



DYLITE[®] Expandable Polystyrene Resins



Product Data Sheet

Cup and Container Grades F271T (F271TN and F271TS)

Features:

- Highly consistent bead size
- High gloss characteristics
- Low energy consumption
- Fast molding cycles
- Food contact compliant

Applications:

- Drinking cups (hot and cold)
- Noodle bowls
- Take-out containers
- Ice cream containers
- Thin-wall cups
- Labeled and printed cups

Attributes:

- Good thermal insulation
- Superior temperature retention
- Less exterior condensation
- Strong and lightweight
- Superior taste and odor properties

Properties	Typical Values (English Units)	Typical Values (S.I. Units)
Product Properties:		
Bead Size (T) - Fine	0.012 – 0.020 inches	0.30 – 0.50 millimeters
Pentane Content	5.3 – 5.9% by weight	5.3 – 5.9% by weight
Bulk Density	38 – 40 pounds per cubic foot	608 – 640 grams per liter
Thermal Properties:		
Thermal Resistance¹ (R-Value)	4.26 (hr-ft ² -°F)/Btu-in	0.029 (meters-° Kelvin)/milli-Watts
Thermal Conductivity¹ (K-factor, Lamda) Foot (ft) British Thermal Unit (Btu) Degree Fahrenheit (°F) Degree Centigrade (°C)	0.235 Btu-in/(hr-ft ² -°F)	33.9 milli-Watts/(meters-° Kelvin)
Coefficient of Linear Expansion Inch (in) Centimeter (cm)	3.5 x 10 ⁵ in/in/° F	6.3 cm/cm/° C
Maximum Continuous Service Temperature	175° F	80° C

¹ The thermal conductivity of expanded polystyrene at an average temperature of 75°F (24°C) is lowest at 3.5 pounds per cubic foot (pcf). It rises slightly at lower density until about 1.5 pcf where it increases rapidly. The rate of increase is much less at higher densities:

8.0 pcf (128 g/l) → 0.269 Btu-in/(hr-ft²-°F) or 38.7 mW/(m-K)
12.0 pcf (192 g/l) → 0.276 Btu-in/(hr-ft²-°F) or 39.8 mW/(m-K)

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Availability

DYLITE expandable polystyrene (EPS) resins are produced at the Beaver Valley plant site (Monaca, PA) and are available in 2205 pound (1 metric tonne) bulk bags. The product type and batch number are clearly marked on each bag. Contact the NOVA Chemicals sales office in your region.

Quality and Environmental Management Systems

DYLITE F271T resins are manufactured at an ISO 9001 and ISO 14001 registered facility.

Storage and Handling

DYLITE F271T should be stored in a cool, dry place away from direct sunlight. This product can release pentane during expansion and molding. Pentane is a highly flammable gas in the presence of open flames, lit cigarettes, sparks, static electricity discharges, or heat. Prolonged or improper storage can result in deterioration of product properties. Care should be taken when handling and transferring product to prevent foreign matter contamination. The NOVA Chemicals' **Material Safety Data Sheet (MSDS)** and **EPS Storage and Handling Safety Guide** contain important safety information and should be reviewed before using the product. These and additional safety and health information are available on our [Product Care](#) webpage.

Processing Conditions**Recommended Conditions:****Minimum Density:**

3.0 pounds per cubic foot 48 grams per liter

Pre-expansion lube levels:

1000 parts per million (ppm)

Pre-puff age time:

2 – 8 hours

Comprehensive assistance with processing conditions and technology is available from NOVA Chemicals Styrenics Technology Center.

Food Packaging Status

United States: DYLITE F271T complies with the U.S.A. [Food and Drug Administration](#) (FDA) Code of Federal Regulations [21 CFR 177.1640](#) for polystyrene and [21 CFR 178.3010](#) for blowing agents. Thus, DYLITE may be used in the United States as an article or a component of an article intended for use in contact with food, subject to any limitations described in the regulations.

Europe: DYLITE F271T complies with European Union food contact regulations including the Framework Regulation (EC) No. 1935/2004 and Directive 2002/72/EC which consolidates and replaces EU Directive 90/128/EEC and its seven amendments, as lastly amended. For a complete regulatory compliance statement please contact your NOVA Chemicals representative.

Other Countries: For regulatory compliance information for other countries, please contact NOVA Chemicals in your region.

Environmental Information

NOVA Chemicals DYLITE resins are biologically and chemically inert. **DYLITE does not contain CFC's (Chlorofluorocarbons).** DYLITE resins are recyclable.



PS is the SPI resin code for polystyrene to identify material type for sorting and recycling. Significant information regarding EPS recycling is available from the [Alliance of Foam Packaging Recyclers](#). Where recycling of EPS resins is not possible, disposal to landfill or incineration in accordance with applicable laws and regulations is recommended. Contact NOVA Chemicals Styrenics Technology Center for further information on recycling and disposal.

