

Joncryl[®] 804

General

Joncryl[®] 804 is a high equivalent weight, hydroxyl functional solid flake acrylic polyol for liquid polyurethane and industrial powder coating applications.

Key features & benefits

Wide solvent selection latitude
Exceptional appearance for powder coatings
Excellent exterior durability and chemical resistance
Excellent gloss and gloss retention
High equivalent weight for economical urethane formulations

Chemical nature

Hydroxy functional acrylic polyol

Properties

Appearance

solid flake

Typical characteristics

(should not be interpreted as specifications)

Solids(wt)	100%
Solids(volume)	100%
Hydroxy number of solids	45
Equivalent weight as supplied	1250
Equivalent weight of solids	1250
Density as supplied	9.6 lbs/gal 1.15 g/mL
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Tg (measured)	70°C

Application

Joncryl[®] 804 is a high equivalent weight, hydroxyl functional acrylic polyol for economical liquid polyurethane and powder coating applications.

Joncryl[®] 804 is recommended for applications such as:

- Interior/exterior general metal powder coating applications
- Interior/exterior plastic component coating applications
- Exterior wood coatings for furniture applications
- Automotive refinish applications

Formulation Guidelines

Crosslinker Selection

For maximum gloss retention properties, aliphatic isocyanates are recommended. The trimer or biuret versions of hexamethylene diisocyanate can be used. The trimer version may give better gloss retention and reactivity. A ratio of 1.05:1 of isocyanate to hydroxyl is normally recommended in the industry. However, a ratio of 1:1 of isocyanate to hydroxyl is more economical and does not sacrifice performance properties.

Solvent Selection

Because the hydroxyl functionality of alcohols and glycol ethers can react with the isocyanates, their use should be avoided. Urethane-grade solvents should be used when available. Ketone solvents will give the best viscosity/VOC due to a combination of good solvency and low density. Esters generally provide the next best viscosity/VOC, but do not provide as low of a viscosity/VOC as the ketones due to their higher density. Generally, the lower the molecular weight of the solvent within the family, the lower the viscosity/VOC that is obtainable. Aromatics such as xylene and toluene provide good solvency and can be readily used in combination with the more polar solvents. Glycol ether acetates can be used but normally do not provide as low viscosity/VOC. PM- acetate should be avoided due to its film retention characteristics.

Catalysis

Catalysis with 0.005% dibutyltin dilaurate on total binder solids is normally recommended. Higher catalyst levels will result in shorter pot lives and faster cure rates. Other catalysts such as zinc octoate and other metallic soaps can also be used.

Economical Liquid Polyurethane Coatings

Joncryl® 804 is a solid flake acrylic polyol resin with a high equivalent weight that can be used to manufacture economical liquid urethane coatings at conventional solids. Joncryl® 804 has a high equivalent weight of 1,250 that results in a low isocyanate demand and low coating cost. Joncryl® 804's polyol acrylic backbone provides gloss retention and performance characteristics suitable for urethane applications. Joncryl® 804 should especially be considered where cost of the supplied coating is a priority. Joncryl® 804 is also used in powder coating applications.

For further detailed application information please contact our Technical Support Department.

Safety

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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