

Product Information

Paints, Inks and Coatings

Dow Corning® 29 Additive

FEATURES

- Paste
- Enhances flow, leveling and gloss
- Provides antiblocking properties
- Compatible with acrylic, epoxy, polyesters and urethane systems
- Can prevent pigment flotation
- Meets BGA recommendations after full evaporation of solvent from final coating

COMPOSITION

- Reactive silicone glycol surfactant with carbinol functionality
- ABA copolymer

Carbinol functional silicone glycol surfactant used to provide leveling and wetting and improve gloss

APPLICATIONS

Dow Corning® 29 Additive has been successful in these industrial applications:¹

To improve leveling and wetting:

Ink:	Solvent-based flexographic ink
	Water-based letterpress ink at 0.2-0.5%
Coating:	Solvent-based coil coating
	Solvent-based overprint varnish

To provide gloss:

Coating:	Solvent-based coil coating
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¹All usage levels are weight percents based on the total formulation.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test	Unit	Result
Specific Gravity at 25°C (77°F)		1.04
Flash Point, closed cup	°C (°F)	67 (153)
Viscosity at 25°C (77°F)	cs	310
Glycol Type		Polyethylene oxide
Number of OH sites/molecule		2
Suitable Diluents		Water, alcohols, toluene, methylene chloride

HOW TO USE

Dow Corning 29 Additive is effective at low concentrations. The amount required depends on the type of formulation, the solvent it contains, resin system and total system solids.

Dow Corning 29 Additive is generally effective at concentrations typically ranging from 0.2-1.0 weight percent, based upon total formulation. This additive can be added during the grind, let down or be post-added. Characteristics may vary when used with different systems and formulations.

Dow Corning 29 Additive is compatible with acrylic, epoxy, polyesters, and urethane systems. Thorough preproduction testing is necessary to ensure expected performance.

RESULTS OF ULTRAVIOLET OVERPRINT VARNISH STUDIES

This data is based on laboratory studies. The control in both of these studies consisted of the formulation with no additives added.

In Formulation 1, *Dow Corning* 29 Additive increased the mar resistance over the control by 18 percent. The 20° gloss of the overprint varnish was not compromised to provide increased mar resistance.

Figure 1: Mar Resistance Performance in Formulation 1

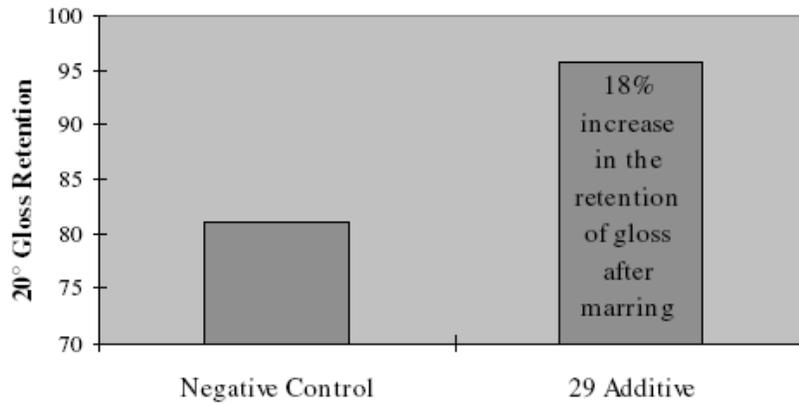
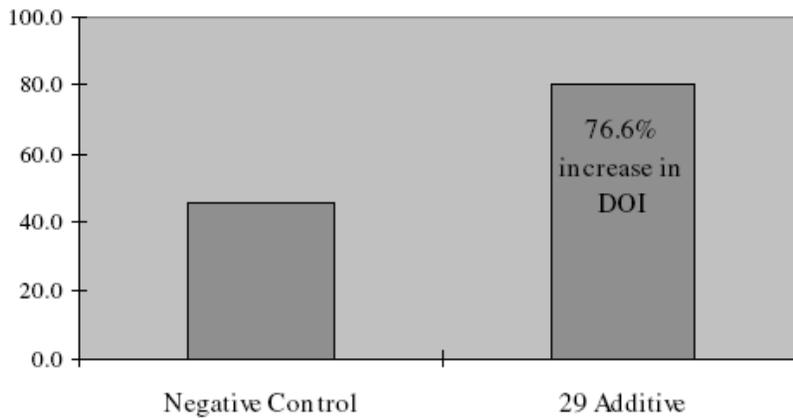


Figure 2: Appearance via DOI in Formulation 2



In Formulation 2, *Dow Corning 29 Additive* provided a 76.6 percent increase in the distinction of image (DOI) thus indicating an improvement in appearance of the automotive topcoat.

**HANDLING
PRECAUTIONS**

Caution: Direct contact with eyes may cause irritation. Repeated and pro-

longed exposure may cause irritation to the skin.

Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information. The material safety data sheet is available on the Dow Corning website at www.dowcorning.com. You can also obtain a copy from your

local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

USE LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses. Not for human injection.

SHIPPING LIMITATIONS

Class 2 freezable product. Not damaged/avoid freeze.

STORAGE AND SHELF LIFE

When stored above -50°C (-58°F) and below 50°C (122°F), *Dow Corning 29 Additive* has a shelf life of 30 months from manufacture. Refer to product packaging for “Use By” date.

PACKAGING

Dow Corning 29 Additive is available in 16.9-fl oz (500-mL) samples; 44-lb (20-kg) pails and 441-lb (200-kg) drums.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com, or consult your local Dow Corning representative.

Test Conditions

Formulations

Dow Corning 29 Additive was tested in an ultraviolet overprint varnish and solvent-based automotive topcoat. Formulation 1 consisted of a diacrylate, an aromatic urethane diacrylate and a chlorinated polyester with *Dow Corning 29* Additive added to the formulation at 0.5% based on total formulation at 1200 rpm. Formulation 2 consisted of a solvent-based acrylic melamine system with *Dow Corning 29* Additive added to the formulation at 600 ppm at 1000 rpm.

Formulation 1

<u>Ingredient</u>	<u>Percent</u>
Eb-584	54.7
HDODA	18.2
Eb-4827	18.2
Eb-P115	4.6
Irgacure 500	4.3

Formulation 2

<u>Ingredient</u>	<u>Percent</u>
<i>Joncryl</i> ^{®1} 500	58
Cymel 303	20
Butanol	8
Methyl Amyl Ketone	12.9
Nacure 2500	1.1

Samples

Formulation 1 – Drawn down on an N2C Lenetta chart using a #3 wire wound rod.

Formulation 2 – Sprayed using a siphon spray gun onto an ACT cold roll steel panel with a wet film thickness of 3-4 mils, flashed for ten minutes, and cured at 130°C (266°F) for 20-30 minutes.

Mar Resistance

Using a Sutherland Rub Tester, the sample was marred at 100 double rubs across an uncoated NWH Lenetta chart using a four-pound weight at a rate of 42 rubs per minute. The 20° gloss readings were measured with a Micro Tri-Gloss Meter.

Distinctness of Image

Tested using a Landolt Light box, Model GI-GB11-8GM.

¹Trademark of S.C. Johnson & Son Inc.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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