



TEKsperse S1

High molecular weight polymeric dispersant with cationic functionality

Description:

TEKsperse S1 is a high molecular weight polymer graft of acrylic-styrene type copolymer dispersion agent designed as wetting and dispersing agent for solvent base coating. TEKsperse S1 prevents reflocculation of pigments through steric hindrance and therefore stabilizes the color strength and hue of pigments in paints and pigment concentrates system. Its high concentration of pigment affinic groups improves the wetting and dispersing even at a low dosage. TEKsperse S1 designed to disperse difficult organic pigment especially high color carbon black. The dispersion agent also can be used for other colors such as red, blue, green, and yellow.

Physical constant:

Appearance	Clear to slightly haze yellow liquid
Percent active, %	43-46
Solvents	Blend of glycol and acetate

Application:

TEKsperse S1 can be used in all types of solvent base coatings such as automotive base coat (OEM and refinish), high performance industrial coatings, and coil coatings. TEKsperse S1 is compatible to difference resin chemistries particularly acrylic, polyester, and alkyd (long, medium, and short chain).

Recommend Dosage:

High color carbon black (T area >250 m ² /gram)	20-40% active on carbon black
Medium color carbon black (T area = 200-250 m ² /gram)	10-20% active on carbon black
Regular color carbon black (T area < 200 m ² /gram)	3-5% active on carbon black
Other colors pigment	5-20% active on pigment
Inorganic pigment	5-10% active on pigment

Incorporation:

TEKsperse S1 can be incorporated in the mill base before or after addition of pigment.

US: Chem-Teks
Lowell, MA 01851
TEL: 978-689-5017

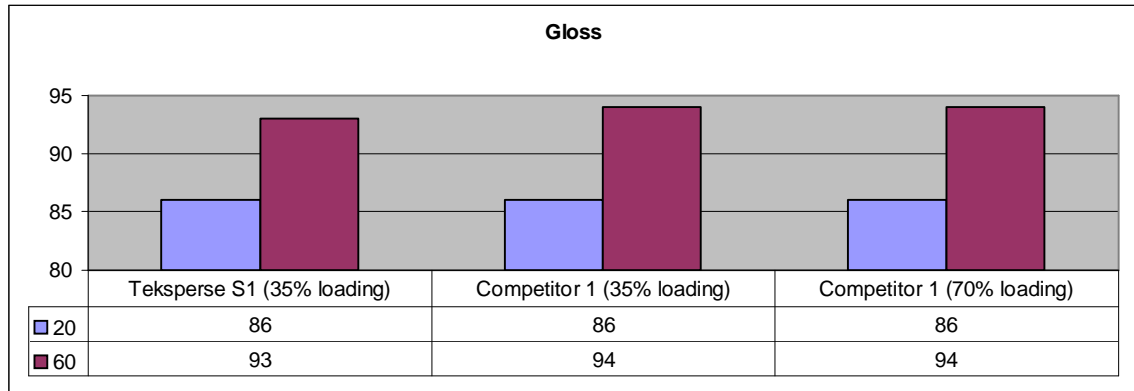
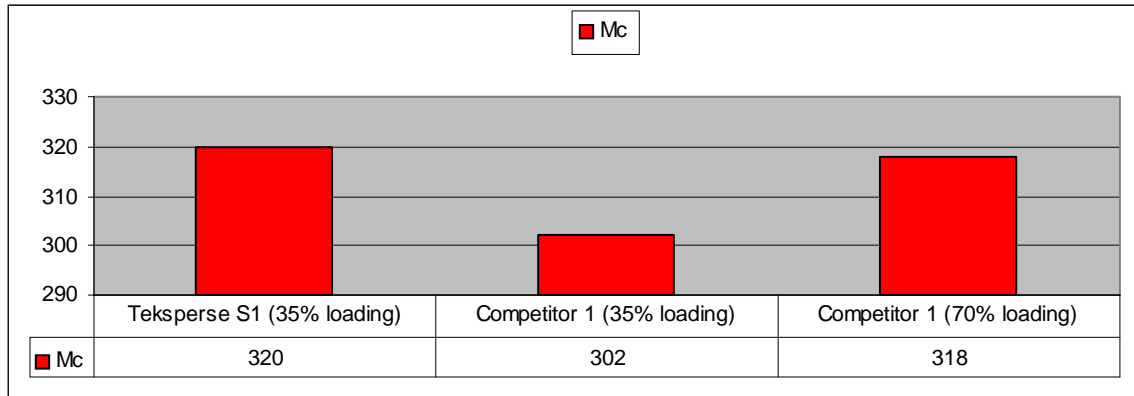
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47301 Petaling Jaya
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TEL: +603-78049508, FAX: +603-78800618

