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APFS-32

APFS-32 is a fluorinated nonionic surfactant. APFS-32 is an excellent choice for wetting difficult to wet surfaces such as plastics, oily substrates, waxy surfaces, silicone and fluoropolymer treated fabrics because the surface tension of aqueous solutions and emulsions can be reduced to less than 20 dynes/cm. Because it has limited solubility in water, however, loading levels less than 0.25% are recommended.

CHARACTERISTICS

- Stable and effective in hard water
- Stable in concentrated acids, bases and oxidizing solutions
- Provides better wetting, spreading, and penetration
- In coatings: Improves film uniformity, enhances adhesion, reduces pinholes and craters
- In finishes and polishes: Reduces droplet size resulting in less spotting, and smoother and more even films
- Provides far greater surface tension reduction that can be achieved with either hydrocarbon or silicone based surfactants
- Performance & stability across a wide pH range: 2.5 < pH < 11.5

SURFACE TENSION - DEIONIZED WATER	
0.01%	19 dynes/cm

APPLICATIONS

- Floor polishes/Strippers
- Paints and Coatings
- Caustic Bottle Washing
- Acid Based Cleaners
- Bleach Based Cleaners

TYPICAL PROPERTIES

Appearance:	Amber to dark brown liquid with slight stratification
Ionic Nature:	Nonionic
Specific Gravity (@ 25°C):	1.05
Active Content: (by weight—theoretical)	25%
pH:	4—8
Boiling Point:	~100°C

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Continued . . .

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APFS-32

HANDLING & STORAGE

A small amount of actives, which redisperse easily, will settle to the bottom of container of APFS-32 upon storage. Therefore, APFS-32 should be agitated thoroughly prior to use to ensure consistent performance.

PACKAGING

APFS-32 is available in 4 oz samples and 110-lb drums.

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I want to know more!
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You may also be interested in . . .

- **APFS-70S**

Revised March 3, 2011

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APFS-32

Section 1 - Product Identity

Product Name:	APFS-32
Chemical Name/Family:	Fluorinated surfactant
Product Use:	Wetting agent
24 Hour Emergency Number:	800-424-9300
24 Hour Chemtrec Number:	800-424-9300

Section 2 - Composition/Information on Ingredients

CHEMICAL	CAS #	TWA	STEL	Ceiling	Percent
Ethylene Glycol Monobutyl Ether	111-76-2				23-27
1-4 Dioxane	123-91-1				<0.1

OSHA Hazardous Component (29CFR1910.1200):

Section 3 - Hazard Identification

Emergency Overview: No information available.
Color: Amber to dark brown
Physical State: Liquid With Some Sediment
Odor: Mild Glycol Odor
Primary Routes of Entry: Inhalation: Yes Dermal: Yes Ingestion: Yes
Acute Health Hazard: No data available.
Chronic Health Hazard: No data available.
Carcinogenicity:
NTP: Yes IARC Monograph: 2B (1,4 Dioxane) OSHA Regulated:
Potential Health Effects:

- Skin: Prolonged or repeated contact may cause irritation to skin.
- Eye: Exposure my cause irritation to eyes.
- Ingestion: This material may be harmful if swallowed.
- Inhalation: Vapor or mist may be harmful.

Medical Condition Generally Aggravated by Exposure: Irritation to the eyes, nose, throat, skin and respiratory tract and or gastrointestinal irritation (nausea, vomiting, diarrhea).

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Section 4 - First Aid Measures

Skin Contact:	Flush skin with plenty of water for 15 minutes. Remove clothing and wash before reuse. Get medical attention if irritation persists.
Eye Contact:	Flush with water for at least 15 minutes. Get medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician or local Poison Control Center.
Inhalation:	Immediately remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Please note: Symptoms may be delayed; prompt medical attention may be required. Call a physician.

Section 5 - Fire-Fighting Measures

Flash Point (method used):	200°F (PMCC)
Flammable Limits in Air (% by Volume):	N.D.
Fire & Explosion Hazard:	Flammable vapor may flash back to ignition source.
Extinguishing Media:	In case of fire, use water spray, dry chemical powder or CO_2.
Special Fire Fighting Procedures:	Keep personnel removed from and upwind of fire. A self-contained breathing apparatus and protective clothing must be worn in fighting fires involving chemicals. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers from cooling.
Unusual Fire and Explosion Hazard:	No data available.
Hazardous Decomposition Products:	Burning may produce toxic vapor, oxides of carbon and nitrogen, hydrogen fluoride and carbonyl fluoride.

