

DEFOAMERS
WETTING AGENTS
DISPERSANTS
WAXES
for Agricultural Applications





Products for seed coatings (suitable for agricultural applications)

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Title 40, Code of Federal Regulations (40 CFR):

Environment is the section of the CFR that deals with EPA's mission of protecting human health and the environment.

180.910: Inert ingredients used pre- and post-harvest exemptions from the requirement of a tolerance.

Residues of the following materials are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest

180.920: Inert ingredients used pre-harvest; exemptions from the requirement of a tolerance

AGITAN® 299 – Blend of non-ionic alkoxyated compounds

- ❖ A highly effective particle-free defoamer for aqueous systems
- ❖ Easy to incorporate
- ❖ Usage - 0.05% - 1.0%

AGITAN® 299 is a good choice when a ‘silicone-free and mineral oil free’ defoamer is required.

DEE FO® SC-11 – Silicone compound-based defoamer

Classic silicone-based technology formulated to give the following characteristics:

- ❖ Excellent defoaming efficiency and foam knock down
- ❖ Usage 0.01% - 0.1%

Highly efficient class. Straight silicone compounds in general have the potential to cause wetting defects/compatibility issues so dosages are very low.

(Products on this page for use in 40 CFR 180.910 conforming applications)

DEE FO® SC-76: Blend of organo-modified siloxane and polyoxyalkylene technology

- ❖ Versatile workhorse with optimal defoaming and wetting
- ❖ Excellent compatibility with most binders
- ❖ Low viscosity and easy to handle
- ❖ Usage 0.1% - 0.5%

Modification of straight silicones allows this class to overcome the wetting/compatibility issues resulting in optimal defoaming efficiency, persistence and wetting.

DEE FO® SC-180 – 3-Dimensional siloxane emulsion

Unlike the linear or branched structures of conventional silicones, the 3D siloxane technology is based on a molecular architecture such that the siloxane molecules are cross-linked to form gel-like microscopic particles. When formulated with a suitable emulsifier package and carrier, the 3D siloxane technology will produce relatively stable, minute droplets in aqueous media. The small droplet size coupled with the low surface tension of the 3D siloxane lends:

- ❖ Superior and persistent defoaming compared to conventional silicones that makes it really suited for high shear applications
- ❖ Good foam knockdown
- ❖ Excellent compatibility with minimal or no wetting defects
- ❖ Suitable for high gloss and clear coatings
- ❖ Usage - 0.1 % - 0.5 %

(Products on this page for use in 40 CFR 180.910 conforming applications)

METOLAT® SC-40 / METOLAT® 700 / 780

- ❖ Blend of Non-ionic Surfactants
- ❖ Provides strong reduction in dynamic surface tension
- ❖ Pigment and filler wetting in seed coating and agricultural adjuvants
- ❖ Low foam tendency and APEO
- ❖ METOLAT SC-40 and METOLAT 700 have HLB of 12.5
- ❖ METOLAT 780 has an HLB of 9.0

METOLAT® 388

- ❖ Blend of special polyglycol esters (biodegradable)
- ❖ Wetting agent for aqueous and non-aqueous system
- ❖ Can be added during pigment grind, 0.1 % - 0.3% on total formulation
- ❖ Can also be post added to improve color intensity, 1% to 3%
- ❖ Prevents flocculation of particles during storage or thermal shock
- ❖ Low foam tendency

(Products on this page for use in 40 CFR 180.910 conforming applications)

EDAPLAN® 397

- ❖ Wetting and dispersing agent for aqueous and non-aqueous systems
- ❖ Blend of special non-ionic polyglycol esters (biodegradable)
- ❖ Suitable for organic pigments particularly phthalocyanine pigments
- ❖ Added prior to the addition of pigments in grinding process
- ❖ Can be used in binder free as well as binder containing concentrates
- ❖ Low foaming tendency
- ❖ Usage - 10-60% on organic pigment and ladder study needed for optimization
(for use in 40 CFR 180.910 and 180.930 conforming applications)

EDAPLAN® 516

- ❖ Salt of poly carboxylic acid
- ❖ Prevents pigment/filler from settling and stabilizes the system
- ❖ Suitable for inorganic pigment, especially TiO_2 , and fillers over a wide pH range
- ❖ Can be used as a sole dispersant without any wetting agents
- ❖ Low foam tendency - Low water sensitivity
- ❖ Usage - 0.1 % - 1.0 %
(for use in 40 CFR 180.910 conforming applications)

CERETAN® MC-6015 - (D50 < 6.0 µm and D99 < 15.0 µm)

Spray micronized carnauba wax

- ❖ High slip
- ❖ Good scratch resistance and hardness
- ❖ Useful for direct food application, porous, soft and flexible surfaces
- ❖ Usage – start at 1.0% - 3.0% and adjust depending on application

