

Product Data Sheet

NA-SUL[®] 437



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NA-SUL 437 is a water soluble rust preventive concentrate ideally suited for the manufacturing of water-based rust preventive fluids. **NA-SUL 437** based products have excellent solubility, stability and tolerance for hard water.

CHEMICAL

COMPOSITION: Preparation of dinonylnaphthalenesulfonic acid, organic acid complex and an amine. **NA-SUL 437** does not contain reportable quantities of DEA (diethanolamine).

APPEARANCE: Clear amber liquid.

TYPICAL

PROPERTIES:	Viscosity @ 40°C (ASTM D 445, DIN 51 550)	300 mm ² /s (cSt)
	Density @ 25°C (ASTM D 4052)	0.99 g/ml
	Weight Per Gallon @ 25°C	8.3 lbs
	Flash Point, COC (ASTM D 92, DIN 51 376)	> 100°C (> 212°F)

Note: The above analytical data are not specifications.

APPLICATIONS:	Water Soluble Rust Preventive Fluids	<u>Typical Treat Levels</u> 0.5% - 5.0%
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NA-SUL 437 is a unique water soluble rust preventive concentrate. It can be cut back in either cold or warm water. **NA-SUL 437** also shows exceptional hard water tolerance. It exhibits exceptional storage stability both as the concentrate and in water solutions. Unlike most water soluble rust preventive additives, **NA-SUL 437** deposits a thin film upon metal parts that becomes hydrophobic during drying. This enables parts to resist rusting for extended periods, even in the 100% humidity environment of the Humidity Cabinet (ASTM D 1748) test. The thin protective film can easily be removed with alkaline cleaners. Water solutions of **NA-SUL 437** are ideal for dip application of metal parts for protection during indoor storage.

To achieve foam control of the formulated water-based rust preventive fluid, it is recommended to use Agitan[®] 731 (distributed by King Industries) or Foamban[®] MS-525 (Ultra Additives Corp., Paterson, NJ.). Add the antifoam at a concentration of 0.1% of the **NA-SUL 437** concentration in the solution. A typical formulation based on 1000 g could be: 900 g water, 99.9 g **NA-SUL 437** and 0.1 g Agitan 731.

ADVANTAGES:

- * Deposits extremely thin hydrophobic films
- * Easily cut back in cold water
- * Thin film formation allows fast drying

(see reverse side)

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- * **Film is easily removed with alkaline cleaner**
- * **Solutions are highly hard water tolerant**
- * **Product concentrate and dilutions have long term stability**

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

SOLUBILITY: Soluble in water at all concentrations. Soluble in alcohols and glycols.

STANDARD PACKAGING: 440 lbs (200 kg) closed head drum.

STORAGE CONDITIONS: Store in a cool, dry place away from any direct source of heat and moisture. Maximum recommended storage temperature: 46°C (115°F)

SHELF LIFE: Best if used within 2 years from the date of manufacture.

HANDLING: Avoid all personal contact. Observe good personal hygiene. For additional information, it is advised to consult the Material Safety Data Sheet (MSDS) for **NA-SUL 437**.

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

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

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