

# Technical Bulletin

## **HUNTSMAN**

### TERMIX<sup>®</sup> 5225 Surfactant (SURFONIC<sup>®</sup> AG-225 Surfactant)

#### PRODUCT DESCRIPTION

TERMIX<sup>®</sup> 5225 surfactant is a solution containing a blend of anionic and nonionic surfactants. It is a clear amber, low viscosity liquid, free of suspended material.

#### APPLICATIONS

- Agricultural spray adjuvant

#### SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance at 25°C	Clear, amber liquid	ST-30.1
Nonvolatile content, wt%	88 min.	ST-30.67, E
pH, 1% in 10/6 IPA/H <sub>2</sub> O	4.0 - 7.0	ST-31.36, F

\*Methods of Test are available from Huntsman Corporation upon request.

#### TYPICAL PROPERTIES

##### Physical Properties

Flash point, PMCC, °F	>280
Flash point, PMCC, °C	>137.8
Pour point, °F	<0
Pour point, °C	<-17.8
Density, g/ml	
at 25°C (77°F)	1.04
at 37.8°C (100°F)	1.03
at 65.6°C (150°F)	1.00
Weight, lbs/US gal	
at 25°C (77°F)	8.67
at 37.8°C (100°F)	8.58
at 65.6°C (150°F)	8.33
Viscosity, kinematic	
cSt at 25°C (77°F)	98
cSt at 40°C (104°F)	66

##### Regulatory Information

CAS Number	PROPRIETARY BLEND
DOT Classification	Flammable Liquids, NOS (2-propanol), UN 1993, (P.G. III)
HMIS Code	2-2-0
TSCA Inventory	Yes
WHMIS Classification	B3, D2B
Canadian DSL	Yes

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## TOXICITY AND SAFETY

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

## HANDLING AND STORAGE

TERMIX<sup>®</sup> 5225 surfactant may be satisfactorily stored in stainless steel tanks using steel pipes and pumps.

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 or tank trucks from several approved manufacturing facilities.

## BIODEGRADABILITY AND ENVIRONMENTAL SAFETY

Although Huntsman Corporation has not conducted biodegradability studies on the TERMIX<sup>®</sup>-series products, constituents of these products are widely recognized as being readily biodegradable in the environment.

Numerous studies conducted by other workers<sup>1-4</sup> show that linear alcohol ethoxylates and nonylphenol ethoxylates rapidly undergo ultimate biodegradation to a significant degree (>90%) under a wide variety of conditions, including those present in secondary wastewater treatment plants and in river die-away tests corresponding to all seasonal conditions.

### General References

1. Swisher, R. D., Surfactant Biodegradation, Marcel Dekker, 1987.
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.
3. Naylor, C. G., F. J. Castaldi and B. J. Hayes. "Biodegradation of nonionic surfactants containing propylene oxide." JAOCS 65:1669-1676 (1988).
4. Kubeck, E. and C. G. Naylor. "Trace Analyses of Alkylphenol Ethoxylates." JAOCS 67:400-405 (1990).