HAZARD CLASSIFICATION

Health Hazard:	1
Flammability:	0
Reactivity:	0

Section 6 - Accidental Release Measures

Methods for Cleaning Up:	Soak up with clay, sawdust, sand, oil dry or other absorbent material. Dike and contain spilled material. Remove with vacuum trucks or pump to storage/salvage containers. Flush area with water to remove trace residue.
Environmental Precautions:	Shut off source of leak if it is safe to do so. Prevent liquid from entering sewers and waterways.
Personal Precautions:	Wear respirator and protective clothing as appropriate.

Section 7 -Handling & Storage

Handling Conditions:	Handle and open containers with care. Do not handle near an open flame, heat or other source of ignition. Wear appropriate personal protection gear. Follow all MSDS/label warnings even after container is emptied since emptied containers retain product residues.
Storage Conditions:	Store in a tightly closed container. Store in a well ventilated area. Store away from incompatible materials. Protect from direct sunlight.

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Section 8 - Exposure Controls/Personal Protection

Engineering Controls:	Provide sufficient mechanical ventilation (general and local exhaust) to maintain exposure below the level of overexposure from known, suspected or apparent adverse effects.
Ventilation:	General and local exhaust ventilation is recommended.
Respiratory Protection:	If workplace exposure limits of product or any component are exceeded, a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control.
Eye Protection:	Safety glasses or wear safety chemical goggles when splashing is possible.
Skin Protection:	Wear neoprene or nitrile rubber gloves. Wear impervious clothing and boots or coveralls as necessary to prevent skin contact.
Other Protective Equipment:	Eye wash equipment.
Work Hygienic Measures:	Wash hands thoroughly after handling materials.
Exposure Guidelines:	No data available.

Section 9 - Physical and Chemical Properties

Boiling Point:	212ºF
Specific Gravity (H_2O=1):	1.05
pH (1% aqueous solution)	6.0
Vapor Pressure:	No data available.
Vapor Density (Air=1):	No data available.
Evaporation Rate (BuAc=1):	No data available.
Solubility in Water:	Sparingly Soluble
Appearance and Odor:	Amber to dark brown liquid with mild glycol odor.

Section 10 - Stability and Reactivity

Stability:	Stable:	X	Unstable:	
Condition to Avoid:	None.			
Incompatibilities:	None.			
Hazardous Decomposition or By-Products:	In case of fire or extreme heat, the following products may be produced: toxic vapor, oxides of carbon and nitrogen, hydrogen fluoride and carbonyl fluoride.			
Hazardous Polymerization:	May Occur:		May Not Occur:	X

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Section 11 - Toxicological Information

Acute Toxicity:	No data available.
Chronic Toxicity:	No data available.
Eye Irritation:	Exposure my cause irritation to eyes.
Skin Irritation:	Prolonged or repeated contact may cause irritation to skin.
Inhalation:	Vapor or mist may be harmful.
Ingestion:	This material may be harmful if swallowed.
Sensitization:	No information available.
Mutagen Effects:	No information available.

Section 12 - Ecological Information

Ecotoxicity Persistence and Degradability:	No information available.
Bioaccumulative Potential:	No information available.

Section 13 - Disposal Considerations

Waste Disposal Method:	Waste Disposal Method As in accordance with EPA and local regulations.

Section 14 - Transport Information

Land Transport (DOT, ADR, RID):	Proper Shipping Name: Not Regulated

Section 15 – Regulatory Information

International Inventories

TSCA (USA)	Yes
DSL (Canada)	No data available.
EINECS (Europe)	No data available.
ENCS (Japan)	No data available.
IECSC (China)	No data available.
KECL (Korea)	No data available.
PICCS (Philippines)	No data available.
AICS (Australia)	No data available.
ERMA (New Zealand)	No data available.

Federal Regulations

SARA 313	1,4 Dioxane, CAS # 123-91-1, <0.1%
SARA 311/312	No data available.
Clean Water Act	No data available.
Clean Air Act, Section 112 HAPs (see 40CFR61)	No data available.

State Regulations

California Proposition 65: This product contains the following Proposition 65 chemicals

Chemical Name	CAS#	Percent
1,4 Dioxane	123-91-1	<0.1

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Section 16 - Other Information

Date Prepared .....April 14, 2010
Prepared By .....API
Date Revised .....
Revised By .....

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