

Modified Graphite Expandable Polystyrene

Product Description:

NexTherm is NexKemia’s new option for improved insulating performance over traditional expandable polystyrene (EPS). The pentane (blowing agent) concentration and bead size range provide optimal achievable EPS density targets from 1.0 to 3.0 pcf. **The MT series** is suitable for a wide range of applications requiring improved insulating properties. The **MT series** eps resin is best described as black beads, are slightly lentil in shape, and are produced by a state-of-the-art extrusion process.

Applications:

MT Series EPS can be used in many applications including but not limited to:

Block Molding	Shape Molding
<ul style="list-style-type: none"> • Insulation board (1.0 to 3.0 pcf) for Building & Construction projects • Structural Insulated Panels (SIP's) • Protective Packaging • Many Additional Applications 	<ul style="list-style-type: none"> • Thick wall (> 1 cm) applications

Compliance & Documentation:

EPS finished goods produced with **NexKemia MT series** resin, properly manufactured, comply with the following:

- CAN/ULC S701.1: Type I, II, III
- ASTM C578: Types XI, I, II, VII, IX, XIV and XV
- ASTM E84/ UL723 Surface Burning Characteristics of Building Materials (UL Certified, 0.70 to 3.0 pcf)
- CAN/ULC102.2 Surface Burning Characteristics of Building Materials and Assemblies (max 32kg/m3)
- ICC ESR- Thermal and moisture protection
- ULEX- Thermal Protection
- REACH Directive for regulation of Substances of Very High Concern (SVHC)
- RoHS Directive for regulation of Heavy metals and specific flame retardant
- Greenguard Gold

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Technical Data:

NexKemia MT Series Modified EPS	Typical Pentane Value (%wt.)	Unexpanded Beads Size Distribution (mm)	Recommended Expanded Density Range (pcf)
MT55L	5.5	0.85-1.40 mm (95%)	0.95 – 1.80
MT55K	5.5	0.85-1.40 mm (95%)	0.95 – 1.80
MT35L	5.5	0.40-0.85mm (95%)	1.15 – 3.00
MT35K	5.5	0.40-0.85mm (95%)	1.15 – 3.00
MT54H	4.0	0.85-1.40mm (95%)	1.50 – 2.40

Processing:

Pre-Expansion	Maturation Time	Molding
<p>Single pass expansion: to optimize pre-expansion and achieve a homogeneous density from bead to bead, a slower expansion rate is recommended. By optimizing the expansion cycle, the uniformity of the pre-expanded beads will help to provide more consistent and uniform molding.</p> <p>Second pass: to achieve lower densities (<0.95 pcf) it is recommended that the products be pre-expanded in two stages</p>	<p>Aging times may range between 4 to 48 hours. The maturation time will vary according to the product used and the density targeted. Please contact your sales or technical representative for more details.</p>	<p>NexKemia EPS is designed to be molded with commercially available EPS processing machinery (horizontal and vertical block molds and shape presses).</p>

For additional product information please contact your NexKemia representative.

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General Information

Product Packaging

- All **Nexkemia EPS** materials are packaged in 1,000 Kgs. (2,205 Lbs.) Super-sacks. A typical full truckload shipment consists of 20 Super-sacks of eps material with a total delivered weight of 20,000 Kgs. (44,100 Lbs.) per truckload.

Safety and Handling

- Electrostatic discharges may be generated during the use and manipulation of any EPS product.
- All metallic equipment and machinery should be grounded in accordance with all local government safety ordinances.
- Only use spark-proof tools in all areas where EPS is stored and processed.
- NexKemia **MT Series** products contain a flame-retardant additive and are not suitable for food contact applications
- For more information, refer to the NexKemia Safety Data Sheet (SDS) prior to use.
- Upon delivery, trailer and/or container should be opened and allowed to vent for a minimum of one hour before unloading.

Storage

All EPS materials should be:

- Stored in unopened containers in dry and well-ventilated areas. The recommended storage temperature range for EPS is 15-25°C (68-77°F).
- Protected against unsuitable weather conditions and direct sun light.
- Kept away from heat, sparks, flame, and other sources of ignition.

