Nonionic Dynamic Wetting Agent and Molecular Defoamer

SURFADOL® 541PA

SURFADOL® 541PA 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 isopropyl alcohol
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)	52.0 dynes/cm
Dynamic surface tension (concentration 0.1%, 6b/s)	53.8 dynes/cm
Density at 25°C, g/cm 3	0.84
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	0.800-0.900

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® 541PA, 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® 541DPM	Light yellow liquid	50% wt 541 in dipropylene glycol monomethyl ether
SURFADOL® 541H	Light yellow liquid	75% wt 541 in ethylene glycol
SURFADOL® 541E	Light yellow liquid	50% wt 541 in ethylene glycol
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

- Water-based printing inks
- Overprint varnishes
- Agricultural chemicals
- Fountain solutions

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® 541PA is 170kg galvanized iron drums, 4 drums/pallet.

Keep containers tightly closed in a dry, cool, and well-ventilated place. Product is freeze-thaw stable. Mix thoroughly before use. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat and sources of ignition.

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