



ROPAQUE™ TH-2000 Hollow Sphere Pigment

For Thermal Paper Coatings

Regional Product Availability

- Asia-Pacific

Description

ROPAQUE™ TH-2000 Hollow Sphere Pigment is supplied as an aqueous styrene-acrylic emulsion with a hollow water filled core. Upon drying the water evaporates leaving an air-filled void which offers excellent insulation properties making the product an excellent choice for use in the insulating pre-coat of direct thermal paper. The polymeric nature of the shell means that paper coatings containing ROPAQUE TH 2000 Hollow Sphere Pigment are very easy to calendar with low temperature and pressure resulting in a smooth surface.

Key Features

- Smooth surface offering improved printability
- Excellent insulation offering reduced imaging layer chemicals
- Low density offering high print performance at low coat weights
- Easy incorporation without additional dispersants or surfactants
- Facilitates very high coating speeds

Typical Properties

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

Property	Typical Values
Appearance	Opaque, white to off-white liquid
Solids, by weight, %	19.5
Density, wet, (g/ml)	1.02
Density, dry, (g/ml)	0.35
pH	9.3
Average particle size, µm	1.5
Void fraction, %	68
Viscosity (Brookfield LV #2, 30 rpm, 25 °C), cps	< 350
Ionic charge	Slightly anionic

Suggested Formulation Guidelines

The product is suitable for application by size press, rod or blade or curtain coating. It can be used with the common binder types used in the paper industry: styrene-butadiene copolymers, styrene-acrylic copolymers, starch and polyvinyl alcohol. ROPAQUE™ TH-2000 Hollow Sphere Pigment is an excellent choice in the insulating pre-coat of thermal paper and is appropriate for most types of direct thermal paper (Point of sale, top-coated, label grades etc). Its low density, smooth surface and excellent runnability offer significant performance benefits over traditional inorganic pigments such as calcined clay. The smoothness and high insulating power allow papers with high sensitivity at low energy with reduced use of costly imaging layer chemicals. The low dry density (0.35 g/cm³) compared to inorganic pigments (2.2 to 2.7 g/cm³) means that high coat thickness and bulk is offered at low coat weights. ROPAQUE TH-2000 Hollow Sphere Pigment offers use as the sole pigment in pre-coats (100 dry parts) at coat weights below 3 g/m².

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.

Contact:

Australia / NZ +61-3-9956-7500
South East Asia +65-6861-1077
Greater China +86-21-3851-1000
Japan +81-3-5460-2150
Korea +82-10-5265-3736
India +91-22-6602-8888
<http://www.dow.com/coating>

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