

### GENERAL APPLICATION

SOLSPERSE 39000, 36000, 41000 & 71000 are polymeric dispersants which are recommended for use in UV wood coating applications where pigments and silica matting agents are being dispersed.

### BENEFITS

- Increased pigment and matting agent concentration
- Improved pigment & matting agent wetting
- More efficient dispersion (increased productivity through reduced dispersion time)
- Improved colour strength
- Improved gloss for pigmented dispersions

### SPECIAL FEATURES

- SOLSPERSE 39000, 36000, 41000 & 71000 are 100% active dispersants
- Recommended for use in UV wood coatings (pigmented and unpigmented)
- SOLSPERSE 39000 is recommended for organic pigments & carbon black
- SOLSPERSE 36000 is recommended for titanium dioxide & inorganic pigments
- SOLSPERSE 39000 is recommended for wetting and stabilizing silica matting agents
- SOLSPERSE 41000 is recommended for silica matting agent dispersions where settling is an issue
- SOLSPERSE 71000 is recommended for silica matting agent dispersions where low gloss is a key requirement

## METHOD OF USE

SOLSPERSE polymeric dispersants must be added at the millbase or dispersion stage. Because the SOLSPERSE is likely to reduce viscosity, the pigment or matting agent concentration in the millbase may need to be increased to maintain viscosity / shear for efficient dispersion.

## DOSAGE

### For Pigmented Systems

The dosage level of total SOLSPERSE 39000 or 36000 used is typically 2mg of active dispersant per square metre of pigment surface area. This is a suggested starting dosage level, and it is advised that a ladder series is carried out around the 2mg dosage. This can be calculated using this simple formula:

$$\frac{\text{Pigment Surface area (m}^2\text{/g)}}{5} = \text{\% active dispersant on the weight of pigment}$$

### For Unpigmented Systems (Matting Agents)

The amount of SOLSPERSE 39000, 41000 or 71000 required is typically 8% on the weight of silica matting agent. For further guidance please refer to 'Technology and Benefits' literature.

## ORDER OF ADDITION

1. Mix the SOLSPERSE in the millbase monomer/oligomer mixture
2. Add additional additives including the photoinitiator (if applicable) and distribute evenly with stirring
3. Add the pigment or silica matting agent, in stages, and disperse in the normal manner

## DISPERSION FORMULATIONS

TABLE 1 - TYPICAL RANGE OF STARTING FORMULATIONS FOR ORGANIC PIGMENT DISPERSIONS USING SOLSPERSE 39000

Table 1 shows a range of typical starting formulations for organic pigment dispersions using SOLSPERSE 39000

Pigment	CI No	Pigment (%)	Sartomer™ SR306 (%)	Sartomer™ CN104A80 (%)	SOLSPERSE 39000 (%)	SOLSPERSE 5000 (%)	SOLSPERSE 22000 (%)
TIOXIDE™ RHD2	PW 6	65.00	16.85	16.85	1.30	-	-
BAYFERROX™ Yellow 3920	PY 42	48.00	25.53	25.51	0.96	-	-
BAYFERROX™ Red 110M	PR 101	57.50	20.67	20.68	1.15	-	-
MONOLITE™ Red BR	PR 112	28.00	35.16	35.16	1.68	-	-
MONOLITE™ Yellow 2G	PY 74	30.00	34.26	34.25	1.20	-	0.29
IRGALITE™ Blue GLO	PB 15.3	25.00	35.16	35.15	3.75	0.94	-
MONOLITE™ Green GNX-C	PG 7	28.00	34.05	34.03	3.92	-	-
Special Black 250	PBL 7	36.00	29.83	29.85	4.32	-	-

TABLE 2 - TYPICAL RANGE OF STARTING FORMULATIONS FOR MATTING AGENT DISPERSIONS USING SOLSPERSE 71000

Table 2 shows a range of typical starting formulations for matting agent dispersions using SOLSPERSE 71000

Matting Agent	Matting Agent (%)	SOLSPERSE 71000 (%)	Sartomer™ SR4423 (%)	Sartomer™ CN2505 (%)	Sartomer™ CN104D80 (%)	Irgacure™ 500 (%)
SYLOID™ ED3	10.00	0.80	25.12	43.20	17.28	3.60
SYLOID™ ED30	10.00	0.80	25.12	43.20	17.28	3.60
ACEMATT™ TS100	5.00	0.40	26.96	45.60	18.24	3.60
LANCOMATT™ 2000	10.00	0.80	25.12	43.20	17.28	3.60

## SUPPLIERS

TIOXIDE™ RHD2	Pigment supplied by Huntsman Tioxide
BAYFERROX™	Pigment supplied by Lanxess
MONOLITE™	Pigments supplied by Heubach
Special Black 250	Pigment supplied by Evonik
IRGALITE™	Pigment supplied by Ciba
IRGACURE™	Photoinitiator supplied by Ciba
SARTOMER™	Oligomers and monomers supplied by Cray Valley
SYLOID™	Matting agents supplied by Grace
ACEMATT™	Matting agent supplied by Evonik
LANCOMATT™	Matting agent supplied by Lubrizol

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