

Technical Bulletin

TERMIX® 5180 Surfactant

PRODUCT DESCRIPTION

TERMIX® 5180 surfactant, an alkoxyated linear alcohol, is a fluid, water-soluble, biodegradable, nonionic surface-active agent. It provides good detergency and wetting properties as well as low freeze and pour points. This product is non-gelling in water at 25°C and higher temperatures. TERMIX® 5180 surfactant is compatible with other nonionic surfactants and with most anionic and cationic surfactants.

APPLICATIONS

- industrial cleaning compounds
- household detergents
- dust control compositions
- wetting agents for clays used in manufacture of bricks and ceramics
- paint brush cleaner
- concrete additive
- textile and paper manufacture
- wallpaper removal

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance at 25°C	Clear and substantially free of suspended matter	ST-30.1
Cloud point, °C, 1% aqueous	57 - 62	ST-9.1, 5.2.1
Color, Pt-Co	100 max.	ST-30.12
pH, 1% solution	6.5 - 7.5	ST-31.36, C
Water, wt%	0.5 max.	ST-31.53

*Methods of Test are available upon request.

TYPICAL PROPERTIES

Regulatory Information

See SDS for all regulatory information.

Physical Properties

Flash point, COC, °F/°C	375/190
Pour point, °F/°C	23/-5
Density, g/ml at 25°C (77°F)	1.0037
Weight, lbs/US gal at 25°C (77°F)	8.35
Viscosity, kinematic	
cSt at 15.6°C (60°F)	80
cSt at 25°C (77°F)	51

Performance Properties

Draves Wetting Time, sec at 25°C		
1.5 gram hook,	0.25% solution	<1.0
	0.10% solution	9.8
3.0 gram hook,	0.10% solution	4.8
	0.05% solution	17.8
Foam height, Ross-Miles, mm		
120°F, 0.1% solution, initial		75
after 5 minutes		70
Surface tension, dynes/cm,		
25°C, 0.1% solution		29.2

Chemical Properties

Hydroxyl Number (theoretical)	97
HLB Value	13.1



TOXICITY AND SAFETY

For information on the toxicity and safe handling of this product, please read the Safety Data Sheet prior to use of the product.

HANDLING AND STORAGE

TERMIX® 5180 surfactant may be satisfactorily stored in carbon steel tanks using steel pipes and pumps. Caution must be exercised, however, to keep the material in the anhydrous state to prevent severe corrosion to the carbon steel tank and related equipment. A drier on the breathing nozzle is recommended to help maintain anhydrous conditions in the storage tank.

For longer term color stability, it is recommended that the product be stored under an inert atmosphere. Solid sediment may form upon standing. There should be circulation in the storage vessel to keep solids suspended.

Low pressure steam coils in storage tanks and steam tracing of transfer lines should be provided in cases where low environmental temperatures may make pumping of the product difficult.

SHIPPING DATA

Product is available in tank cars, tank trucks and drums of 450 pounds (204 kilograms) net weight. Small samples can be obtained by contacting any Indorama Ventures sales office.

BIODEGRADABILITY AND ENVIRONMENTAL SAFETY

Semi-continuous activated sludge studies performed on TERMIX® 5180 surfactant indicate this material is completely biodegraded, as measured by disappearance of dissolved organic carbon.

Two standard aquatic toxicity tests on TERMIX® 5180 surfactant show it to have properties typical of alcohol ethoxylates:

<u>Species</u>	<u>LC₅₀, ppm</u>
Bluegill sunfish	2.3
Water flea	2.6

General References

1. Journal of the American Oil Chemists' Society, Volume 65, No. 10, p. 1669 (1988).
2. Talmage, S. S., Environmental and Human Safety of Major Surfactants: Alcohol Ethoxylates and Alkylphenol Ethoxylates, a report to the Soap and Detergent Association, Lewis Publishers, 1994.

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13766-0420