

Industrial Coatings

Technical Data Sheet

Joncryl[®] 848



Product Description	Joncryl[®] 848 is a solid flake acrylic resin for gloss control in industrial hybrid powder coating applications.
Key Features & Benefits	<ul style="list-style-type: none">- Chemical resistance- Low cure- Stable color and gloss over a wide bake range- Matte gloss
Chemical Composition	Carboxyl functional acrylic resin

Properties

Typical Properties	Appearance	clear flake
	Molecular weight	~ 5,000
	Non-volatile	> 98.5%
	Acid number (0.3g in 3A alcohol)	~ 225
	Equivalent weight	261
	Softening point	127°C
	Tg	67°C

These typical values should not be interpreted as specifications.

Applications

Joncryl[®] 848 is a high acid functional acrylic resin designed specifically as a gloss control additive for acrylic epoxy hybrids or for use as a stand-alone resin. Typical recommended use levels are 3 – 9 parts per hundred resin as a modifier. Over this range, a wide variety of glosses can be achieved without detracting from the excellent properties associated with acrylic hybrids.

Using Joncryl[®] 848 in combination with Joncryl[®] 819 or Joncryl[®] 820, economical low gloss acrylic hybrid formulations can be made which are often much more cost effective than either polyester epoxies.

An added benefit of using Joncryl[®] 848 is that it provides excellent color and gloss stability over a wide range of bake temperatures, a negative feature of many other common powder de-glossing agents.

Joncryl[®] 848 is recommended for applications such as:

- Interior/exterior general metal powder coating applications

Formulation Guidelines

The table below shows the effect of Joncryl® 845 at various levels in a Joncryl® 819 acrylic hybrid. Caution must be taken to adjust the formulation for stoichiometry to achieve maximum properties.

PHR	60° Gloss
5.0	56
7.0	31
7.4	25
8.0	23
9.0	21

Starting Point Formulation

The following starting point formulation is recommended for an initial evaluation of Joncryl® 848. Additional optimization of the formulation may be required to achieve desired results for specific applications.

Joncryl® 848 ACRYLIC HYBRID LOW GLOSS

Materials	#148-5E White	#148-18D Black
Joncryl® 819	23.51	-
Joncryl® 848	4.59	15.99
Araldite ¹ GT 6063	33.57	41.84
Modaflow ² III	0.50	1.00
Benzoin	0.30	0.50
Actiron ³ NXJ 60	0.25	-
Ti-Pure ⁴ R-960	37.28	-
Barytes	-	40.00
Raven ⁵ 5000	-	0.67
Total	100.00	100.00

Formulation Attributes

Pigment:Binder ratio	0.60	0.70
Joncryl® 845 level (PHR)	7.4	100

Extrusion Parameters

BUSS PLK46	
Zone 1 (kneading screw temperature)	60°C
Zone 2 (jacket temperature)	105°C
RPM	200

Matte Black Coating Performance Properties

Powder Properties	White Formula	Black Formula	Test Protocol
Gel time @ 200°C	54 seconds	65 seconds	PCI test procedure #6
Storage stability	Free flowing	Free flowing	7 days at 40°C
Film Properties			
Gloss, 60° / 20°	25 / 5	7	ASTM D-523
Pencil hardness	3H+	3H+	ASTM D-3363-74 Eagle Turquoise
Direct impact resistance	160 in/lbs	160	ASTM D-2794
Indirect impact resistance	40 in/lbs	160	ASTM D-2794
Conical mandrel (1/8")	Pass	Pass	
Crosshatch adhesion	95%+	95%+	ASTM D-3359-83

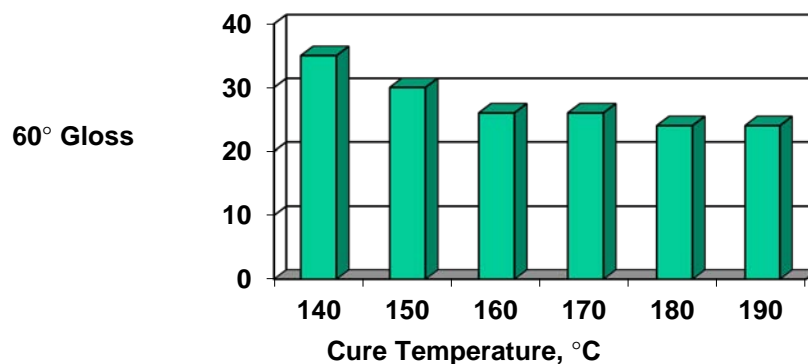
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Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of personal protective equipment.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Joncryl® 845.

Important

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