Lankem

Coating Additives - Overview

Dispersing Agents for Aqueous Systems

Biobased

Introducing a new range of biobased surfactants using our newly patented BioLoop technology, in which the molecule has two hydrophobes, based on either soya or rapeseed, that are then connected with a hydrophilic loop originating from molasses. The two hydrophobes help to achieve maximum bonding and spacing on the particle surface to deliver superior stability and dispersing properties.

Key Features

- Based on BioLoop technology
- Renewable carbon index > 98%
- Ultra-mild
- No skin or eye irritancy
- Low ecotoxicity
- Biodegradable
- A green alternative to conventional dispersing agents
- Hazard label free

Soyabean Variants

Soyabean is from a sustainable crop and is readily available. These dispersing agents can be used in a wide range of aqueous dispersion. Lansperse BIO691 is soluble in solvent and aqueous and can be used in universal tinting formulations. Both Lansperse BIO801 and Lansperse BIO868 are dispersing agents for aqueous systems.

Lansperse BIO691

Lansperse BIO801

Lansperse BIO868

Rapeseed Variants

Rapeseed is a good sustainable crop with no environmental concerns. This range of products will be specifically ideal for dispersions in the cosmetics and personal care industries.

Lansperse RPS11

Lansperse RPS25

Lansperse RPS43

Conventional

All dispersing agents on our range are:

- **VOC free**
- **APE free**

Lanwet JH1

Particularly effective in Yellow 42 Iron Oxide. Also, a powerful substrate wetter.

Lansperse SPA

Used mainly for inorganic powder dispersions.

Lansperse LT87

Based on the new BioLoop technology but has increased hydrophilic chains to boost the dispersing properties. Another dispersing agent that can be used in many pigment types.

Lansperse DS200W

The mainstay dispersing agent that performs across a wide range of pigment dispersions. Can be used singularly as a primary dispersing agent, but for some pigment types, we recommend using Lansperse DS80 in conjunction to help disperse pigments that are difficult to disperse.

Summary of Aqueous Pigment Dispersions

	Black 7	Red 112	Blue 15.3	Yellow PY74	Yellow 42	Red 101	White
Lansperse DS200W	●	●	●	●			
Lansperse LT87	●	●				●	
Lansperse BIO691	●	●				●	
Lansperse BIO801							●
Lansperse BIO868							
Lansperse RPS11	●						
Lansperse RPS25							●
Lansperse RPS43	●		●				●
Lansperse BA6		●	●				
Lanwet JH1					●		

Method of screening for all dispersing agents

Each dispersion was prepared on either a bead mill or a high-shear homogeniser depending on the pigment type. The rheology was measured over time and colour strength , gloss and flocculation were assessed from coating draw-downs.

Hyperdispersants for Non-Aqueous Systems

Key Features

- Powerful dispersing properties
- Enhanced steric hindrance
- Good colour strength
- Low flocculation
- Fast particle size reduction

Hyperdispersants provide effective dispersion of a wide range of solids materials such as inorganic and organic pigments into non-aqueous systems. The hyperdispersant molecule is a high molecular weight polymeric material, the structure of which can be optimised to give the correct affinity to the dispersed particle surface whilst offering good steric hindrance. The careful design of the optimum dispersant architecture can provide a range of products that can allow the preparation of high solids dispersions of low particle size, that exhibit excellent rheology and stability.

Solvent-borne

	Black 7	Red 57.1	Blue 15.3	Yellow 74	Yellow 42	Red 101	White
Lansperse SL58	●		●	●	●		●
Lansperse SL66		●	●		●	●	

Tested in a Laropal A81 / PMA system

UV systems

Lansperse UV51

A multi-functional dispersing agent for use in Blacks, Reds, Whites and Blues.

Lansperse UV93

The very latest technology.

Has been screened in DPGDA, TMP(EO)TA and Ebecryl 452 and found to be effective across a wide range of pigment types.

Compatibility Agent for Aqueous Pigmented Coatings

Lansperse UT57

Give your coating formulations a performance boost. Lansperse UT57 helps to improve colour strength and reduce flocculation problems of existing pigment dispersions and paint formulations.

