

Technical Data Sheet

Last revised: 01-2019

DELTA-S® 5225

DELTA-S® 5225 is a fatty acid-based polymer to stabilize all kinds of pigments and extenders in water- and solvent-based systems, especially in decorative coatings. Due to the absence of solvents, **DELTA-S® 5225** can be used as a wetting and dispersing agent for VOC-free applications. It is also suitable for the preparation of universal colorants for architectural paints and the improvement of their compatibility with the bases (post-addition). **DELTA-S® 5225** is suitable for **coatings** and **printing inks**.

Specifications:

Composition	: Fatty acid-based polymer
Amine value	: 45-50 mg KOH/g
Acid value	: 44-51 mg KOH/g
Appearance	: Brownish liquid
Active ingredients	: >98%

Methods of analysis can be received upon request

Applications and usage:

Coatings

DELTA-S® 5225 stabilizes organic and inorganic pigments and extenders in water- and solvent-based systems, especially in decorative coatings. In addition, it makes polar ingredients of universal colorants more compatible with non-polar solvent-based paints into which they may be incorporated. This results in:

- Maximum color development of the colorant based on **DELTA-S® 5225**
- Higher pigment loading in colorants
- Optimum color acceptance of universal colorants in the bases

When used in colorants or water-based systems, **DELTA-S® 5225** should be neutralized to pH 8.0-8.5 (1.5 pbw of 25% NaOH solution upon 10.0 pbw of the additive) in order to reach the lowest viscosity and best performance. A solution of **DELTA-S® 5225** at this pH should be fully transparent.

DELTA-S® 5225 should be incorporated in the mill-base before adding the pigments.

For universal colorants	: <u>05.0-10.0% on inorganic pigments</u>
	: <u>10.0-20.0% on organic pigments</u>
Post-addition in bases	: <u>0.5-1.5% on total base weight</u>

Printing Inks

DELTA-S® 5225 is a dispersant for enhancing the dispersion of inorganic pigments and stabilizing the suspension of special effect pigments in water-based and solvent-based media. This results in:

- Improved dispersion or suspension stability
- Improved color strength
- Lower viscosity and/or higher pigment loading
- Higher gloss or luster

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DELTA-S® 5225 has been developed for water-based and solvent-based formulations.

DELTA-S® 5225 is effective with metallic flakes and special effect pigments.

DELTA-S® 5225 is particularly suitable for nitrocellulose-based flexographic applications and for screen printing.

For best results, **DELTA-S® 5225** should be combined with the pre-blended liquid portion of the millbase formulation before addition of the pigment.

1.0-5.0% (delivery form) on TiO₂ and metallic pigments or special effect flakes

5.0-10.0% (delivery form) on Bentonites and thickeners

Safety and Handling:

DELTA-S® 5225 should be handled in accordance with good industrial practice. Detailed information can be found in the Safety Data Sheet.

Storage:

DELTA-S® 5225 should be stored in a cool dry place. When kept in an original unopened container, it will keep up to 5 years from the date of manufacture. The production date is indicated on the container.

Packaging:

60 kg and 200 kg non-returnable metallic containers.

Guiding formulations for universal colorants suited for architectural paints:

The following formulations (in-plant-tinting) have been tested in our technical service laboratory in various white base paints (water- and solvent-based paints) from different manufacturers in the Middle East and their compatibility and stability over time are just stunning.

	PY 74 (OA=37 g/100g, BET=19 m ² /g)	PR 166 (OA=55 g/100g, BET=29 m ² /g)	PB 15:3 (OA=45 g/100g, BET=57 m ² /g)	PR 112 (OA=45 g/100g, BET=30 m ² /g)
Monoethyleneglycol	18.0	18.0	16.0	11.0
DELTA-S® 5225	6.5	10.0	10.0	17.0
Demi-Water	33.8	35.8	32.8	38.7
Sodium hydroxide (25% solution)	1.0	1.5	1.5	2.6
Pigment	40.0	34.0	39.0	30.0
Defoamer	0.5	0.5	0.5	0.5
Preservative	0.2	0.2	0.2	0.2
Total weight	100.0	100.0	100.0	100.0

	PG 7 (OA=42 g/100g, BET=44 m ² /g)	PR 101 (OA=26 g/100g)	PY 42 (OA=34 g/100g)	PW 6 (OA= 16 g/100g)
Monoethyleneglycol	16.0	15.3	18.0	15.5
DELTA-S® 5225	10.0	6.6	7.7	7.3
Demi-Water	32.8	12.0	17.2	14.1

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Sodium hydroxide (25% solution)	1.5	1.0	1.1	1.1
Pigment	39.0	64.0	55.0	61.0
Anti-settling agent	--	0.3	0.3	0.3
Defoamer	0.5	0.5	0.5	0.5
Preservative	0.2	0.3	0.2	0.2
Total weight	100.0	100.0	100.0	100.0