

ARCEL® Resins

ARCEL® Resin Design Study

Packaging Solution for Cabinets

ARCEL resin vs. Molded Pulp or Corrugate Corner Pads

ARCEL resin has been used by cabinet manufacturers to reduce the number of packaging components. ARCEL resin is less abrasive than other packaging materials such as molded pulp and corrugate, allowing some cabinet manufacturers to eliminate the use of a polyethylene (PE) microfoam wrap between the cabinets and the cushions when using ARCEL resin cushions. The simplification of the total packaging solution has allowed cabinet manufacturers to realize reductions in labor time associated with packaging a cabinet.

The following photographs show the difference between packaging solutions using ARCEL resin and packaging solutions using molded pulp for the same cabinets. Fabricated PE cushions were also considered for some applications shown, but the ARCEL resin cushions were specified due to better structural stability.



ARCEL resin corner cushions



Molded pulp corner cushions with PE microfoam



This Recycling Spotlight is one in a series demonstrating how ARCEL resin enables molders and manufacturers to address their sustainability concerns.

ARCEL resin is a sustainable foam packaging solution that reduces package size and environmental footprint while providing superb packaging properties.

ARCEL resin vs. Fabricated Polyethylene

A molded solution would typically have lower labor costs than a fabricated solution. As volumes increase, the tooling costs required for molding ARCEL resin would be offset by the reduced labor costs for a fabricated PE cushion.

Although PE is durable, higher density PE foam would be needed to get the same compressive strength/dimensional stability performance as ~1.5pcf ARCEL resin. A solution using 1.7 pcf PE foam was trialed, but it failed because the weight of the cabinet caused the cushion to flatten.

Criteria for Success

Cost

- Price per part target for cushions
- Tooling cost was not a driver due to long project life cycles
- In some cases the corner pads may have been more expensive with ARCEL resin, but labor time/cost savings offset the higher part cost.

Protection

- Match the protective performance of existing pack
- ARCEL resin packaging solutions for cabinets have passed various industry standard protective packaging performance tests such as ISTA 1A, ISTA 2A, and ISTA 2C requirements.

Tack Time (Operational Efficiency)

- Improving operational efficiency to allow assembly of more packs per shift.

US Regional Office

NOVA Chemicals Inc.
400 Frankfort Road
Monaca, PA 15061 USA
Phone: 724.770.5555
Fax: 724.770.6767

Asian Operating Center

NOVA Chemicals (International) S.A.
Suite 1901, Chongqing Finance Center
No. 288 West Nanjing Rd, Shanghai, China
Phone: +86 21-3366 3418
Mobile: +86 13817951443

Singapore Sales Office

NOVA Chemicals (International) S.A.
The Executive Centre
Level 42, Six Battery Road
Singapore 049909
Phone: 65.6224.8807
Fax: 65.6224.1877

Pegasus Polymers NV

Exclusive distributor of ARCEL resin in Europe
Moerenstraat 85A
B-2370 Arendonk
BE0808842121, Belgium
Phone: +32-27-140100
Fax: +32-27-140150

The NOVA Chemicals logo is a registered trademark of NOVA Brands Ltd. | ARCEL® is a registered trademark of NOVA Chemicals Inc.

The information contained herein is provided for general reference purposes only. By providing the information contained herein, NOVA Chemicals Inc. makes no guarantee or warranty and does not assume any liability, with respect to the accuracy or completeness of such information, or product results in any specific instance, and hereby expressly disclaims any implied warranties of merchantability or fitness for a particular purpose or any other warranties or representations whatsoever, expressed or implied. Nothing contained herein shall be construed as a license to use the products of NOVA Chemicals Inc. in any manner that would infringe any patent. Nothing herein shall be copied, reproduced, distributed or otherwise used without the express written permission of NOVA Chemicals.