FORMULATION STUDY:

High Solids Acrylic System

MILLBASE:			
Macrynal 510	40	40	40
Aromatic 100	42.25	42.25	34.5
Dispersion agent	7.75	7.75	15.5
Grade	TEKSPERSE S1	COMPETITOR 1	COMPETITOR 1
MONARCH 1300	10	10	10
Premix the above at 3,000RPM for 10 minutes, then run in skandex for 4 hours			
Media	Zirconium Oxide	Zirconium Oxide	Zirconium Oxide
Media size, mm	1.6-2.0	1.6-2.0	1.6-2.0
Millbase constants:			
Total solids, %	41.5	41.5	45
Carbon black loading, %	10	10	10
Dispersant/Pigment, active %	35	35	70
LETDOWN MASTERBATCH:			
Macrynal 510	500	500	500
Cymel 325	120	120	120
Aromatic 100	200	200	200
Premix the letdown masterbatch under good agitation for 30 minutes Finish formulation is as following			
Finish Formulation:			
Letdown masterbatch	150	150	150
Millbase	25	25	25
Formulation constants:			
Total solids, %	52.55	52.55	53.0
Carbon black loading, solids, %	2.7	2.7	2.7
Premix the finish formulation under good agitation for another 20 minutes Adjust viscosity with aromatic 100 to 25-30 seconds # 4 Ford cup for spray application			
Performance Properties:			
Base coat			
DFT, microns	25-28	25-28	25-28
Flash off, RT, minutes	5	5	5
Flash off base coat, 100°C	5 minutes	5 minutes	5 minutes
Clear coat			
DFT, microns	60-65	60-65	60-65
Flash off, RT, minutes	10	10	10
Flash off base coat, 140°C	30	30	30

PERFORMANCE COMPARISION (Acrylic):



FORMULATION STUDY:

Polyester System

MILLBASE:			
26-1035	50	50	50
Aromatic 100	32.25	32.25	24.5
Dispersion agent	7.75	7.75	15.5
Grade	TEKSPERSE S1	COMPETITOR 1	COMPETITOR 1
MONARCH 1300	10	10	10
Premix the above at 3,000RPM for 10 minutes, then run in skandex for 4 hours			
Media	Zirconium Oxide	Zirconium Oxide	Zirconium Oxide
Media size, mm	1.6-2.0	1.6-2.0	1.6-2.0
Millbase constants:			
Total solids, %	58.5	58.5	62.0
Carbon black loading, %	10	10	10
Dispersant/Pigment, active %	35	35	70
LETDOWN MASTERBATCH:			
26-1035	385	385	385
Cymel 325	120	120	120
Aromatic 100	300	300	300
Premix the letdown masterbatch under good agitation for 30 minutes Finish formulation is as following			
Finish Formulation:			
Letdown masterbatch	150	150	150
Millbase	25	25	25
Formulation constants:			
Total solids, %	55.5	55.5	56.0
Carbon black loading, solids, %	2.6	2.6	2.6
Premix the finish formulation under good agitation for another 20 minutes Adjust viscosity with aromatic 100 to 25-30 seconds # 4 Ford cup for spray application			
Performance Properties:			
Base coat			
DFT, microns	25-28	25-28	25-28
Flash off, RT, minutes	5	5	5
Flash off base coat, 100°C	5 minutes	5 minutes	5 minutes
Clear coat			
DFT, microns	60-65	60-65	60-65
Flash off, RT, minutes	10	10	10
Flash off base coat, 140°C	30	30	30

PERFORMANCE COMPARISION (Polyester):

