

DuPont™ Entira™ AS SD100

Entira™ AS resins Product Data Sheet

Description

Product Description DuPont™ Entira™ AS SD100 is an extremely hygroscopic ionomer resin that is supplied as free flowing pellets.

Restrictions

Material Status • Developmental: Active

Typical Characteristics

Uses • Industrial Applications
Packaging

Features Entira™ AS SD100 is used to lower the static decay time and surface resistivity of LDPE, LLDPE and other polymers.

Characteristics / Benefits Entira™ AS SD100 can be precompounded or dry blended into polymers for extrusion, molding, or various other processing methods

Applications Antistatic agent for polyethylene (LDPE, LLDPE and EVA) and other polymers, in films, moldings and extruded forms

Typical Properties

Physical	Nominal Values	Test Method(s)	
Density ()	0.985 g/cm ³	ASTM D792	ISO 1183
Melt Flow Rate (190°C/2.16kg)	5.0 g/10 min	ASTM D1238	ISO 1133
Thermal	Nominal Values	Test Method(s)	
Melting Point (DSC)	92°C (198°F)	ASTM D3418	ISO 3146
Freezing Point (DSC)	64°C (147°F)	ASTM D3418	
Vicat Softening Point ()	63°C (145°F)	ASTM D1525	ISO 306

Processing Information

General

Maximum Processing Temperature 210°C (410°F)

General Processing Information Entira™ AS SD100 is a hygroscopic material. To minimize exposure to moisture, any remaining material should be hermetically sealed in a barrier package immediately after use.
In order to reuse remaining material that has been hermetically sealed, the material should be dried under vacuum with a nitrogen flow at 50–60°C for several hours prior to use.
Entira™ AS SD100 is available in pellet form for use in conventional equipment for processing polyolefins. Entira™ AS SD100 can be fed together with base polymers and other additives in the hopper during processing. Typical addition levels range

from 10-30%.

Materials of construction used in the processing of this resin should be corrosion resistant. Stainless steels of the types 316, 15-5PH, and 17-4PH are excellent, as is quality chrome or nickel plating, and in particular duplex chrome plating. Type 410 stainless steel is satisfactory, but needs to be tempered at a minimum temperature of 600°C (1112°F) to avoid hydrogen-assisted stress corrosion cracking. Alloy steels such as 4140 are borderline in performance. Carbon steels are not satisfactory. While stainless steels can provide adequate corrosion protection, in some cases severe purging difficulties have been encountered. Nickel plating has been satisfactory, but experiments have shown that chrome surfaces have the least adhesion to acid based polymers. In recent years, the quality of chrome plating has been deteriorating due to environmental pressures, and the corrosion protection has not always been adequate. Chrome over top of stainless steel seems to provide the best combination for corrosion protection and ease of purging.

After processing Entira™ AS, purge the material out using a polyethylene resin, preferably with a lower melt flow rate than the Entira™ AS resin in use. The "Disco Purge Method" is suggested as the preferred purging method, as this method usually results in a more effective purging process. Information on the Disco Purge Method can be obtained via your DuPont Sales Representative.

Never shut down the extrusion system with Entira™ AS in the extruder and die. Properly purge out the Entira™ AS with a polyethylene, and shut down the line with polyethylene or polypropylene in the system.

FDA Status Information

Entira™ AS SD100 resin complies with the U.S. Food and Drug Administration Regulation 21 CFR 177.1330(a) -- Ionomeric resins, subject to the limitations and requirements therein. This Regulation describes polymers that may be in contact with non-alcoholic food, subject to the finished food contact article meeting the extractive limitations under the intended conditions of use, as shown in paragraph (c) of the Regulation.

Regulatory Information

For information on regulatory compliance outside of the U.S., consult your local DuPont representative.

Safety & Handling

Entira™ AS SD100 resins as supplied by DuPont are not considered hazardous materials. As with any hot material, care should be taken to protect the hands and other exposed parts of the body when handling molten polymer. At recommended processing temperatures, small amounts of fumes may evolve from the resins. When resins are overheated, more extensive decomposition may occur. Adequate ventilation should be provided to remove fumes from the work area. 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. Resin pellets can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls. For more detailed information on the safe handling and disposal of DuPont resins, a Material Safety Data Sheet can be obtained from the DuPont Packaging and Industrial Polymers website or by contacting your sales representative.

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:

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