ADDITOL® XW 6565

Technical Datasheet

PRELIMINARY PRODUCT INFORMATION

TYPE

Multifunctional universal grinding medium for high performance SB and low VOC WB architectural paints and colorants

FORM OF DELIVERY (f.o.d.)

Active substance

approx. 38 %

DEVELOPMENT PRODUCT

This product is serving for trial purposes only. Deviations which might occur during transfer into manufacturing in a commercial scale are possible and do not constitute any material defect.

TENTATIVE PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219		
dynamic viscosity (25 1/s; 23 °C)	[mPa.s]	2500 - 7500
Colour / Appearance VLN 250		
colour		yellowish
appearance		clear to opaque
Non-Volatile Matter DIN 55671		
non-volatile matter (150 °C; 10 min; 0,8 g)	[%]	36,0 - 40,0

Not continually determined:

Density (Liquids) DIN EN ISO 2811-2		
density approx. (20 °C)	[g/cm³]	1,05
Flash Point (CCCFP) ASTM D 6450		
flash point	[°C]	> 95
VOC		
according to EU Directives 1999/13/RC and 2004/42/EC	[%]	1.5

SPECIAL CHARACTERISTICS AND APPLICATION

Additol XW 6565 is a unique multifunctional universal grinding medium, designed for performance optimized solventbased, waterbased and all low VOC decorative paints.

The special composition yields the following benefits:
- excellent color development,
- viscosity control and stabilization with all architectural pigments,
- optimized pigment paste formulations for POS tinting,
- glycol & Surfactant free pastes,
- enables formulation of near to zero VOC pigment pastes,
- improved humidity & water resistance performance,
- reduced paint blocking times,
- short grinding times,
- high pigment loading for in plant tinting.

Experimental design techniques have yielded a very versatile powerful universal grinding medium.

RECOMMENDED ADDITIVES

In some cases improved pigment paste properties can be achieved by using:

- Additol VXW 6205 as a dispersing agent for inorganic pigments to reduce mill base viscosity
- Additol XW 6544 as defoamer

For less critical paints Additol XW 6535 might be considered.

STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 365 days.

Synthetic resins containing water may freeze and/or separate at temperatures below 0 °C. However, this will not cause any damage to the product, but it will be necessary for extended heat treatment at 40 - 50 °C with continuous stirring for regeneration. It is therefore recommended to store in a "keep from freezing" environment.

STARTING POINT FORMULA

	3) PY 74 Sudafast Yellow	3) PR 122 Sudafast Pink 2997	4) PV23 Hostaperm VioletRL spec.	3) PB 15.3 Sudafast Blue 2785	5) PY 42 Bayferrox 3920	3) PG 7 Sudafast Green 2727	3) PO 36 Sudaperm Orange 2915	6) PW 6 Kronos 2190
Additol XW 6565	40.00	35.00	50.00	30.00	35.00	42.00	35.00	35.00
deionized water	12.90	30.90	17.90	27.90	7.20	17.90	17.90	2.15
1) Acticide MBS (preserver)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Additol XW 6544 (defoamer)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
2) Aerosil 200	-	-	-	-	0.70	-	-	0.75
pigment	45.00	32.00	30.00	40.00	55.00	38.00	45.00	60.00
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Grinding time (bead mill)	60 min	60 min	60 min	60 min	30 min	60 min	60 min	30 min
Pigment concentration	45 %	32 %	30 %	40 %	55 %	38 %	45 %	60 %
Dynamic Viscosity DIN EN ISO 3219/23 °C d: 100 1/s	580 mPa.s	1100 mPa.s	270 mPa.s	220 mPa.s	440 mPa.s	570 mPa.s	580 mPa.s	800 mPa.s

1) product manufactured by Thor Corporation
2) product manufactured by Evonik
3) product manufactured by Sudarshan
4) product manufactured by Clariant
5) product manufactured by Lanxess
6) product manufactured by Kronos International

PIGMENT PASTE PRODUCTION GUIDELINE

Combine and premix the full quantity of Additol XW 6565, Acticide MBS and Additol XW 6544 on a dissolver for a few minutes. With agitation speed sufficient to maintain a good vortex, slowly add the pigment while controlling the viscosity by adding water as required. Pre-disperse for at least 15 min on a dissolver at a high viscosity level. Then adjust viscosity with water to meet the requirements of the bead mill. Grind to particle size below 5 µm. Check color strength and mill to stable maximum color strength. Temperature during grinding should be between 30 - 50 °C or the maximum temperatures of the pigments used.

DISTINGUISHING FEATURES

Pigment concentrates based on Additol XW 6565 can be used in most solventbased and all waterbased architectural paints with very low contribution to VOC.

GENERAL INFORMATION FOR NOT EVALUATED PIGMENTS

- To achieve maximum color strength in solvent borne systems keep the level of additional water as low as possible.
- The dosage of Additol XW 6565 on pigment should be a minimum of 60 % on inorganic pigments and 80 % on organic pigments.
- Grinding time depends on bead mill used and pigment chemistry.
- To adjust viscosity to special requirements it is recommended to uses PU-thickeners, fumed silica or clays in moderate dosages.
- Pigment pastes developed around Additol XW 6565 do not form crystalline flakes.

If humectants are needed they should be evaluated carefully as some may be detrimental to color strength development.

- Adjustment of pH value is not recommended.

REMARK:

Data contained in this publication are based on careful investigations (and are intended for information only). Due to scale up of this product there is not yet sufficient experience concerning serial production. We can therefore not exclude, that based on future knowledge product data and other indicated properties in upcoming Technical Data Sheets will be subject to change. We reserve the right to leave the product name unchanged, even if product data or other indicated properties will vary from the present product info. Regardless of the data contained in this publication any user is obliged to carry out tests under his own responsibility as to the suitability of the product for a particular use and to investigate the possible violation of industrial property rights of third parties. Information is therefore not binding and cannot be construed as guaranteeing specific properties of products. We apply our General Sales Conditions.