Tomadol® 902 Surfactant

Description

Tomadol 902 surfactant is designed to be multifunctional and provide better cleaning and degreasing than NPE surfactants or other NPE-alternatives.

It has been shown to be highly effective in use, providing excellent cleaning and degreasing at reduced concentrations. Tomadol 902 surfactant is formulated to be highly compatible with other surfactants and solvents, and can replace oxygenated solvents in many formulations. It can be effective over a broad range of temperatures, being readily biodegradable and having near-zero VOC.

Applications

- Household all-purpose cleaners
- Industrial and heavy-duty cleaners
- Vehicle care products

Advantages

- Provides better cleaning/degreasing efficiency with lower use levels than other NPEs or NPE replacements
- Highly compatible with other surfactants and solvents
- Readily Biodegradable
- Low VOC
- NPE free

Typical Properties

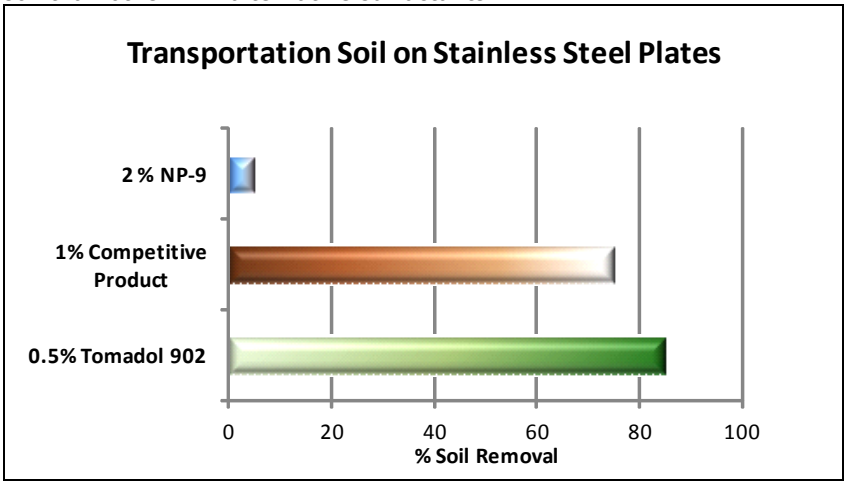
Appearance	Clear liquid with mild odor
Specific gravity (25 °C)	0.98
Viscosity (25 °C), cPs	44.9
Pour point, °C	-16
Flash point (PMCC), °C	>93.3
Vapor pressure (20 °C), mm Hg	14.1
VOC (EPA method 24), %	2.7
Cloud point, °C	46.9
HLB	12.2
Surface tension @ 0.1%, dynes/cm	27
Solubility in water and organic solvents	Miscible

Ecological Information

Readily biodegradable
Near-zero VOC
Non-flammable
Mild skin irritant

FIGURE 1: Removal of Greasy Particulate Soil

Tomadol 902 surfactant at half the level removes the same or even more soil than other NPE alternative surfactants.