(for use in 40 CFR 180.910 conforming applications)

CERETAN® MXS 3815 - (D50 < 5.0 µm, D99 < 15.0 µm)

Spray micronized wax blend, coated with silica

- ❖ Excellent matting effect with high transparency (minimal influence on viscosity)
- ❖ Enhances slip and scratch resistance
- ❖ Good anti-blocking
- ❖ Increases stain and chemical resistance (e.g. to alcohol, vinegar, wine)
- ❖ Gives pleasant haptic feel on the matt finish
- ❖ Usage – start at 2.0% and adjust depending on application

(for use in 40 CFR 180.910 conforming applications)

CERETAN® MX 9820 WD (D50 < 7 µm and D99 < 20 µm)

CERETAN® MX 9825 WD (D50 < 9 µm and D99 < 25 µm)

Spray micronized polyolefin wax, easily dispersible in water

- ❖ Excellent anti-blocking
- ❖ Very good slip
- ❖ Improved scratch and abrasion resistance
- ❖ Usage – start at 1.0% - 3.0 % and adjust depending on application

(for use in 40 CFR 180.910 and 180.920 conforming applications)

CERETAN® ME 0825 WD (D50 < 9 µm, D99 ≤ 25 µm)

Water dispersible, spherical, spray micronized Polyethylene wax powder

- ❖ Excellent rub and scratch resistance
- ❖ Good anti-blocking
- ❖ 'Surface modification' makes it easy to disperse and incorporate in water- and solvent-based systems resulting in good compatibility
- ❖ Usage – start at 0.5 – 1% and adjust depending on application
- ❖ For use in 40 CFR 180.910 conforming applications

(for use in 40 CFR 180.910 conforming applications)

CERETAN® waxes spherical particle shape are made by unique spray micronization technology that helps improve incorporation, dispersibility and wettability in the dispersion making process. The special manufacturing process gives narrow particle size distribution, makes it more efficient and less dusty than conventional milled waxes.

LUBA-print® SC 5700 - (D50 < 0.8 µm and D99 < 1.4 µm)

Fine particle size polyethylene dispersion

- ❖ Improves slip and mar resistance
- ❖ Improves anti-blocking
- ❖ Good rub resistance
- ❖ 'Unique' particle size distribution results in superior mechanical properties compared to wax emulsions (allows low dosage levels)
- ❖ Minimal to moderate impact on gloss
- ❖ Usage – start at 0.25% and adjust depending on application

LUBA-print® SC 5725 - (D50 < 3.0 µm)

Fine bimodal particle size polyethylene dispersion

- ❖ Bimodal particle size distribution gives better overall performance
- ❖ Improves slip and mar resistance
- ❖ Superior rub resistance in its class of PE dispersions
- ❖ 'Unique' particle size distribution results in superior mechanical properties compared to wax emulsions (allows low dosage levels)
- ❖ No impact on gloss
- ❖ Usage – start at 0.25% and adjust depending on application

(Products on this page for use in 40 CFR 180.920 conforming applications)

LUBA-print® WX 9825

Polyolefin wax dispersion (Solids: 50%; $D_{50} \leq 6 \mu\text{m}$, $D_{98} \leq 8 \mu\text{m}$)

- ❖ Improved scratch and rub resistance
- ❖ Very good slip
- ❖ Good anti-blocking
- ❖ Minimal to moderate impact on gloss
- ❖ Usage - start at 1 % and adjust depending on application
- ❖ For use in 40 CFR 180.920 conforming applications
(for use in 40 CFR 180.920 conforming applications)

LUBA-print® 3520

Very fine Polyethylene wax dispersion (Solids: 35%)

- ❖ Improved slip and rub resistance
- ❖ No impact on gloss
- ❖ Excellent stability in coatings and inks due to nano particle size distribution
- ❖ Usage - start at 2 % and adjust depending on application
- ❖ For use in 40 CFR 180.910 conforming applications
(for use in 40 CFR 180.910 conforming applications)



Contact

MÜNZING North America
1455 Broad Street, 3rd Floor
Bloomfield NJ 07003-3003
USAPhone +1 973 279-1306
Toll Free +1 800 524-0055
Fax +1 973 338-0420
E-Mail info@munzing.us

MÜNZING CHEMIE GmbH
Münzingstrasse 274232
Abstatt GERMANY
Phone +49 7131 987-100
Fax +49 7131 987-125
E-Mail info@munzing.com

MÜNZING Shanghai Co.Ltd.
Rm 1701B-1703
ANo. 20, Lane 1228, ZRT Tower
Jiangchang Rd.
Shanghai 200072
P.R. CHINA
Phone +86 21 6149 1561
Fax +86 21 6149 1563
E-Mail info@munzing.cn

Visit our website for more information:
www.munzing.com