Can be added during processing or as a post-additive.

Pre-treatment

Post-treatment

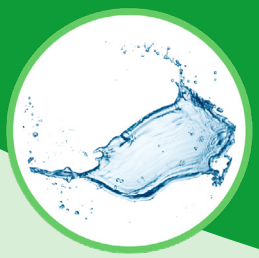
Co-dispersant for aqueous pigment dispersions

Lansperse DS80

As a dispersing agent on its own merits, Lansperse DS80 is anionic in nature and can help to offer a good charge balance in pigments that have an associated charge. This product is used mainly in conjunction with Lansperse DS200W but can also be used with other dispersing agents, such as the new BioLoop versions.

More details for recommendations can be seen in the formulation guides.

Humectant for Aqueous Coatings



Kemectant EB3

A humectant that can be used to protect the in-can drying of paint and coating formulations by maintaining a moist air gap at the top of the tin. Kemectant EB3 also exhibits properties to help improve the freeze-thaw stability of aqueous pigment dispersions and coatings.

Open time is the time available in which the coating applied can be worked into a previously coated area. It is a key performance property for coatings, particularly for brush applications. Humectants slow the open times for better paint drying and minimal brush lines.

Key Features

- Prevents in-can drying
- Increases open time
- Improves freeze-thaw stability
- No VOC

Defoamers

Dfoam AX1

A mineral oil based defoamer for use in a wide of aqueous environments.

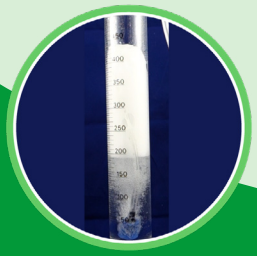
Dfoam AR2

Its the same composition as Dfoam AX1 but contains additional hydrophobic particles to provide an additional defoaming boost.

Both antifoam and defoamer are the same in many respects but the term antifoam suggests the prevention of the generation of foam and a defoamer operates by causing the collapse of the foam that has already been generated.

Both Dfoam AX1 and Dfoam AR2 are silicone-free antifoams that effectively prevent air entrainment, froth and foam. It coalesces minute air bubbles in the liquid, allowing them to rise easily to the surface, and promotes rapid bubble film rupture on the surface of the liquid. Foaming is not only suppressed during manufacture, but it also remains suppressed during stirring and application by the consumer. Foam control is easily and effectively achieved with small percentage increases. This ensures an economical method of foam control.

Recommended dosage level is up to 0.5%.



Foaming before addition of Dfoam

Foam control during aeration after Dfoam added

Universal Tinters

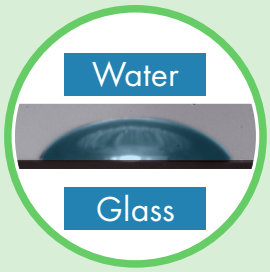
Key Features

- Ease of use can be added to the millbase or as a post additive
- Improves compatibility
- Reduces rub-out (flocculation)
- Improves colour acceptance and hence stronger tints
- Suitable for both inorganic and organic pigments
- Biobased
- Hazard label free

Lansperse BIO691

Lansperse BIO691 is unique as its soluble in both aqueous and a wide range of solvents. As well as being a very effective dispersing agent, it is also biobased.

Substrate wetter for aqueous systems



Lanwet JH1

Lanwet JH1 is an extremely effective wetting agent for a wide range of different substrates.

Lansperse BIO691

A biobased substrate wetter.

	Acetal	Acrylic Sheet	Aluminium	Coated PVC	Copper	GV Steel
Lanwet JH1	●	●	●	●	●	●
Lansperse BIO691	●	●	●			

	Glass	Lino	Nylon 6	Nylon 66	PE1000	PET G
Lanwet JH1	●	●	●	●	●	●
Lansperse BIO691				●		●

	Polycarbonate	Polypropylene	PTFE	Rigid PVC	Stainless steel	Ceramic Tiles
Lanwet JH1		●	●	●	●	●
Lansperse BIO691	●	●				●