CYTEC

PRODUCT DATA SHEET Specialty Additives

AEROSOL® MA-80 I Surfactant

Type: Anionic

Chemical: Sodium dihexyl sulfosuccinate

AEROSOL MA-80 I surfactant is a surface tension depressant and an emulsifying, dispersing and solubilizing agent exhibiting high electrolyte tolerance. It promotes penetration and spreading of organic liquids as films which break up into minute droplets.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 25°C (77°F)	Clear, slightly viscous liquid
Solids, % by weight	80±1.0
Solvent	Water, isopropanol
Color, APHA, as is, maximum	50
Specific gravity, 25°C	~1.13
Density, lb/gal, 25°C	~9.4
Melting point, 100% solids, °C	199-202
Freezing point, °C	-28 (-18°F)
Flash point, °C Pensky-Marten (closed cup)	38 (101°F)
Autoignition temperature	Does not promote spontaneous combustion
pH, 10% solids solution	5-7
Acid number, as is, maximum	1.0
Iodine value, as is, maximum	0.20

SOLUBILITY

Temperature, °C	g/100 mL water
25	34.3
30	35.4
40	37.5
50	39.8
60	42.1
70	44.7

Solubility in polar organic solvents – Good
Solubility in nonpolar organic solvents – Good

Acetone	Soluble
Benzene	Soluble
Carbon tetrachloride	Soluble
Ethanol (SDA 2-B)	Soluble
Glycerine	Soluble
Kerosene	Soluble
Mineral oil	Insoluble
Oleic acid	Soluble
Olive oil	Soluble, hot
Pine Oil	Soluble

SURFACE ACTIVE PROPERTIES

Critical Micelle Concentration (CMC), % by weight	1.5
Interfacial tension, dynes/cm 1% active solution vs mineral oil	4.2
Surface Tension	See Surface Tension table below
Ross Miles Foam Test, ASTM D-1173, 0.5% solution, 25°C Initial foam volume, mL Foam Volume after 15 minutes, mL	 40 5
Wetting	See Draves Test table on page 3

SURFACE TENSION

Surface Tension of AEROSOL MA-80 I Surfactant

AEROSOL MA Concentration % solids	Surface tension, dynes/cm			
	Water	1% Na_2SO_4	2.0% Na_2SO_4	5.0% Na_2SO_4
0	72.0	72.5	72.8	73.4
0.001	69.5	64.6	64.6	61.6
0.02	60.6	41.6	39.0	44
0.1	45.8	30.4	27.0	24.7
0.25	38.2	25.0	24.8	23.9
0.5	30.8	25.1	24.5	23.4
1.0	27.8	25.4	24.4	23.0
2.00	27.5	–	–	–

WETTING (DRAVES TEST)

Wetting Time vs AEROSOL MA-80 I Surfactant Concentration

Draves Sinking Time in seconds
AATCC 17-1952, 1.5 g hook, 25°C

AEROSOL MA	Temp °C	Surfactant Concentration, %											
		.3	.25	.15	.125	.075	.05	.04	.03	.025	.02	.015	.01
In Water	30	10	15	53	84								
	50	11	16	56	90								
	75	15	20	70	130								
In 5% NaCl	30					10	28	48	99				
	50					12	30	52	110				
	75					14	35	53	115				
In 8% NaCl	30								13	26	63		
	50								14	30	70		
	75								16	35	83		
In 12% NaCl	30									10	16	33	92
	50									12	21	43	120
	75									15	27	55	150

STORAGE AND HANDLING

Gellation of AEROSOL MA-80 I can occur. When gelled a small amount of ethanol should be added and the drum rolled until the gel disappears (1-2% of isoprapol on the weight of the batch is sufficient).

To effect more rapid liquefaction the drum should be put in a steam heated chest. It is advised to keep the product stored at ambient temperature. The efficacy of AEROSOL MA-80 I surfactant is not impaired by freezing and thawing.

Handling and storage information on this product can be found in the corresponding Cytec Industries Inc. Material Safety Data Sheet.

HEALTH AND SAFETY INFORMATION

Before handling this material, read the corresponding Cytec Industries Inc. Material Safety Data Sheet for safety, health and environmental data.

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