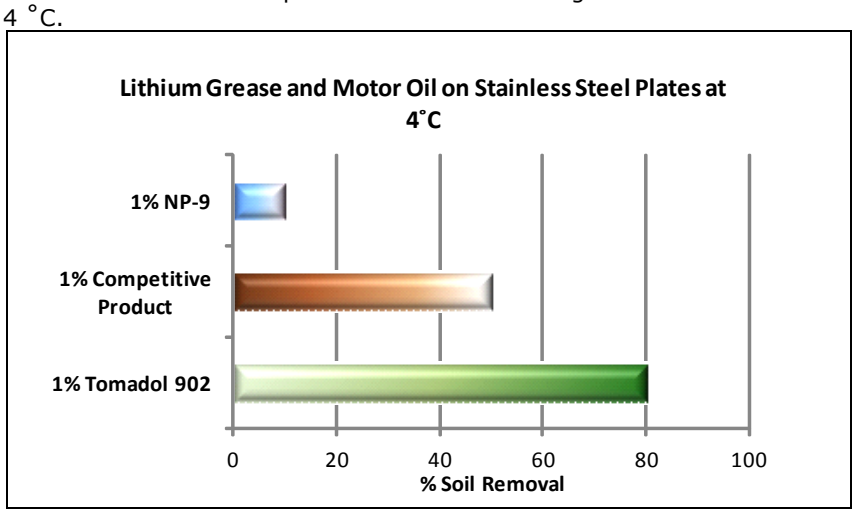


Formulation: 2% NP-9, 1% Competitive Product or 0.5% Tomadol 902 surfactant (as supplied)
1% Sodium Metasilicate
1% KOH (45%)

Conditions: Stirred at room temperature

FIGURE 2: Immersion Degreasing at Low Temperatures

Tomadol 902 surfactant provided the best cleaning after 20 minutes at 4 °C.

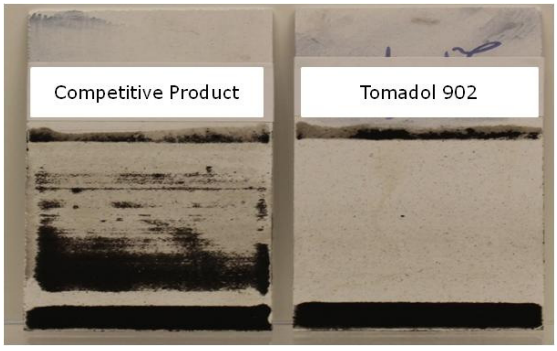


Formulations:
- 1% as supplied of either: NP-9, competitive product, or Tomadol 902 surfactant
- 1% Sodium Metasilicate, 1% KOH (45% aqueous)

Conditions: Stainless steel plates soiled with tenacious Li grease and motor oil were stirred in solution at 4 °C for 20 minutes

FIGURE 3: Vinyl Floor Cleaning

Tomadol 902 surfactant outperformed competitive NPE-alternative in similar formulation.

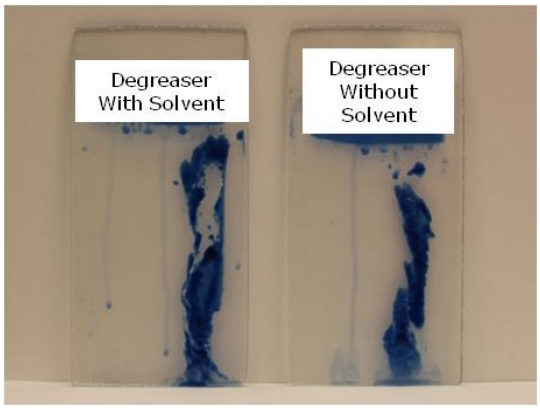


Formulation:
- 1% Tomadol 902 surfactant or 1% competitive product
- 1% Sodium Metasilicate
- 1% KOH (45%)

Conditions: Vinyl coated tiles with baked on oily particulate soil. The tiles were scrubbed via a Gardner Scrub Tester with 10 scrub cycle.

FIGURE 4: Multifunctional Use

Tomadol 902 surfactant has shown effectiveness in replacing nonylphenol ethoxylates and NPE-alternative surfactants, but also replacing oxygenated solvents such as Ethylene Glycol Monobutyl Ether in degreasing and cleaning formulations.



Degreaser With Solvent Formulation:
- 2.5% Sodium Citrate
- 0.5% Sodium Carbonate
- 0.65% Competitive Product
- 1.6% Ethylene Glycol Monobutyl Ether

Degreaser Without Solvent Formulation:
- 2.5% Sodium Citrate
- 0.5% Sodium Carbonate
- 1.3% Tomadol 902

Conditions: Glass slides soiled with tenacious Li grease and motor oil were immersion cleaned at room temperature for the same amount of time.

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For more information, please contact us at:

Corporate Headquarters
Air Products and Chemicals, Inc.
1-800-345-3148
T 610-481-6799
F 610-481-4381
cheminfo@airproducts.com

AIR PRODUCTS

airproducts.com/nimble

 110-13-001-US