

DuPont™ Selar® PA 2072

Selar® resins Product Data Sheet

Description

Product Description

Selar® PA 2072 is an amorphous nylon (polyamide) resin which exhibits superior transparency, good barrier properties to gases, water, solvents and essential oils and high temperature structural properties which make it suitable for consideration in a number of applications.

It is available in the form of small, free flowing pellets in 25 kg (55 lb.) foil-lined bags or 750 kg. (1653 lb.) foil lined boxes.

Restrictions

Material Status

- Commercial: Active

Availability

- Globally

Typical Characteristics

Composition

100% By Weight 6I/6T polyamide

Features

Selar® PA 2072 barrier resin can be utilized in both flexible and rigid packaging structures and is characterized by very good gas O₂, CO₂ and moisture barrier. Furthermore, Selar® PA is unique in that its gas barrier improves with increasing relative humidity. It has excellent physical properties, high temperature resistance and excellent optical properties desirable in a structural resin. Like other nylons, Selar® PA barrier resin is an excellent barrier for many types of solvent systems. In general it has good resistance to aliphatic, aromatic hydrocarbons, dilute alkalis, higher molecular weight alcohols, and low concentrations of lower molecular weight alcohols. It is not recommended for acids or concentrated lower molecular weight alcohols. End use testing is recommended for each application. With its high degree of stiffness, very good gas and moisture barrier, solvent resistance and excellent gloss and clarity, Selar® PA used in monolayer provides a "glass like" container for rigid packaging.

Characteristics / Benefits

"Intrinsic Viscosity" of 0.72 via ASTM D5225
 "Moisture content" at time of packaging: --- max 0.05 % via ISO 15512

Applications

High melt viscosity for extrusion processes such as EBM.
 Improved performance in shrink applications when blended with nylon6.
 Monolayer - blow molded tubes, pharmaceutical vials or bottles, typically less than 4 ounces.
 Modification of EVOH for broader thermoforming window.

Typical Properties

Physical

Nominal Values

Test Method (s)

Density ()

1.19 g/cm³

ASTM D792 ISO 1183

* Solution Viscosity ()

*** See IV information above ***

ASTM D2857

Thermal

Nominal Values

Test Method (s)

Melting Point (Selar® PA is an amorphous polymer. Glass Transition (T_g) by DSC is reported here.)

125°C (257°F)

ASTM D3417 ISO 3146

Processing Information

General

Maximum Processing Temperature 310°C (590°F)

General Processing Information DuPont™ Selar® PA is an amorphous nylon resin which can be processed on conventional extrusion, coextrusion, injection Molding or blow molding equipment that is designed to process nylon or polyolefin resins.

Suggested "start-up" melt temperatures should be in the minimum range of 240°C to 250°C (464°F to 482°F) unless prior experience has shown that lower temperatures are acceptable. If lower melt temperatures are desired, machine temperatures should be reduced after "start-up" while carefully monitoring drive power and head pressure. For processing methods that require melt temperatures above 250°C (482°F), "start-up" can be at or near the desired melt temperature.

FDA Status Information

Selar® PA 2072 complies with FDA regulation 21 CFR 177.1500 (a)(12) regarding food contact. Selar® PA can be used with all types of food, except those with more than 8% alcohol. There is no FDA limitation on the temperature of the food or the thickness of the Selar® PA in contact with the food.

Safety & Handling

Selar® PA has a low toxicity by ingestion and is neither a skin irritant nor a skin sensitizer. One should avoid heating the resin above 340°C (644°F). When resins are overheated, decomposition with fume evolution may occur. As with most plastics, local ventilation should be used to avoid exposure to fumes which may be irritating to the eyes, nose, throat, and upper respiratory tract. As with any hot material, care should be taken to protect the hands and other exposed parts of the body when working with molten polymer. If molten polymer contacts the skin, cool the affected area with cold water or ice. Do not attempt to peel the solidified polymer from the skin. Obtain medical attention for thermal burn. Pellets of resins can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls.

Disposal of scrap presents no special problems and can be by landfill or incineration in a properly operated incinerator. Disposal should comply with local, state, and federal regulations. For more detailed information on the safe handling and disposal of resins, a Material Safety Data Sheet can be obtained from the Regional Office serving you.

Read and Understand the Material Safety Data Sheet (MSDS) before using this product

Regional Centres

DuPont operates in more than 70 countries. For help finding a local representative, please contact one of the following regional customer contact centers:

Americas

DuPont Company, BMP26-2363
Lancaster Pike & Route 141
Wilmington, DE 19805 U.S.A.
Telephone +1 302-774-1161
Toll-free (USA) 800-628-6208
Fax +1 302-999-4399

DuPont do Brasil, S.A.
Alameda Itapecuru, 506
06454-080 Barueri, SP Brasil
Telephone +55 11 4166 8122
Fax +55 11 4166 8720

Asia Pacific

DuPont China Holding Co., Ltd.
Shanghai Branch
399 Keyuan Road, Bldg. 11
Zhangjiang Hi-Tech Park
Pudong New District, Shanghai
P.R. China (Postcode: 201203)
Telephone +86 21 3862 2888
Fax +86-21-3862-2889

Europe / Middle East / Africa

DuPont de Nemours Int'l. S.A.
2, Chemin du Pavillon Box 50
CH-1218 Le Grand Saconnex
Geneva, Switzerland
Telephone +41 22 717 51 11
Fax +41 22 717 55 00

<http://selar.dupont.com>

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