

FinaSperse®

Specialty Wetting & Dispersing Additives for Colour masterbatches & compounds

Attaining high quality dispersion in masterbatches is a widespread challenge faced by the Masterbatch producers & Compounding Experts. Therefore, there is a continuous demand for more effective dispersing agents than the conventional ones (non-oxidized PE waxes & metal stearates) in order to achieve desired superior coloristic properties & processing benefits.

FinaSperse is a range of new generation wetting & dispersing additives designed to help in improving dispersion of organic & inorganic pigments in colour masterbatches & compounds. Pigments typically exhibit a tendency to form agglomerates due to prominent 'pigment-pigment' interactions, which then reflects in an inadequate dispersion in the base polymer. Unique functionalities of FinaSperse additives enable 'wetting' of hard pigment agglomerates through 'Effective Molecular Interactions (EMI)' resulting in preferred 'pigment-FinaSperse additive' interactions. It helps in minimizing an extent of pigment particles agglomeration, which post melt-blending process brings about remarkable pigment dispersion quality improvement.

FinaSperse additives can suitably replace the conventional dispersing additives either entirely or partially to offer techno-commercial benefits to the Masterbatch producers & Compounding Experts.

FinaSperse DT 500 N

- Loading: up to 5%*
- Food contact compliance & REACH registered
- Higher colour strength

FinaSperse DT 700

- Loading: from 5 up to 15%*
- Food contact compliance
- Low FPV requirement (For Fiber application)

*Additive use level (%) on the basis of current non-oxidized PE-wax & metal stearate loading & further highly recommended to be optimized suitably



Tel: + 91 (22) 2102 5000 Extn.100

Email: info@fineorganics.com | Web: www.fineorganics.com

Working principle of FinaSperse

- Basis Non-covalent molecular interactions
- Effective 'wetting' is achieved due to the dispersive electromagnetic interactions (EMI) and the pigment dispersion quality is enhanced by weakening the pigment agglomerate strength

Visual evidence of effective wetting

Schematic: Dispersion process involves wetting, dispersion and distribution of pigment particles



state

Pigment

Additive

Wetting process

Agglomerate strength reduction

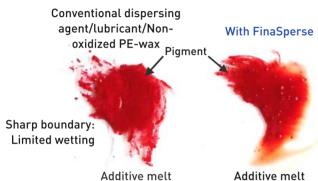




Dispersion process

Aids the breaking of agglomerates in smaller aggregates by shear Stabilization

Preserves quality of dispersion



Diffused boundary: Effective wetting

process

EMI Principle'
Effective Molecular Interactions

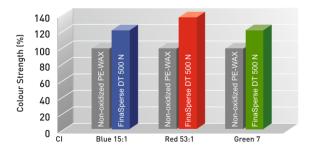
Excellent wetting of pigment particles with FinaSperse additive is evident through rapidly diffusing boundary of pigment agglomerates.

Excellent product performance

FinaSperse DT 500 N



Right half: with FinaSpere DT 500 N Left half: with conventional additive



- Higher colour strength: Through superior dispersion quality
- Potential savings: Desired colour strength can be attained with lower loading of pigment
- Quality improvement: Minimum/no specks on films, improved surface texture

FinaSperse DT 700

Properties	PP Wax	FinaSperse DT 700
Yellow Pigment	44%	44%
Loading of additive	10%	10%
FPV, bar/g	3.2	0.04
Color strength	100	104.6

Properties	PP Wax	FinaSperse DT 700
Red oxide pigment	25%	25%
Loading of additive	12.5%	12.5%
FPV, bar/g	10.1	5.4
Color strength	100	110.5

- Effective wetting and dispersion due to suitable chemical features
- Lower FPV value suitable for critical application such as fiber MBs
- Quality improvement: Minimum/no specks on films, improved surface texture

FinaSperse additives can offer excellent technical benefits translating into quality improvements & savings.

For Further technical assistance, Please contact our Technical Services Department | Email: info@fineorganics.com

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