



FormPro™ Chill

PRODUCT DESCRIPTION

FormPro Chill provides an effective barrier to HFO and other chemically aggressive insulative foams. Manufacturers might even be unaware of underlying product issues and potentially disastrous long-term effects of attack. But they are preventable; Spartech's proprietary, HFO resistant barrier layer provides short-and-long-term protection against micro-cracking, discoloration due to substrate attack, and other adverse effects. Both FormPro Chill-A ABS and FormPro Chill-H High Impact Polystyrene sheet product solutions utilizing this unique technology are available.

VALUE SOLUTION

Refrigeration and Freezer manufacturers throughout the world made a concerted effort to reduce the use of materials or chemical processes that deplete the Earth's critical ozone layer. This step change in thinking led to many manufacturers changing to environmentally friendly hydrofluoro-olefinic (HFO) blowing agents.

The challenge that users of these "new" HFO blowing agents face has been that, during the foaming process,

the condensed liquid blowing agent attacks the normally stable HIPS and ABS plastic liners. The potential short-term defects range from a visible micro-wrinkle or micro-crack to a larger surface break if there is enough stress on the formed part. The long-term effects of the plastic degradation from the HFO blowing agent are still under evaluation and present a risk of future part fracture and/or failure.

KEY CHARACTERISTICS

- Proprietary HFO resistant barrier layer to inhibit chemical attack causing cracking, visual imperfections and discoloration, and protect structural integrity
- Technology demonstrates performance limiting long-term adverse impact to formed part deterioration due to the chemical nature of the foam
- Available in HIPS or ABS sheet structures
- Customizable surface color and gloss
- Recyclable trim and scrap program
- Alternative solution to stand-alone HFO-resistant ABS and HIPS resins may improve cost and performance

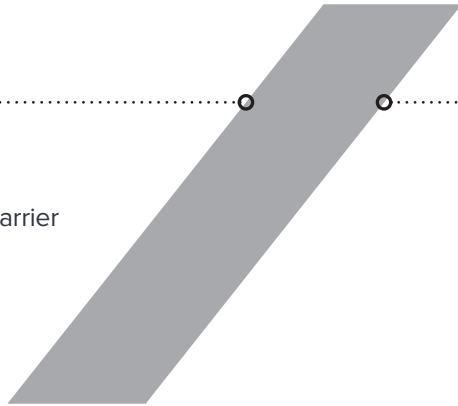
TARGET MARKET AND APPLICATIONS

The unique, proprietary technology of FormPro Chill should be considered as a first line of defense to aggressive HFO chemical attack in the following markets and applications:

- High-end custom-built refrigeration
- Commercial refrigeration
- Residential refrigerators and freezers
- Wine coolers
- Beer and keg coolers
- Portable refrigeration
- Under-cabinet refrigeration
- Recreational vehicle refrigeration
- Commercial icemakers
- Medical refrigeration

AESTHETIC SIDE

- Color
- Gloss
- Chemical and foodstuff barrier



FOAM SIDE

- HFO penetration barrier
- Chemical protection
- Enhanced foam adhesion