# PARALOID<sup>™</sup> B-44 100% Solid Grade Thermoplastic Acrylic Resin

## Description

PARALOID B-44 solid grade acrylic resin provides an outstanding combination of hardness, flexibility, and adhesion to various substrates. It also permits wider latitude in formulating in solvents that are suitable for specific applications. The resin is slightly softer and more flexible than PARALOID A-21 acrylic resin and has excellent adhesion to various substrates.

PARALOID B-44 acrylic resin can be dissolved in toluene, xylene, selected esters, acetone, and methyl ethyl ketone. PARALOID B-44 is not soluble in most alcohols and aliphatic hydrocarbons as the sole solvent. It is well suited for a variety of applications, including treated metal, copper, zinc, brass, treated aluminum, concrete floors, and certain plastics.

### Solubility

Information about the solvent compatibility of PARALOID B-44 acrylic resin can be found in Rohm and Haas brochure 82A114--Paraloid Solid Grade Resins, Solvent Selection Chart.

#### **Typical Properties**

These properties are typical but do not constitute specifications.

Physical Form	Pellets
Chemical Composition	MMA Copolymer
Tg, °C	60
Bulk Density, 25°C, Ib/gal	9.8
Solubility Parameter	9.4
Ultimate Hardness of Clear Films, KHN	15 to 16

## Properties in White Lacquers<sup>1</sup>

		Whiteness			
Tukon Hardness		(K color low numbers	s best)	Cross Hatch <sup>3</sup>	
30 min. at 180°F	6.5	30 min. at 300°F	7.6	30 min. at 180°F	0
30 min. at 300°F	18.2	16 hrs. at 350°F	9.0	30 min. at 300°F	0
Pencil Hardness		Flexibility <sup>2</sup> , 1/8, 1/4, 1/2 inch mandrels		Mustard Staining (30 minute exposure)	
30 min. at 180°F	2H	30 min. at 180°F	2, 2, 1	30 min. at 180°F	None
30 min. at 300°F	5H	30 min. at 300°F	3, 3, 2	30 min. at 300°F	Trace
Gloss, 20°		Printing, 2 psi for 1 hour at 140°F		Gasoline Resistance (15 minute exposure)	
30 min. at 180°F	71	30 min. at 180°F	Moderate	30 min. at 180°F	ОК
30 min. at 300°F	78	30 min. at 300°F	Trace	30 min. at 300°F	ОК
Gloss, 60°		Knife Adhesion		Spray Conditions	
30 min. at 180°F	92	30 min. at 180°F	Excellent	Viscosity, No. 4 Ford Cup, sec.	15
30 min. at 300°F	93	30 min. at 300°F	Excellent	Solids Content, %	24.0

Note: Drying the coatings at 300°F for 30 minutes simulates final properties of the resin.

<sup>1</sup> The white lacquers were formulated at a titanium dioxide/binder ratio (solids basis) of 30/70. The properties were determined after coatings were sprayed on Bonderite 1000.

<sup>2</sup> The degree of cracking at the bend over each mandrel is rated on a 0 (no failure) to 10 (complete flaking) scale.

<sup>3</sup> The degree of flaking at the scribed cross hatch is rated on a 0 (no failure) to 5 (complete lift off) scale.

## Safe Handling Information

Rohm and Haas Material Safety Data Sheets (MSDS) contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Under the OSHA Hazard Communication Standard, workers must have access to and understand MSDS on all hazardous substances to which they are exposed. Thus, it is important that you provide appropriate training and information to your employees and make sure they have available to them MSDS on any hazardous products in their workplace. Rohm and Haas Company sends MSDS on non-OSHA-hazardous as well as OSHA-hazardous products to its customers upon initial shipment (including samples) of all its products (whether or not they are considered OSHA-hazardous). If you do not have access to one of these MSDS, please contact your local Rohm and Haas representative for an additional copy. Updated MSDS are sent upon revision to all customers of record. MSDS should be obtained from your suppliers of other materials recommended in this bulletin.

Rohm and Haas Company is a member of the American Chemistry Council (ACC) and is committed to ACC's Responsible Care<sup>®</sup> Program.

PARALOID is a trademark of Rohm and Haas Company or of its subsidiaries or affiliates.

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

Suggestions for uses of our products or the inclusion of descriptive material from patents and the citation of specific patents in this publication should not be understood as recommending the use of our products in violation of any patent or as permission or license to use any patents of the Rohm and Haas Company.



© Rohm and Haas, 2007 All rights reserved.

December 1996 82A118