

# Product Data Sheet

## NA-SUL<sup>®</sup> 1019A (Formerly KX1019A)



Science Road  
Norwalk, CT 06852  
(800) 431-7900  
Fax: (203) 866-0425  
E-Mail: lad@kingindustries.com

**NA-SUL 1019A** is a water-soluble rust and corrosion inhibitor which provides excellent protection for steel, galvanized steel and aluminum.

### CHEMICAL

**COMPOSITION:** Preparation of dinonylnaphthalenesulfonic acid, organic acid complex and an alkanolamine.

**APPEARANCE:** Clear amber liquid.

### TYPICAL

<b>PROPERTIES:</b>	Viscosity @ 40°C (ASTM D 445, DIN 51 550)	350 mm <sup>2</sup> /s (cSt)
	Density @ 15.6°C (ASTM D 4052)	1.02 g/ml
	Weight Per Gallon @ 25°C	8.5 lbs
	Flash Point, CC (ASTM D 3828, ISO 15 23)	88°C (190°F)

Note: The above data are not specifications.

**APPLICATIONS:** **NA-SUL 1019A** is a water-soluble rust and corrosion inhibitor concentrate for protecting steel, galvanized steel and aluminum parts during storage. Water solutions of **NA-SUL 1019A** are ideal for dipping metal parts. Parts dry in about 15 minutes. **NA-SUL 1019A** leaves a thin, almost dry, hydrophobic film on the metal surface that provides excellent protection even in very humid conditions. The film can be easily removed with alkaline cleaners. Treat levels of 1.0%-10.0% are recommended depending on the applications and requirements.

### BLENDING

**INSTRUCTIONS:** **NA-SUL 1019A** can be cut back with water to any desired concentration. It is soluble in warm or cold water. The concentrate has excellent storage stability. Dilutions maintain clarity and stability for extended periods of time, even in hard water.

To achieve foam control of the formulated water-based rust preventive fluid, it is recommended to use Agitan<sup>®</sup> 731 or Foamban<sup>®</sup> MS-525. Add the antifoam at a concentration of 0.1% of the **NA-SUL 1019A** concentration in the solution. A typical formulation based on 1000 g could be: 900 g water, 99.9 g **NA-SUL 1019A** and 0.1 g Agitan 731 or Foamban MS-525.

(see reverse side)

- ADVANTAGES:**
- \* Water soluble
  - \* Fast drying
  - \* Thin, dry film
  - \* Excellent hard water tolerance
  - \* Film can be removed easily with alkaline-type cleaners
  - \* Water solutions maintain clarity

**TEST RESULTS:**

**Steel\* & Iron Chip Testing**

Tests	Formulations	5.0% NA-SUL 1019A 95.0% Tap Water	1.0% NA-SUL 1019A 99.0% Tap Water
<b>Application Method</b>		Dip	Dip
<b>Average Film Thickness</b> Measured by Weight (µm)		0.3	0.1
<b>Humidity Cabinet</b> (ASTM D 1748) Average Hours to Failure		500	300
<b>Iron Chip</b> (ASTM D 4627)		--	Pass

\* Low carbon, cold rolled steel panels.

**Aluminum Testing**

Tests	Formulations	6.0% NA-SUL 1019A 94.0% Water
<b>Average Film Thickness</b> Measured by Weight (µm)		0.3
<b>Humidity Cabinet</b> (ASTM D 1748) Average Hours to Failure*		450

\* Appearance of white/brown corrosion

(see next page)

**NA-SUL® 1019A**  
(Formerly KX1019A)

- SOLUBILITY:** Soluble in water in all proportions. The solutions are clear.
- 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:** Not determined.
- 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 1019A**.
- 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.

King Industries, Inc.  
Science Road  
Norwalk, CT 06852-0588  
Tel: 203-866-5551  
Fax: 203-866-0425  
E-mail: LAD@kingindustries.com

King Industries International, Inc.  
Noordkade 64, 2741 EZ Waddinxveen  
The Netherlands  
Tel: +31-182-631360  
Fax: +31-182-621002  
E-mail: info@kingintl.nl

Agitan® is a registered trademark of Münzing Chemie GmbH, Heilbronn, Germany  
Foamban® is a registered trademark of Ultra Additives, Paterson, NJ, USA

The conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of product evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. Such testing has not necessarily been done by King Industries, Inc. ("King"). The facts, recommendations and suggestions herein stated are believed to be reliable; however, no guaranty or warranty of their accuracy is made. EXCEPT AS STATED, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE. KING SHALL NOT BE HELD LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES. Any statement inconsistent herewith is not authorized and shall not bind King. Nothing herein shall be construed as a recommendation to use any product(s) in conflict with patents covering any material or its use. No license is implied or granted under the claims of any patent. Sales or use of all products are pursuant to Standard Terms and Conditions stated in King sales documents.