

RADEL R-5000, R-5100 NT15, R-5500

Drying

RADEL R polyphenylsulfone resins must be dried completely prior to melt processing. Incomplete drying will result in defects in the formed part ranging from surface streaks to severe bubbling. However, such parts may be recovered as regrind, since there will be no loss of properties. Pellets of RADEL R resins can be dried on trays in a circulating air oven or in a hopper dryer.

Recommended drying conditions for injection molding are 300°F (149°C) for 2.5 hours. For extrusion purposes, more thorough drying is needed. Hopper drying for a minimum of 4 hours at 340°F (171°C) is recommended. Desiccated inlet air temperatures up to 360°F (182°C) are usable.

Injection Molding

RADEL R-5000 and R-5100 NT15 resins can be readily injection molded in most screw injection molding machines to close part tolerances. Stock temperature requirements will generally range from 680° to 735°F (360° to 390°C), depending on mold design and the type of equipment being used. A general purpose 2.2:1 compression screw is recommended, with minimum back pressure. Mold temperatures of at least 280°F (138°C) are suggested. For long-flow or thin-walled parts, or where low residual stresses are required use mold temperatures as high as 300° to 325°F (150° to 165°C).

Extrusion

RADEL R-5500 resin is easily extrudable into sheet, film, profile or tubing. Extrusion temperature ranges are broad, depending on thickness of sheet or profile being extruded. Typical temperature profiles for extrusion range from 640°F (340°C) to 730°F (395°C) on the barrel. Useful adapter and die temperatures are in the range 620°-700°F (325°-370°C) with melt temperatures being in the range 650°-750°F (345°-400°C). RADEL R resins are stable thermoplastics. Accordingly, up to 25% clean reground R-5500 resin, in a mix with new material, can be used with little, if any, property effects except for a slight darkening in color. Udel® polysulfone is recommended as

a start-up and purge resin for extrusion of RADEL R resins.

Standard Packaging and Labeling

RADEL R resins are packaged in multiwall paper bags containing 25 kg (55.115 pounds) of material. Special packaging can be supplied upon request.

Individual packages will be plainly marked with the product number, the color, the lot number, and the net weight.

Precautionary Labeling

On the basis of the toxicological, physical, and chemical properties of RADEL R polyphenylsulfone resins, labeling used on containers is as follows:

Caution! Handling and/or processing this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose, and throat.

Product Safety and Emergency Service

For product safety information or a Material Safety Data Sheet on a product of Solvay Advanced Polymers

1 (800) 621-4557

1 (770) 772-8880 outside of U.S.

For information or help in an emergency such as a spill, leak, fire or explosion, call day or night:

Emergency Health Information

1 (800) 621-4590

1 (770) 772-5177 outside of U.S.

Emergency Spill Information

CHEMTREC 1 (800) 424-9300

1 (703) 527-3887 outside of U.S.
collect calls accepted

For Additional Information

Technical Service

1 (800) 621-4557

Customer Service

1 (800) 848-9744

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