

Product Data Sheet

NA-SUL[®] 450



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NA-SUL 450 is a liquid emulsifiable rust preventive concentrate. **NA-SUL 450** easily forms stable emulsions when added to water with moderate stirring. The resulting emulsions give excellent rust protection for steel parts during storage and transportation. Calcium-based **NA-SUL 450** contains no mineral oil but instead uses a biodegradable ester carrier.

Do not freeze, see storage conditions.

CHEMICAL

COMPOSITION: Calcium dinonylnaphthalene sulfonate/carboxylate, alkanolamines, ester.

APPEARANCE: Dark brown liquid.

TYPICAL

PROPERTIES:	Calcium Content	0.7%
	Viscosity @ 40°C (ASTM D 445, DIN 51 550)	660 mm ² /s (cSt)
	Density @ 15.6°C (ASTM D 4052)	0.99 g/ml
	Weight Per Gallon @ 25°C	8.2 lbs
	Flash Point, COC (ASTM D 92, DIN 51 376)	100°C (212°F)

Note: The above analytical data are not specifications.

APPLICATIONS: Water emulsifiable rust preventive fluids for protection of steel parts during storage and transportation.

USE LEVEL: 1% to 8% **NA-SUL 450** in water.

NA-SUL 450 is a rust preventive concentrate that is designed to easily form stable emulsions by adding to water with moderate stirring. Emulsions of **NA-SUL 450** deposit thin, hydrophobic protective films, providing excellent humidity protection with moderate salt fog protection at higher concentrations. Protective films of **NA-SUL 450** provide effective rust protection even in 100% condensing humidity conditions, yet are also easily removed with alkaline cleaner. **NA-SUL 450** dries quickly, leaving a thin dry to the touch film from concentrations of 5% or less.

BLENDING

INSTRUCTIONS: **NA-SUL 450** can be cut back easily with water to form emulsions. For easiest blending, pour **NA-SUL 450** into water with moderate stirring.

ADVANTAGES:

- * Excellent rust and corrosion inhibitor
- * Deposits extremely thin hydrophobic films
- * No mineral oil, biodegradable ester carrier
- * Coating is easily removed with alkaline cleaner
- * Emulsions form easily with moderate stirring
- * Coating @ 5% is dry; Coating @ 10% is nearly dry

(see reverse side)

NA-SUL[®] 450

TEST RESULTS: Technical reports are available from King Industries and can be requested by contacting the offices shown below.

SOLUBILITY: **NA-SUL 450** forms emulsions in water at use levels of 1% to 8% with moderate stirring. **NA-SUL 450** is soluble in some mineral oils, esters and vegetable oils. Solubility and emulsion stability should be verified in the fluids that are intended for use.

STANDARD PACKAGING: 430 lbs (195 kg) head drum.

STORAGE CONDITIONS: **Do not freeze.** Best if stored above 10°C (50°F). If stored below 10°C, before using heat between 40°C and 50°C with stirring. Rust protection is not affected, but emulsion stability is reduced. Store in a cool, dry place away from any direct source of heat and moisture. Keep storage containers tightly closed. Maximum recommended storage temperature: 46°C (115°F)

SHELF LIFE: Best if used within 12 months from manufacture. After 6 months from date of manufacture, **NA-SUL 450** should be stirred at between 40°C (105°F) and 50°C (120°F) to restore uniformity and performance. Do not exceed 60°C (140°F) to avoid loss of emulsion stability.

HANDLING: Avoid all personal contact. Observe good personal hygiene. For additional information, it is advised to consult the Safety Data Sheet (SDS) for **NA-SUL 450**.

REGISTRATION: Please refer to Section 15 of the Safety Data Sheet for information.

For Samples or Technical Service, contact King Industries or your King representative.

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