

# SOLPLUS™ HYPERDISPERSANTS

## PLASTICS MADE EASY

### POLYMERIC DISPERSANTS FOR THERMOSETS

Thermosetting resin systems present unique challenges to dispersion producers and users of these materials. There exists a delicate balance between dispersion properties like color development and dispersion stability versus the need of the final formulated product to crosslink in the desired timeframe without significant impact from the dispersion. Solplus Hyperdispersants can help in formulators' efforts to balance these properties. Whether the polymer is epoxy, unsaturated polyester, acrylic or polyaspartic there is a Solplus dispersant designed to optimize performance in that polymer.

### WHAT WE ADD MAKES THE DIFFERENCE.™

- MORE UNIFORM DISPERSION
- EFFECTIVE AS TREATMENTS FOR FILLERS AND FUNCTIONAL MATERIALS
- EASY FORMULATION INCORPORATION

PRODUCT	DESCRIPTION
<b>Solplus™ D560</b>	New product for high and low temperature cure and some ambient systems; Low viscosity for easy handling
<b>Solplus™ D540</b>	Dispersant for heat cured UPE
<b>Solplus™ D541</b>	Dispersant for low temperature and some ambient cured UPE
<b>Solplus™ D570</b>	Effective in ambient cured systems with minimal impact on cure
<b>Solplus™ D520</b>	Dispersant for use in acrylic syrup
<b>Solplus™ D510</b>	Dispersant for heat and ambient cured UPE and epoxies
<b>Solplus™ D610</b>	Dispersant for styrene-containing and styrene-free gel coats, UPE, epoxies and polyaspartics
<b>Solplus™ R710</b>	Dispersant for organic pigments in gel coats and other systems

USAGE RECOMMENDATION						
PRODUCT	ORGANIC PIGMENT	INORGANIC PIGMENT	FILLERS	UPE	EPOXY	ACRYLIC
<b>Solplus™ D560</b>	—	●	●	●	●	●
<b>Solplus™ D540</b>	—	●	●	●	—	—
<b>Solplus™ D541</b>	—	—	●	●	—	—
<b>Solplus™ D570</b>	—	●	●	●	○	●
<b>Solplus™ D520</b>	●	●	●	—	—	●
<b>Solplus™ D510</b>	●	—	○	●	●	—
<b>Solplus™ D610</b>	●	○	○	●	●	—
<b>Solplus™ R710</b>	●	○	○	●	○	—

● Highly Recommended ○ Suitable — Not Recommended

## FEATURES & BENEFITS

- ALLOWS FOR HIGH PIGMENT AND FILLER LOADING WITH GOOD FLOW PROPERTIES
- HIGHER COLOR STRENGTH DEVELOPMENT
- EXCELLENT VISCOSITY REDUCTION
- ENHANCES PROPERTIES OF COMPOSITES THROUGH CONSISTENT DISPERSION OF PARTICULATES

