PYROPEL®
The First Insulation Designed Specifically for Plastics and Rubber Processing

Pyropel® rigid polyimide fiberboard offers superior insulating properties across a broad temperature range, exceptional durability, and unmatched ease of fabrication and use.

2 to 4 Times More Effective Than Other Common Insulation
A patented manufacturing process creates sintered fiber bundles which give Pyropel its rigidity, compressive strength, dimensional stability, and durability. They also trap air, making Pyropel a much better insulator than cement or plastic-based hardboard insulation.

<table>
<thead>
<tr>
<th>THERMAL CONDUCTIVITY (BTU/ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
</tr>
<tr>
<td>1.5</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0.5</td>
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<td>0</td>
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</table>

**Calcium Silicate**  | **Hardboard Reinforced Plastic**  | **Cement**  | **Pyropel**  | **HD**

Will Not Crack Under Pressure
Pyropel's unique thermoset fiber construction makes it both nonbrittle and compression resistant. Unlike other hardboard insulation, it will not crack when subjected to compression forces, thermal expansion, or thermal cycling and shock.

Easy to Cut, Machine, and Fabricate
Pyropel cuts and machines easily with standard wood or metalworking tools. It handles like wood or any free machining plastic.

Easy to Install Using Adhesives or Mechanical Fasteners
Pyropel can be bonded to molds using RTV adhesive or countersunk flat head screws. Its rigidity eliminates the need for supporting structures.

Pays for Itself in Energy Savings Alone in Months
Pyropel will increase process output by improving heating and/or cooling efficiency. In addition, it will lighten the load on plant environmental systems by reducing unwanted plant heating and will increase both employee comfort and safety.

Applications
Pyropel is available in a range of thicknesses and densities and is ideal for most plastics and rubber processing applications including:
- Tool base/platen
- Hot runner systems
- Tool perimeter
- Air rings

For specific product recommendations, refer to the Selector Guide on the back of this sheet.
Selector Guide

**Tool Base/Platen Insulation**

Pyropel is an ideal base insulation for both compression molds and injection molds.

1. Use MD-50 for applications where compliance is required.

**Perimeter Insulation**

Pyropel can be mechanically fastened or bonded to the sides of tooling or heated platens using high-temperature adhesives.

<table>
<thead>
<tr>
<th>Temperature °(F)</th>
<th>Normal 1/8&quot;</th>
<th>High 3/16&quot;</th>
<th>Super 5/16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>201 - 300</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>5/16&quot;</td>
</tr>
<tr>
<td>301 - 400</td>
<td>3/16&quot;</td>
<td>3/16&quot;</td>
<td>5/16&quot;</td>
</tr>
<tr>
<td>401 - 550</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>5/16&quot;</td>
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</tbody>
</table>

1. Super Durable Pyropel is recommended for large, heavy tools which are stored on their sides or moved with fork lift trucks.

**Hot Runner System Insulation**

- Pyropel should be installed inside the manifold cavity using high-temperature adhesives.
- Pyropel thickness should be ½ that of the air gap.

- For maximum effectiveness, the perimeter should be insulated as well as the top and bottom of the cavity.

**Air Ring/Flat Film Insulation**

**Air Ring**

- Installed between the top die plate and air ring, Pyropel improves cooling efficiency and bubble stability.
- Pyropel thickness should be sufficient to seal the gap between the ring and the die.

**Flat Extrusion Dies**

Typically, extrusion dies have no external loading but benefit from perimeter insulation. Pyropel can be bonded or mechanically fastened to existing dies or designed into new dies as an internal structural plate, isolating the heater section from the external structures.

**Recommended Pyropel® Product**: MD-12 or MD-18

**Recommended Pyropel® Product**: MD-18

1. Pyropel HD should be used for highly critical areas where tight tolerances must be maintained.

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**Regarding This Information**

All statements and technical information contained herein are based on tests we believe to be reliable. There is no guarantee of the accuracy and completeness of the information and the following is made in lieu of all warranties, expressed or implied.
Honeywell Switches to Pyropel™ for Energy Savings

Mars Hill, NC Thermoset Molder

Customer: Honeywell Sensing and Control is one of the world's preeminent switch and sensor manufacturers providing products to the automotive, aerospace, marine, information technology, medical, electronics and appliance industries.

Customer Challenge: The Mars Hill facility, a molder of electrical connectors, was faced with rising energy costs, considerable mold heat up times and high maintenance costs associated with the regular replacement of degrading glass reinforced polyester insulation boards.

The engineers at Honeywell evaluated Pyropel insulation. Their objective was to improve their operating efficiencies and reduce their tool base maintenance costs. They replaced the existing platen insulation with Pyropel MD-60 and added Pyropel MD-18 perimeter insulation.

Results: By switching to Pyropel, Honeywell achieved their objective and was able to immediately reduce power consumption by 25% and their startup time from 90 to 50 minutes. In addition, the more durable Pyropel MD-60 insulator has already lasted six times longer than the glass reinforced polyester, virtually eliminating a major maintenance cost.

Customer Benefits

- Saved 25% on power consumption
- Reduced start up time
- Eliminated maintenance issue
- Payback 36 weeks