

ADVITROL 100

Product Data

Special Features and Benefits

ADVITROL 100 is a castor-based thixotrope suitable for a wide range of solvent systems. Compared to organoclays, castor-based thixotropes are significantly more thixotropic. This means that paints and coatings formulated with castor-based thixotropes exhibit shear-thinning that does not immediately rebuild upon removal of the shear forces. This type of rheology presents several advantages, mainly in application properties. It is often said that these coatings exhibit a “buttery” feel during brushing. These thixotropes also provide a good balance between sag and leveling and usually are more effective in pigment suspension when compared to organoclay gellants.

Typical Properties

The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Density:	8.48 lbs/US gal (1.02 g/cm ³)
Bulking Value:	0.118 US gal/lb
Particle Size:	100 % < 32 μm
Color/Form:	White Powder
Incorporation Temperature Range Aliphatic Solvents:	130-180 °F (55-82 °C)
Incorporation Temperature Range Aromatic Solvents:	90-120 °F (32-49 °C)

Composition

Castor Oil Derivative

Recommended Use

ADVITROL 100 may be used in trade sales paints, industrial maintenance coatings, marine coatings, and product finishes. ADVITROL 100 is especially useful in formulating high build epoxies and vinyls. Aliphatic, aromatic, and oxygenated solvents are all suitable for the Advitrol types. Note that as the KB Value of the solvent system increases, the incorporation temperature range narrows and the minimum and maximum incorporation temperatures decrease.

Incorporation and Processing Instructions

All castor-based thixotropes are highly solvent/temperature sensitive. ADVITROL 100 is no exception. Care must always be exercised to strictly adhere to the operating temperature constraints imposed by each particular solvent system. ADVITROL 100 should be added at the beginning of the batch, preferably by mixing with the vehicle prior to the addition of pigments. This premixing is designed to disperse the ADVITROL 100 particles prior to the swelling of those particles when the batch reaches operating temperatures. ADVITROL 100 should not be added to batches already at operating temperature as swelling and agglomeration of the Advitrol particles may occur before those particles can be dispersed.

ADVITROL 100

Data Sheet
Issue 10/2013

In order to fully activate the ADVITROL 100, the grind phase should be brought within the activation temperature range. This range is a function of the KB Value of the solvent system. For aliphatic systems 130-180 °F (55-82 °C) is a good approximation of this range. For aromatic systems the suggested range would be 90-120 °F (32-49 °C). It is mandatory that the formulator establish this temperature range for each particular solvent system. The middle of the activation temperature range is the preferred activation temperature. If the maximum activation temperature is exceeded, soft seeds will appear in the paint upon cooling to room temperature. Caution: This "seeding" may also occur if finished paint is stored in a manner that allows the paint to exceed maximum activation temperature during storage. This is a distinct possibility for aromatic systems in the South and West during summer months. Note that temperature readings in the center of the batch, near the disperser blade, may be quite higher than temperature readings taken at the top of the tank. The highest temperature in the batch must not exceed the maximum activation temperature. If the maximum activation temperature is exceeded, seeding may be avoided by agitating the batch during cool-down to the minimum activation temperature. Once seeding has occurred, the batches may be reworked by bringing the batch up to activation temperature and applying intensive shear. Sand milling or ball milling may be required.

Always avoid shocking systems containing ADVITROL 100. Examples of things to avoid are:

1. Adding cold let-down solvent to a hot grind paste.
2. Packaging hot batches in gallon cans and storing in a cold warehouse.

Batches should always be agitated during cool-down to avoid the formation of "false body". "False body" is a structure that is easily broken by shearing and will not recover. It can be responsible for erroneous viscosity readings.

Recommended Levels

ADVITROL 100 is typically used at levels of 3 to 12 pounds per hundred gallons, 0.2 % to 0.8 % by weight of the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

BYK-Chemie GmbH
P.O. Box 10 02 45
46462 Wesel
Germany
Tel +49 281 670-0
Fax +49 281 65735

info@byk.com
www.byk.com/additives

ACTAL®, ADJUST-4®, ADVITROL®, BENTOLITE®, CLAYTONE®, CLOISITE®, COPISIL®, FULACOLOR®, FULCAT®, FULGEL®, FULMONT®, GARAMITE®, GELWHITE®, LAPONITE®, MINERAL COLLOID®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PERMONT®, PURE THIX®, RHEOCIN®, RHEOTIX®, RIC-SYN®, SCP®, TIXOGEL®, Y25® are registered trademarks of BYK Additives.

ANTI-TERRA®, BYK®, BYK®-DYNWET®, BYK®-SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, DISPERBYK®, DISPERPLAST®, LACTIMON®, NANOBYPK®, PAPERBYK®, SILBYK®, VISCOBYK®, and Greenability® are registered trademarks of BYK-Chemie. AQUACER®, AQUAMAT®, AQUATIX®, CERACOL®, CERAFK®, CERAFLOUR®, CERAMAT®, CERATIX®, HORDAMER®, and MINERPOL® are registered trademarks of BYK-Cera.

SCONA® is a registered trademark of BYK Kometra.

This information is given to the best of our knowledge. Because of the multitude of formulations, production, and application conditions, all the above-mentioned statements have to be adjusted to the circumstances of the processor. No liabilities, including those for patent rights, can be derived from this fact for individual cases.

This issue replaces all previous versions – Printed in Germany