## SOLPLUS™ D610 ELIMINATION OF COLOR SEPARATION



Solplus™ D610

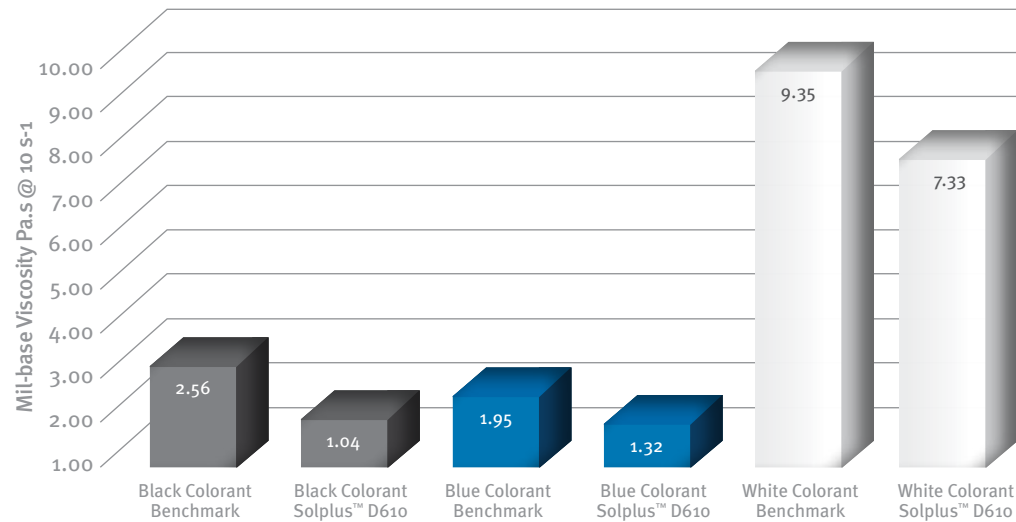
Commercial Benchmark

White and blue UPE colorants milled with Solplus™ D610 and the commercial benchmark were blended and mixed with an isophthalic pre-accelerated thixotropic gelcoat to produce a laminate.

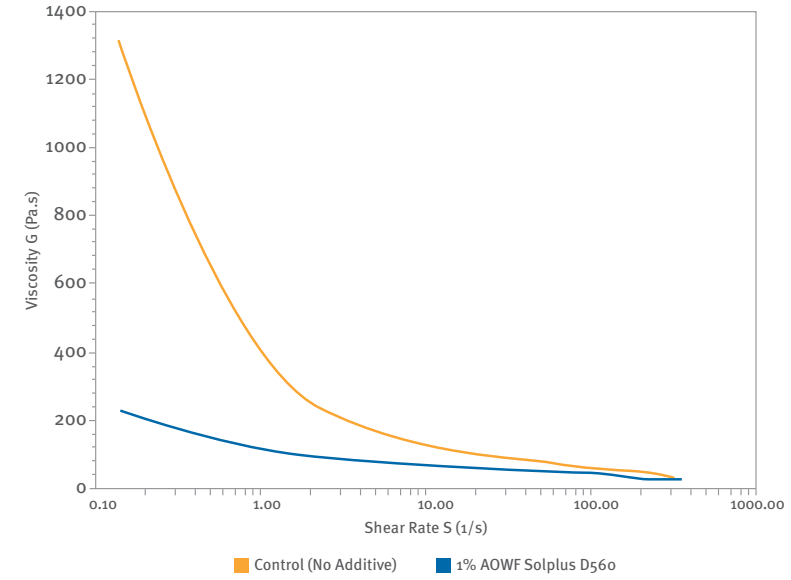
## GUIDE FORMULAS – UPE COLORANTS

UPE COLORANTS	WHITE	BLUE	BLACK
UPE Resin	23.50	75.00	80.00
Solplus™ D610	1.50	4.00	10.00
Solsperse™ 5000s		1.00	
Kronos 2360	75.00		
Printex V			10.00
Heliogen Blue K7090		20.00	
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Pigment Loading</b>	<b>75%</b>	<b>20%</b>	<b>10%</b>
<b>% AOWP</b>	<b>2%</b>	<b>20%</b>	<b>100%</b>

