+ Accumag® and Plastigel® Thickeners

Thickener Dispersions for SMC and BMC

Chromaflo's thickener technology is the result of an innovative breakthrough in formulation, processing and quality control methodology. Designed specifically for polyester molding applications, these thickeners are the most consistent reactive thickener dispersions available in the market.

Key Benefits

Accumag® and Plastigel® dispersions are ideal for molders and compounders who want to achieve a highly controlled and predictable thickening response in SMC and BMC. Thickening profiles are developed to allow for glass wet-out during compounding and raise viscoelasticity of the compound at maturation. In addition to carefully selected formulations, the thickener technologies include an innovative breakthrough in quality control methodology based on state-of-the-art rheological instrumentation, analysis and advanced interpretation.

Properties

Accumag® and Plastigel® products contain reactive alkaline earth metal oxides and/or hydroxides ranging from 22 to 50 percent by weight. Typical product viscosities range from 11,000 to 30,000 cP (mPa*s) depending on solids concentration. All products are dispersed in a low molecular weight unsaturated polyester resin.

The unsaturation allows for cross-linking through double bonds as occurs in peroxide-cured polyesters or vinyl esters in the presence of a reactive monomer such as styrene. In addition, the secondary hydroxyl groups provide a means to crosslink the resin with polyisocyanates. When cross-linked or covalently reacted, the resin is fully converted to a portion of the matrix solids. Accumag® and Plastigel® products contain no solvents or reactive monomers and are heavy metal free*.

Applications

Thickener dispersions are designed to deliver consistent and predictable thickening for the following applications/processes.

- Sheet Molding Compound (SMC)
- Bulk Molding Compound (BMC)
- Thick Molding Compound (TMC)
- Cured-In-Place Pipe (CIPP)

Handling and Storage

Proper handling is essential to maintain good quality. Containers should be tightly sealed when not in use. This will prevent the absorption of atmospheric moisture and minimize the chance of airborne contamination. Containers should be stored in a manner as to protect them from temperature extremes (0-45°C, 32-120°F). It is recommended that the containers be mixed prior to use if stored longer than 30 days. Shelf life of Accumag® products is 12 months from the date of manufacture in unopened containers. Reference the SDS for more product care and safety information.

* Chromaflo Technologies does not intentionally add any heavy metals, reactive monomers or solvents to these dispersions. However, some raw materials may contain impurities in trace amounts.

Product Code	Viscosity	MgO, Wt. %	Reactivity Index[1]	Specific Gravity	Color
AM-91048-DH	12,000-20,000 cP (mPa*s)	22%	0.90-1.10	1.7	Neutral
AM-09059	11,000-25,000 cP (mPa*s)	30%	0.85-1.15	1.5	Neutral
AM-9033	16,000-30,000 cP (mPa*s)	42%	0.85-1.15	1.5	Neutral
AM-90864[2]	15,000-30,000 cP (mPa*s)	42%	0.90-1.10	1.5	Neutral
PG-91146Y	15,000-30,000 cP (mPa*s)	50%	0.85-1.15	1.5	Neutral
MMEA-90856	2,000-5,000 cP (mPa*s)	30%	0.80-1.20	1.2	Neutral

Products listed represent standard thickeners. Custom developed thickeners are available with special consideration for initial reactivity and plateau viscosity in a specified resin system. If a custom thickener product is needed, please contact Chromaflo Technologies.

NOTE: All data provided are typical values and given for guidance only. Refer to products' technical data sheet for specifications. It is the responsibility of the user to test and verify performance in their individual application.

(1) The Reactivity Index is determined per batch in comparison with the standard (Standard Reactivity Index = 1).

(2) AM-90864 has been formulated to provide a slower onset reactivity as compared to AM-9033 while providing the equivalent plateau.

Chromaflo Technologies

Where Art Meets Technology

CHROMAFLO.COM

Published September 2021 Americas