Nonionic Dynamic Wetting Agent and Molecular Defoamer

SURFADOL® 541DPM

SURFADOL® 541DPM is a multi-functional surfactant that combines dynamic wetting and molecular defoaming in waterborne coatings and inks.

Composition

50% 2,4,7,9-Tetramethyldec-5-yne-4,7-diol in dipropylene glycol monomethyl ether
CAS No: 126-86-3

Typical properties

Chemical family	Acetylenic diol; Nonionic surfactant; Gemini surfactant
Appearance	Light yellow liquid
Equilibrium surface tension (concentration 0.1%, 1b/s)	45.3 dynes/cm
Dynamic surface tension (concentration 0.1%, 6b/s)	46.1 dynes/cm
Density at 25°C, g/cm 3	0.93
Solubility in water	Slightly soluble
Suggested use level	0.1% - 1.5% of total formulation weight

COA specifications

Test Item	Standard
Appearance	Light yellow liquid
APHA Color (Pt-Co)	⩽350
Density at 25°C, g/cm^3	0.900-1.000

Special properties

- Low dynamic surface tension
- Ability to wet contaminated substrates
- Defoaming, and flow promotion
- Stability between pH 3-10
- Prevents surface defect problems such as fisheyes, crawling, and cratering on low-energy substrates
- Reduces microfoam in spray-applied systems
- Improves pigment grind efficiency
- Reduces water sensitivity
- Silicone-free, APEO free, non-toxic

Similar Surfactants

Apart from SURFADOL® 541DPM, SURFADOL® 541 (CAS#126-86-3) series surfactants include the following liquid preparations.

SURFADOL® surfactant	Physical form	Composition
SURFADOL® 541A	Light yellow liquid	50% wt 541 in 2-ethylhexanol

SURFADOL® 541BC	Light yellow liquid	50% wt 541 in 2-butoxyethanol
SURFADOL® 541D	Light yellow liquid	50% wt 541 in diethylene glycol
SURFADOL® 541E	Light yellow liquid	50% wt 541 in ethylene glycol
SURFADOL® 541H	Light yellow liquid	75% wt 541 in ethylene glycol
SURFADOL® 541PA	Light yellow liquid	50% wt 541 in isopropyl alcohol
SURFADOL® 541PG	Light yellow liquid	50% wt 541 in propylene glycol
SURFADOL® 541PM	Light yellow liquid	50% wt 541 in propylene glycol methyl ether

Examples of application

- Waterborne wood coatings
- Water-based printing inks
- Dye processing
- Waterborne industrial coatings
- Water-based adhesives
- Pigment synthesis/ grinding/dispersing

Processing instructions

- Addition to the coating as supplied or as a predilution is possible.
- Can be introduced in the grind and let-down stage.

Package and storage

The standard package for SURFADOL® 541DPM is 180kg galvanized iron drums, 4 drums/pallet. The product is also available in 20kg pails, 18 pails per pallet.

Keep containers tightly closed in a dry, cool, and well-ventilated place. Product is freeze-thaw stable; if it phase separates or freezes at colder temperatures, warm container to 40°C and mix thoroughly before use.

When stored in an original unopened packaging, the product has a shelf life of 48 months from the date of manufacture.