## SOLPLUS™ D610 VISCOSITIES

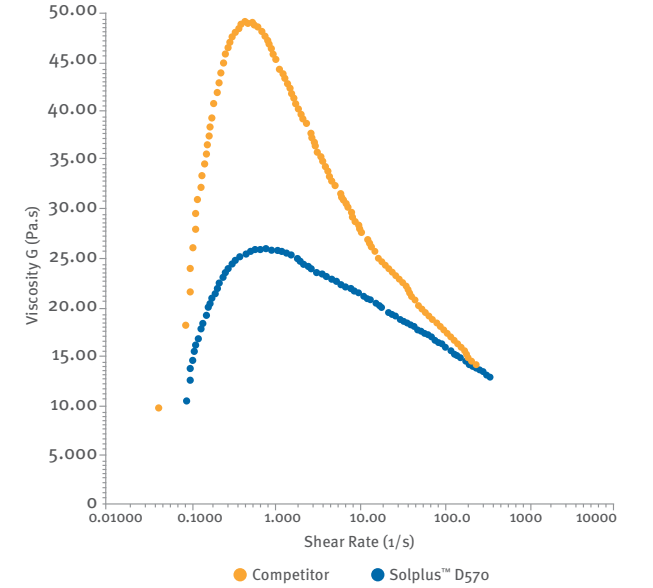


## VISCOSITY OF 67% (210 PHR) DISPERSION OF ATH IN UPE RESIN



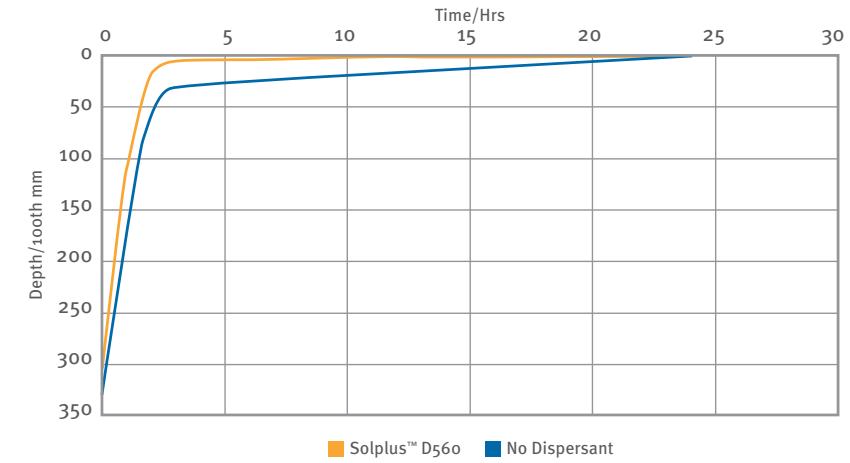
Solplus™ D560 significantly reduces viscosity and improves dispersion. AOWF = Active on weight of filler.

## VISCOSITY OF 66% (200 PHR) DISPERSION OF ATH IN PRE-ACCELERATED UPE RESIN

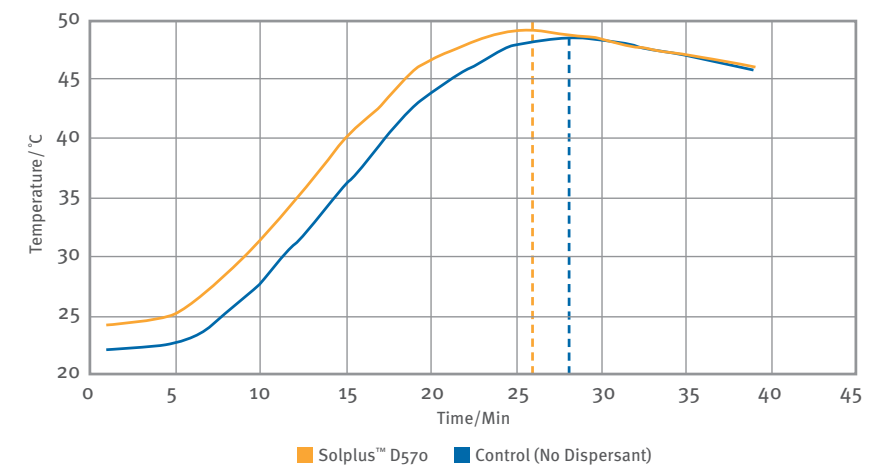


Solplus™ D570 significantly reduces viscosity and improves dispersion in pre-accelerated UPE. 1.5% AOWF Dispersant.

## MATURATION CURVE - MAXIMUM DEPTH OF PROBE



## TEMPERATURE CHANGE OF CaCO<sub>3</sub> FILLED UPE ON CURING



Visit us at:  
[www.solplus-additives.com](http://www.solplus-additives.com)

**Lubrizol Advanced Materials, Inc.**

9911 Brecksville Road, Cleveland, OH 44141

800.380.5397



The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. **THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

Trademarks owned by The Lubrizol Corporation or its affiliates. ©The Lubrizol Corporation 2019, All Rights Reserved.

19-175350