



## ROPAQUE™ SN-1055 Opaque Polymer

For Paper, Paperboard and Thermal Paper Coatings

### Regional Product Availability

- Asia-Pacific

### Description

ROPAQUE™ SN-1055 Opaque Polymer is a hollow sphere pigment for paper and paperboard coatings. When compared with mineral pigments or solid bead plastic pigments, it offers benefits to coated paper and paperboard in three main areas: paper characteristics, printing performance and production efficiency. ROPAQUE™ SN-1055 Opaque Polymer is supplied as an APEO-free<sup>(1)</sup>, aqueous dispersion of styrene acrylic polymeric particles where each particle presents a water-filled core. Upon drying, water diffuses through the particle shell leaving the hollow air-filled structure.

### Paper Characteristics

- Very high gloss
- Smooth surface
- Lighter weight at equal or greater bulk
- Increased bulk at equal or lower weight
- Excellent opacity and brightness
- Better thermal resistance than solid bead pigments
- Excellent print gloss
- Excellent print fidelity

### Production Efficiency

- Easy incorporation without additional dispersants or surfactants
- Offers titanium dioxide (TiO<sub>2</sub>) reduction without loss in opacity and brightness
- Offers easier and/or faster calendaring (pressure may be reduced)
- Inert in recycling processes

### Typical Properties

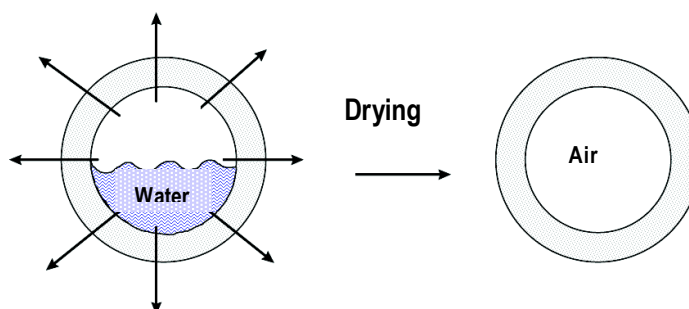
(These properties are typical but do not constitute specifications).

Property	Typical Values
Appearance	Opaque, white to off-white liquid
Solids, by weight, %	26.5
Density, wet, (g/ml)	1.03
Density, dry, (g/ml)	0.5
pH	8.9
Average particle size, µm	1.0
Void fraction, %	55
Viscosity (Brookfield LV #2, 60 rpm, 25°C), cps	< 350
Storage precautions	Protect from freezing

(1) Manufactured without the use of Alkyl Phenyl Ethoxylate (APEO) surfactants.

## **ROPAQUE™ Opaque Polymers**

ROPAQUE™ Opaque Polymers are non-film-forming, emulsion polymers, containing a water filled void. During the drying process of the paint, the water in the void diffuses through the polymer shell and leaves an air void. Due to the difference in refractive index between air and the surrounding polymer, light is effectively scattered, contributing to film opacity.



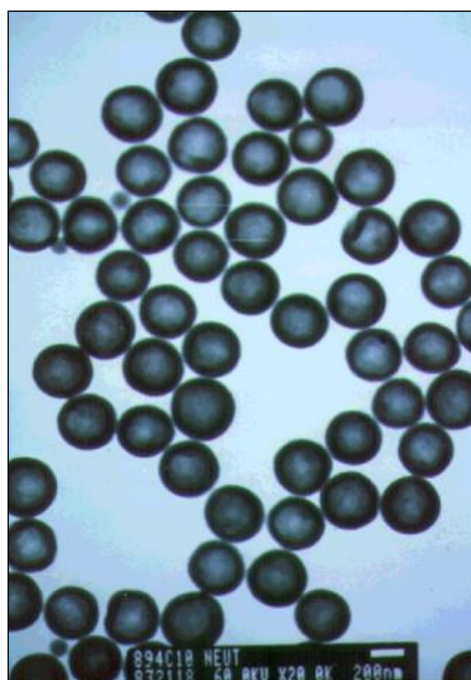
ROPAQUE™ Opaque Polymers have a narrow particle size distribution and are similar in size to TiO<sub>2</sub> particles. This allows them to act like ultra-fine inorganic extenders, spacing TiO<sub>2</sub> effectively and therefore increasing its efficiency as a primary pigment.

Compared to inorganic small particle size pigment extenders, ROPAQUE™ Opaque Polymers have a very low specific surface area due to their uniform, spherical shape and non-porous surface. The binder demand of ROPAQUE™ Opaque Polymer is therefore significantly lower, giving the possibility of formulating at higher pigment volume concentrations.

## **ROPAQUE™ Opaque Polymer Characteristics**

### **Consistent Product Quality**

Dow's long experience with opaque polymer technology has enabled the development of robust production processes leading to consistent product quality. The particle size distribution for instance is key, and a narrow distribution leads to maximum light scattering efficiency.



## Handling Precautions

Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

## Storage

Store products in tightly closed original containers at temperatures recommended on the product label.

## Disposal

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Coating Materials Technical Representative for more information.

## Chemical Registration

Many countries within the Asia-Pacific require the registration of chemicals, either imported or produced locally, prior to their commercial use. Violation of these regulations may lead to substantial penalties imposed upon the user, the importer or manufacturer, and/or cessation of supply. It is in your interests to ensure that all chemicals used by you are registered. Dow does not supply unregistered products unless permitted under limited sampling procedures as a precursor to registration.

## Note on Asia-Pacific Product Line

Product availability and grades vary throughout the countries in Asia-Pacific. Please contact your local Dow Coating Materials representative for further information and samples.

## Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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