mg/L and/or
	48 hr EC_{50} (for crustacea)	≤1 mg/L and/or
	72 or 96hr ErC_{50} (for algae or other aquatic plants)	≤1 mg/L.
Category: Acute I may be subdivided for some regulatory systems to include a lower band at $L(E)C_{50}$ ≤0.1 mg/L.		
Category: Acute II		
	96 hr LC_{50} (for fish)	>1 - ≤10 mg/L and/or
	48 hr EC_{50} (for crustacea)	>1 - ≤10 mg/L and/or
	72 or 96hr ErC_{50} (for algae or other aquatic plants)	>1 - ≤10 mg/L.
Category: Acute III		
	96 hr LC_{50} (for fish)	>10 - ≤100 mg/L and/or
	48 hr EC_{50} (for crustacea)	>10 - ≤100 mg/L and/or
	72 or 96hr ErC_{50} (for algae or other aquatic plants)	>10 - ≤100 mg/L.
Some regulatory systems may extend this range beyond an $L(E)C_{50}$ of 100 mg/L through the introduction of another class.		

Manufacturer says Green…
Is it?

If It Causes Serious Eye Damage & One Cannot Allow Any Runoff Into Storm Drains, How is it Green?

Our Firefighters Have A 14% Higher Rate Of Cancer Than The Typical Population.

When A Firefighter Dies, 70% of the Reasons Are Due to Cancer.

The Fire Industry And Its Suppliers Need to Ensure The Products They Use Are Certified Green And Will Not Harm The Firefighters Or the Community They Serve.

Example of a Certified Green Safety Data Sheet

THIS PRODUCT DOES NOT CONTAIN PFOA OR PFOS

3. HAZARD IDENTIFICATION

EU Main Hazards
NON-HAZARDOUS LIQUID

ECO-SAFE (According to OECD 306, PFE-FR meet or exceed HOCNF, ISO 14669, ISO 5667-16, and ISO 10253 2006, the FFCs meet "green" qualifying requirements. The FFCs need no special labeling or chronic health hazard warning statements and are in compliance with FHSA regulations, 16 CFR 1500 and California Proposition 65)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards
Occupational exposure limits are listed below, if they exist.
NONE
Engineering Control Measures
Use with adequate ventilation. There should be local procedures for the selection, training, and inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.
Respiratory Protection
Not normally required.
Hand Protection
Not normally needed when used as a portable fire extinguisher. Use gloves if irritation occurs.
Eye Protection
Chemical goggles or safety glasses with side shields.
Body Protection
Normal work-wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

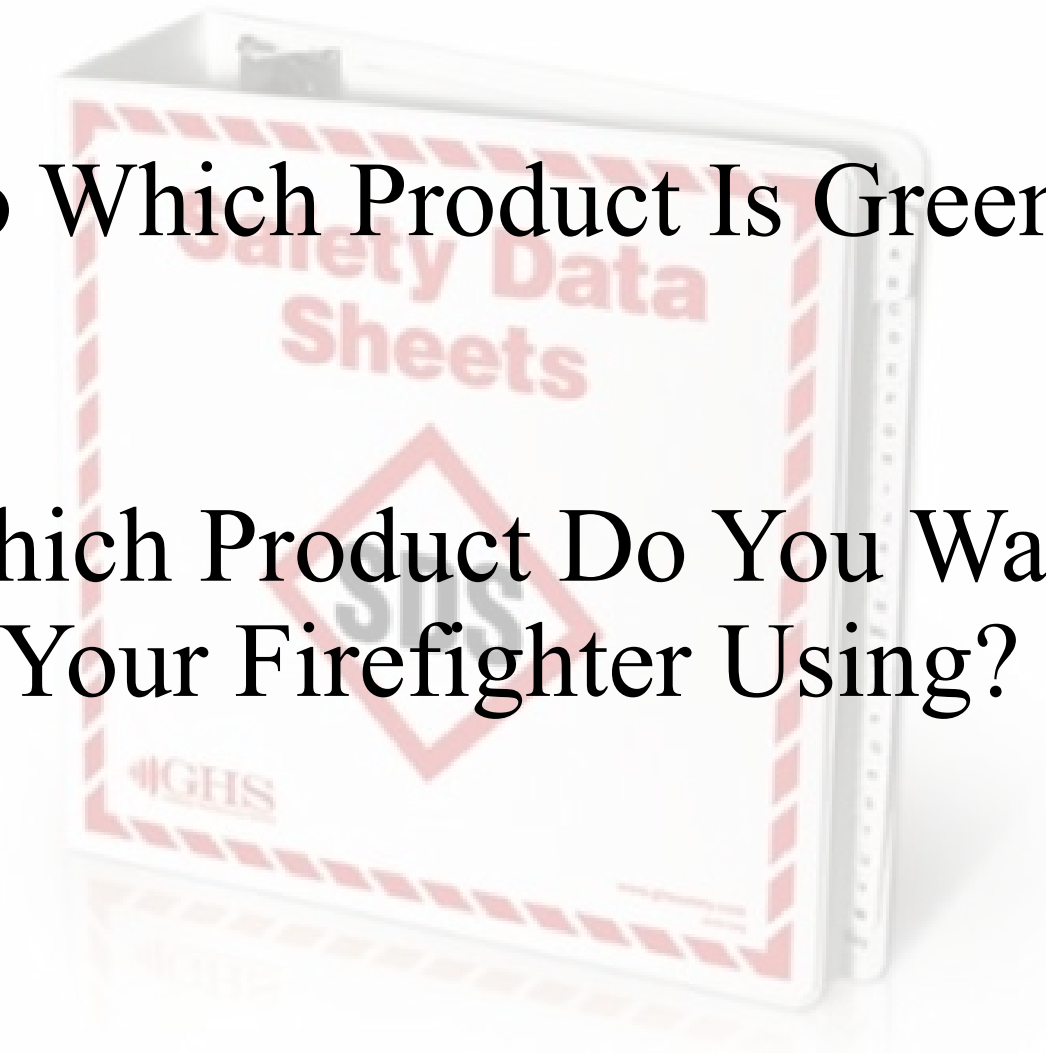
Flash Point (PMCC) (°C/F) Not Flammable
Solubility in Water Soluble
Vapor Density Not applicable

13. DISPOSAL

Dispose of container in accordance with all applicable local and national regulations (this container is 100% recyclable). Do not cut, puncture, or weld on or near to the container. No harm to the environment is expected from this preparation.

16. OTHER INFORMATION

NFPA Ratings
NFPA Code for Health - 0
NFPA Code for Flammability - 0
NFPA Code for Reactivity - 0
NFPA Code for Special Hazards - None
HMIS Ratings
HMIS Code for Health - 0
HMIS Code for Flammability - 0
HMIS Code for Reactivity - 0
HMIS Code for Personal Protection - See Section 8



So Which Product Is Green?

Which Product Do You Want Your Firefighter Using?

We Use Green

™

Firefighting Foams