Product Data Sheet

K-SPERSE® 131
Dispersing and Wetting Agent

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K-SPERSE 131 is a highly effective wetting and dispersing agent for all types of pigments. It is a calcium salt of an alkyl aryl sulfonic acid dissolved in an aliphatic solvent and is recommended for use in solvent borne coatings and inks.

ADVANTAGES:

Faster dispersion times
Better color development and gloss
Lower dispersant levels
Better transparency of transparent pigments
Higher pigment loading due to lower viscosity of pigment paste
Improved corrosion resistance
No deleterious effect on catalyst performance

TYPICAL PROPERTIES:

Appearance	Clear, dark amber liquid
% Active	50
Specific gravity, 25°C	0.93
Volatile	Mineral Spirits

APPLICATIONS:

K-SPERSE 131 is recommended for use as a dispersant for organic and inorganic pigments in most types of resin systems, including alkyd, acrylic, polyester, polyurethane, chlorinated rubber and bituminous. It is particularly recommended for difficult to disperse pigments.

TYPICAL USAGE LEVELS:

Low optimum use levels range from 0.5%-8.0% of K-SPERSE 131 as supplied, based on total pigment weight. The greater the surface area of the pigments used, the greater the level of K-SPERSE 131 will be necessary for proper dispersion. As a guide, we recommend the following approximate amounts of K-SPERSE 131 to use for the following pigments:

Pigment	Surface Area	As Supplies mg/m^2 Pigment	As Supplied Lbs. Per 100 Lbs. Pigment
Rutile Titanium Dioxide	13m^2/g	0.46	0.6
Phthalocyanine Blue	67m^2/g	0.52	3.5
Transparent Iron Oxide	93m^2/g	0.54	5.0
High Color Carbon Black	560m^2/g	0.13	7.0

Follow these guidelines to determine weight percent of K-SPERSE needed per 100 pounds of pigment:

- For most pigments: K-SPERSE level (wt.) = 0.05 x pigment surface area (m^2/g)
- For carbon black pigments: K-SPERSE level (wt.) = 0.13 x pigment surface area (m^2/g)

INCORPORATION:

K-SPERSE 131 should be dissolved in the mill base prior to pigment addition.

SHELF LIFE:

36 months from the date of manufacture, when stored at ambient conditions in the original container.

HANDLING & STORAGE:

Keep the container tightly closed and store at room temperature away from direct sunlight. For further information, please consult the Material Safety Data Sheet.

REGULATORY:

Please refer to Section 15 of the Material Safety Data Sheet for information.

TROUBLE SHOOTING GUIDE:

Which dispersing agent should be used?
For most solvent borne systems, start out with K-SPERSE 152 or 152MS for those systems containing mineral spirits. For solventless ink applications, try K-SPERSE 152PAO. If zinc compounds can not be used try K-SPERSE 131.
For powder coatings, try K-SPERSE 6501 first.

Does K-SPERSE work the same in all systems?
No, with poor wetting resins, (i.e., low MW polyesters, short oil alkyds, etc.) there may not be enough "wetting" power present in the grind medium. The addition of approximately 8% (based on total weight of grind) of a good wetting resin such as Paraloid® AT-400, an acrylic resin supplied by Rohm & Haas, should sufficiently wet out the pigment and help stabilize the grind.

Initially, the grind viscosity is very low but over time it gelled. Is there any way to overcome this?
With some pigments, reagglomeration can lead to gelling or an increase in viscosity. This is unavoidable with some high oil absorption pigments such as high color carbon blacks. However, by adding all or part of the letdown immediately to the grind, the viscosity can be stabilized and the chance of reagglomeration and gelling is dramatically reduced.

Will K-SPERSE affect the cure response of a heat cured coating?
K-SPERSE 152 and 6501 are weakly acidic and therefore will help catalyze amino crosslinked systems. In this case, the amount of catalyst should be reduced. If that is not an option, then try K-SPERSE 131 or 6502.

In epoxy systems, the zinc salt may hurt the stability of the system, in which case we recommend the K-SPERSE 131.

Will K-SPERSE affect the cure response of a 2K urethane coating?
Yes, the higher reactivity of K-SPERSE 152 and 152 MS preclude their use in 2K urethane coatings. For these systems we recommend K-SPERSE 131.