Life Cycle Study – Foodservice Packaging

A [Life Cycle Study](#) detailing the environmental performance of everyday foodservice packaging products demonstrates that polystyrene foam products, in most cases have environmental burdens that are lower than or comparable to the alternative products studied.

www.novachemicals.com

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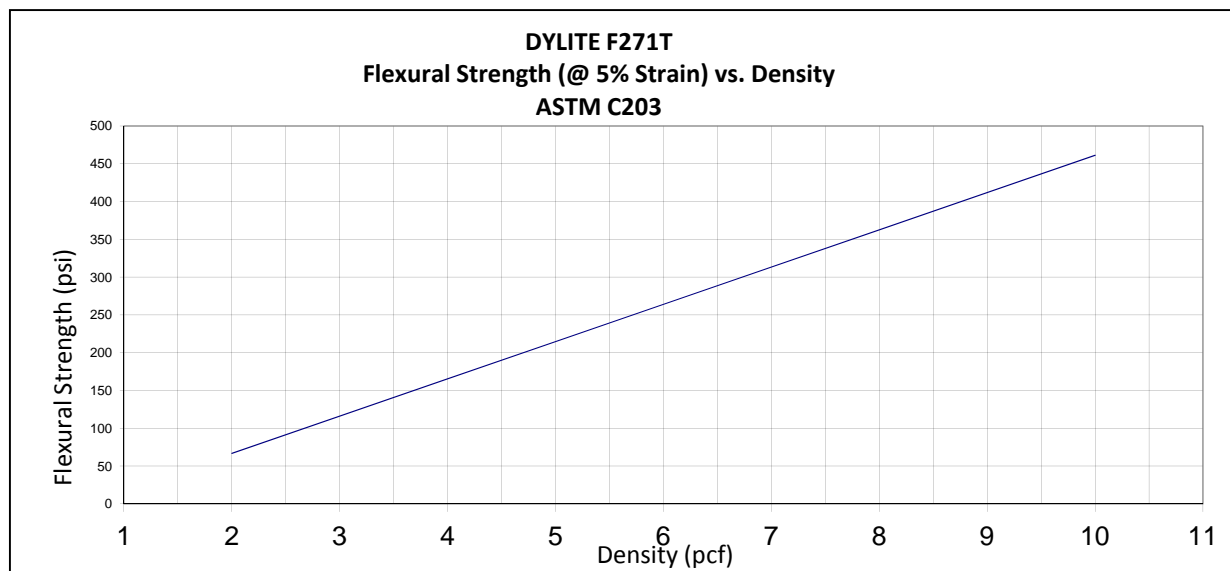
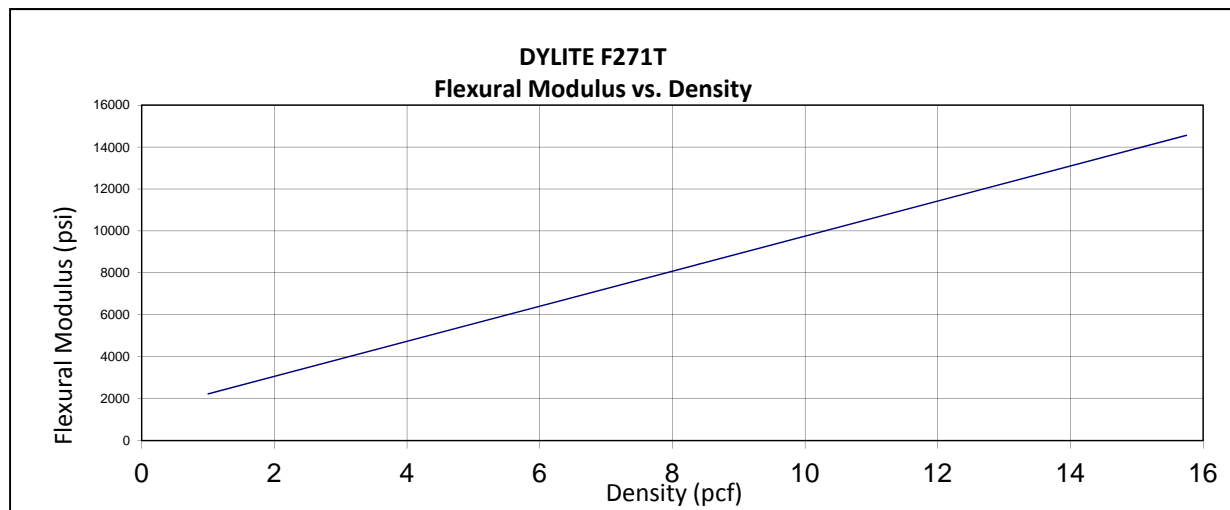
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TYPICAL MECHANICAL PROPERTIES:



Pounds per square inch (psi)

The product properties in the data sheet have been determined in accordance with the current testing methods of the American Society for Testing and Materials (ASTM), wherever possible.

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