

# SFR 640 (Super Foam Resin)

## Technical Data Sheets

### Resin Composition

Polyethylene/styrenic interpolymer, expandable

### Particle Diameter

98% between 0.7 – 1.4 mm

### Color Shape

White Spherical

### Average VOC Content

Pentane 8.8 %  
Plastizer 0.3 %

### Safety

Provide adequate exhaust ventilation during resin and pre-puff storage and processing as recommended in the Safe Handling and Storage Guide to avoid the hazardous accumulation of pentane blowing agent. Keep product away from ignition sources.

### General information

Super Foam Resin 640 has been successfully formulated for improved impact properties and is intended for high density applications. This product also has the smallest bead size of the other products.

### Raw Bead Storage

Store unexpanded product below 4°C (40°F) until processed to avoid loss of expandability and potential hazardous accumulation of pentane vapor

### Expansion

Super Foam 640 resin was developed specifically for batch pre-expansion; however, for densities greater than 2.4 pcf. Continuous expansion is also possible using conventional EPS expansion equipment.

Freshly expanded Super Foam 640 resin is sensitive to the thermal/mechanical shock of an airveyor, Improper conveyance may significantly increase density.

Minimum achievable density is expected to be:

Expansion Method	Pre-Puff density pcf (g/l)	Foam Density pcf (g/l)
Continuous – Single Pass	1.85 (29.6)	2.15 (34.4)
Continuous – Doble Pass	1.40 (22.4)	1.65 (26.4)
Batch	1.5 (24)	1.7 (27.2)

### Molding

The optimum molding window for Super Foam Resin 640 pre-puff is between 8 – 48 hours conditioning time. Longer age time may result in some loss of fusion. Adequate crush fill is required to ensure good sintering and part quality.

Conventional EPS fill guns is small as 19 mm can be used; larger 21-22 mm fill guns and 25 mm ID fill hoses are recommended. Successfully fill is always contingent upon part/tooling design, fill gun placement as well as mold geometry. The minimum recommended wall thickness is 15 mm depending of design.

### Environmental

SFR 640 are biologically and chemically inert. SFR is typically able to be recycled where EPS recycling facilities.

## Foam Physical Properties\*

Property	Test Method	Units	SFR 640					
Density	ASTM-D3575	Pcf	1.85	2.50	3.00	4.00	5.00	6.00
		g/l	26.9	40	48	64	80	96
Compressive Strength at 10% Strain	ASTM-D3575	Psi	18	30	38	55	72	89
Compressive Strength at 25% Strain	ASTM-D3575	Psi	25	36	45	65	86	108
Compressive Strength at 50% Strain	ASTM-D3575	Psi	31	44	56	84	120	163
Compressive Strength at 75% Strain	ASTM-D3575	Psi	75	96	116	171	252	371
Tensile Strength at Break	ASTM-D3575	Psi	59	74	85	107	126	145
Tear Strength at Max Road	ASTM-D3575	Lb/in	11.6	15.2	18.0	23.6	29.2	34.8
Flexural Strength at 5% Strain	ASTM-D3575	Psi	40	58	71	98	125	153
Flexural Stress at Max Road	ASTM-C203	Psi	52	70	84	111	139	167
Flexural Strain at Max Road	ASTM-C203	%	14.1	13.2	12.4	11.0	9.5	8.1
Puncture Max Road	ASTM-D3763	lbf	81	105	123	160	197	233
Burn Rate	FMVSS302	Mm/min	81	62	53	41	34	29

\*Test methods available upon request. All data is typical and not to be considered specification values. CODI MEXICO cannot predict or control the different conditions under which this information and our products may be applied. Therefore, we do not guarantee the applicability or the suitability of our foam nor the accuracy of this information. There is no warranty either expressed or implied on our products. Buyer assumes all responsibility for loss or damage arising from the use of our products, whether done accordance with direction or not. Statements concerning the possible use of our products are not intended as recommendations to use our products in the infringement of any patent. Users of our products should perform testing to determine their efficiency and suitability prior to use.