Shelf Life

- In order to attain and maintain the ideal product performance of NexKemia EPS, it is recommended to process all product materials within 6 months of the date of fabrication.
- Any opened containers should be closed properly to minimize excess air in the product bag and should be processed within a short period time.

End Products

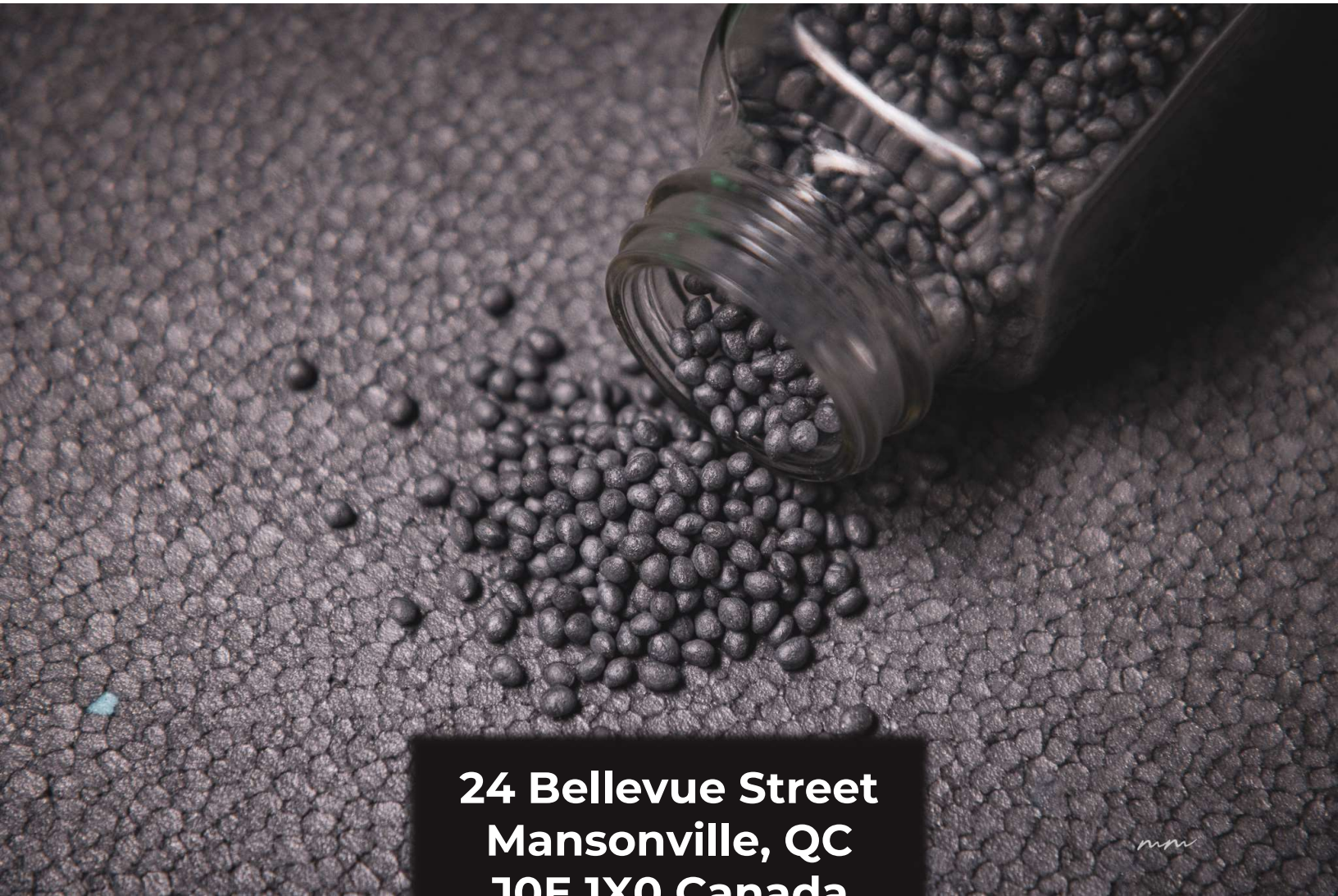
- Finished gray foam products should be kept away from prolonged direct sunlight. End products should be wrapped in opaque white films.

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