

RAMAPET TURBO

JUN 2019

Polyethylene Terephthalate (PET)

Data Sheet

DESCRIPTION

RAMAPET TURBO Polyester Resin is a TPA-based polyethylene terephthalate copolymer resin specially designed for use in producing bottles for the mineral water market.

RAMAPET TURBO Polyester Resin is designed to provide highly desirable container properties, including clarity, sparkle, and good color. **RAMAPET TURBO** Polyester Resin is designed with a special catalyst and stabilizer system that offers property retention during processing. This superior stability also enables use of the required drying conditions without affecting color or molecular weight.

RAMAPET TURBO Polyester Resin also can be processed at lower temperatures compared to other typical bottle grades.

The following table provides the parameters that characterize the grade. Some parameters are shown with values that are specified to fall within certain limits. Other Parameters are shown as a single value that we regard as typical of the grade. Minor differences around this typical value will not detract from the performance of the product. All Parameters are measured under laboratory conditions by the INDORAMA analytical method. Different methods or conditions of analysis may give rise to different values. Purchased material may be accompanied by the Certificate of Analysis or other document, confirming that the product is within specified limits and is consistent with the other values for the stated parameters.

Parameter	Unit	Value	Limits	Test Method
Intrinsic Viscosity (IV)	dl/g	0.80	± 0.02	3J-Lab-050(*)
Acetaldehyde Content	ppm	1.0	Máx	3SPEQHSE-LAB-0032(*)
Color (L * Value)	CIELab	79.0	Min	3SPEQHSE-LAB-0030(*)
Color (b* Value)	CIELab	-1.5	Máx	3SPEQHSE-LAB-0030(*)
Melting Point ++	°C	246.0	± 5.0	3SPEQHSE-LAB-0038(*)
Foreign Particles	-	None	-	Visual Perception

(*)Reference Method: INDORAM/3J -Lab

(++) Monitoed only in food resin

REGULATORY STATUS

RAMAPET TURBO Polyester Resin is suitable for the manufacture of articles for numerous food packaging applications. Since food packaging regulations differ from country to country, for information about the regulatory status, please contact your local account manager or our Technical Assistance Department.

IMPORTANT ASPECTS OF USE IN PROCESSING

Drying

Thermoplastic polyesters such as **RAMAPET TURBO** Polyester Resin can undergo hydrolysis if moisture is not eliminated prior to injection molding leading to a decrease in molecular weight and loss in mechanical properties of the bottle, particularly top load performance and impact strength. Moisture content of the resin must be reduced to a level of 0.003% (30ppm) or less, prior to melt processing. Drying is best accomplished in a continuous high heat dehumidifying type air hopper dryer with a regenerative desiccant bed using -20 °F max (-29°C max) dew point air. Typical drying conditions are an air temperature of 350 °F (175°C), 4-6 hours residence time and a minimum air flow rate of 1.0 ft³ per minute per pound of polymer consumed per hour.

Injection molding and Stretch blow molding

Injection molding temperatures should be maintained at the minimum levels needed to produce clear quality preforms. In addition to temperature limits, care should be taken to avoid excessive shear during injection. Typical processing temperatures should range from 260°C to 295°C, and are largely dependent upon injection barrel dynamics such as residence time and shear. When stretch blow molding, preforms should be heated to minimum levels needed to produce clear, quality biaxially oriented containers. Typical preform surface temperatures are generally between 90°C to 105°C, largely dependent upon the equipment setup and efficiency.

SAFETY ASPECTS

Please read the **Safety Data Sheet** written for this product. It may be obtained from your CLEAR TUF account manager.

Handling

RAMAPET TURBO Polyester Resin presents no toxic hazards, either from skin contact or inhalation, under normal conditions. A mask, safety clothing and gloves should be worn when handling the melted product.

Storage

RAMAPET TURBO Polyester Resin can be stored in silos or big-bags (1000 to 1250kg packaging). For big-bags, the storage should be far from any heat and moisture sources. When stored in the open air for long periods, the bags should be covered with opaque material to protect resin from UV rays. The maximum recommended pile is 2 big bags.

Fire Precautions

In common with most other organic polymers, PET polymers will burn. They are difficult to ignite, but are defined as 'combustible' but not 'highly inflammable'. Reasonable precautions should be taken to ensure absence of sources of ignition in warehouses and storage areas. If large quantities are stored, normal good housekeeping should be enforced, including freedom from dust, uncluttered access ways, sprinkler system etc.

TECHNICAL ASSISTANCE

For further information about this product please contact us at:

Tel.: (55 11) 2111-1300 - Fax: (55 11) 2111-1334