



## Type II Oil Spill Dispersant



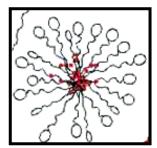
Its not just about spill response .... its about spill cleanup

## How Gold Crew Works

**Gold Crew OSD** is a water-based concentrate designed to emulsify oil products in water. **Gold Crew OSD** must be diluted with water when being applied.

**Gold Crew** when sprayed on an oil or fuel spills solubilizes oil into very minute particles.

**Gold Crew** encapsulates and surrounds these particles of oil. This encapsulation prevents the oil or fuel from forming a slick or rainbowing effect. The particles of oil are suspended in the body of the **OSD**'s water-based solution. These nano particles of oil surrounded by the **Gold Crew** solution become a food source for naturally occurring bacteria. **Gold Crew** enhances the



biodegradation process so the oil is quickly and naturally removed from this planet.

The emulsification of the fuel oil will also prevent or, if needed, extinguish fuel fires.

**Gold Crew** is non-toxic with low aquatic toxicity, is a non-solvent based formulation, non-flammable, non-corrosive, and biodegradable. **Gold Crew** works with both fresh water and salt water.

**Gold Crew OSD** produces no toxic fumes. **Gold Crew OSD** is non-irritating to the skin. **Gold Crew OSD** is safe for easy handling and has a long storage life.



### **Gold Crew Dispersants**

Gold Crew is a highly concentrated dispersant that is diluted at least 20 times at application. Gold Crew may be premixed at this dilution and be ready for use or can be educted through fire equipment at application. This highly concentrated dispersant maximizes space on the oil platforms or workboats while allowing maximum product available to handle a wide variety of spills.

#### Gold Crew OSD ... a little goes a long way .....

competitively priced ... its not what you pay ... it's what you get...

Most solvent based dispersants are applied full strength and are not to be diluted. **Gold Crew OSD MUST BE DILUTED**. Gold Crew is diluted 1 part Gold Crew to 20 parts water and up to 60 parts water depending on the type of hydrocarbon to be dispersed.

Gold Crew OSD reduces dispersant costs and maximizes dispersant application.

- 100 drums of Gold Crew concentrate makes at least 2000 drums of usable dispersant
- 100 drums of solvent based dispersant makes 100 drums of usable dispersant.

#### Gold Crew OSD in The Lab

• Gold Crew was tested at the Warren Springs Laboratory and was found to achieve a 90% effectiveness rating at the application rate of 2.5 to 1, oil to diluted dispersant ratio. The dispersant was tested at a 10% solution.

Under laboratory test parameters

• 100 drums **Gold Crew OSD** would make 1000 drums of usable dispersant. The 1000 drums of useable dispersant treats 2500 drums spilled oil\* equaling 137,500 gallons, 519,750 liters or 3273 barrels of crude oil.

For lighter end petrol, this application ration can be much greater. Greater dilution rates are achieved when applying OSD through standard field equipment thus increasing its effectiveness.

#### Gold Crew OSD in the Field

Funiwa Oil Blowout	200,000 bbls or	8.5 million gallons	8,800 gallons of GCOSD
Santa Barbara Spill	77,000 bbls or	3.25 million gallons	5,500 gallons of GCOSD

#### Gold Crew OSD's Vapor Suppression Advantage:

**Gold Crew OSD** suppresses VOC release and can be used during a fire, potential of fire, or any application to increase public & responder safety.

Gold Crew has been delivering results since 1965

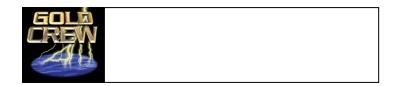


Safe to handle Stores easily Use through fire hoses or ships monitors or hand pump sprayers Effective in all types of seas Prevents and suppresses fire Enhances biodegradability of hydrocarbon Does not sink oil

#### **Technical Information**

# Gold Crew OSD Type II Dispersant Water based, biodegradable

Dilution Rate	<b>1-10</b> υ	up to <b>1-40</b> depending on viscosity of spilled hydrocarbon				
Flash Point	2	>200F				
Pour Point	-	-1.5C	ASTM	D 97-87		
Viscosity at 100F	-	126FUS	ASTM	D-445-74		
Viscosity at Temp		37.5 CP				
Specific Gravity at Te	mp	1.048	ASTM	D-1298-67		
pН	(	9.8 +/5	ASTM	D-150.1		
Ionic Activity	1	nonionic				
Cloud Point	-	-2C				
Surface Tension	@ 0.039 @ 0.069 @ 5.09	% 27.8 dynes	ASTM	D1331		
Corrosion Testing Distilled Water Tap Water Gold Crew	: ( (	30 day soak uncc 0.192 0.270 0.015	pated mild steel	Mils.Per Year (projected) 2.1 2.9 0.16		
Aquatic Toxicity LOW						



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