INTUNE™ Polypropylene-based OBC Compatibilizers: New Value for Post Consumer Recycle

A Breakthrough for Recycle Feedstreams

For years, the recycling industry has scrapped residual materials that are left after sorting and processing. Post consumer recycle (PCR) streams that typically include polypropylene (PP) and polyethylene (PE) don’t blend well and are difficult to process. Historically, these mixed PP and PE blends are technically and economically challenging to sort and can only be used in low addition levels for lower-value goods due to poor material performance.

INTUNE™ Polypropylene-based Olefin Block Copolymers (OBCs) are effective and affordable compatibilizers for PCR blends of PE and PP. These breakthrough compatibilizers offer up-cycling opportunities for recyclers and brand owners.

Cost-effective, Higher Performing Recycle

With INTUNE™ Polypropylene-based OBCs, multi-resin, residual recycle materials that would otherwise not be compatible can now be blended and used in more valuable applications. INTUNE™ OBC technology also allows PP and PE to be combined with polyolefin elastomers and polar materials such as ethylene vinyl alcohol (EVOH), high density polyethylene (HDPE), and polyamide to create broad, flexible formulations.

As seen in Figure 1 below, compatibilizing such blends with INTUNE™ OBCs can lead to improved property balance which increases the available supply of useable PCR and provides access to higher value applications at a lower overall systems cost.

This breakthrough opportunity means that mixed PE and PP PCR scrap that was once thrown away can now be added in varying levels to industrial packaging and durables applications and meet brand owner demands for performance.

Discover the Possibilities

For more information on INTUNE™ PP-based OBC technology and how it improves the value stream for PCR to reshape the plastics recycling industry, contact your Dow Elastomers representative, or contact the nearest location listed on the back.
The principles of Responsible Care® and Sustainable Development influence the production of printed literature for The Dow Chemical Company (“Dow”). As a contribution towards the protection of our environment, Dow’s printed literature is produced in small quantities and on paper containing recovered/post-consumer fiber and using 100 percent soy-based ink whenever possible.

NOTICE: Any photographs of end-use applications in this document represent potential end-use applications but do not necessarily represent current commercial applications, nor do they represent an endorsement by Dow of the actual products. Further, these photographs are for illustration purposes only and do not reflect either an endorsement or sponsorship of any other manufacturer for a specific potential end-use product or application, or for Dow, or for specific products manufactured by Dow.

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the Customer is responsible for determining whether products and the information in this document are appropriate for the Customer’s use and for ensuring that the Customer’s workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Dow assumes no obligation or liability for the information in this document.

NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

NOTICE: If products are described as “experimental” or “developmental”: (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Dow to change specifications and/or discontinue production; and (4) although Dow may from time to time provide samples of such products, Dow is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: Dow will not knowingly sell or sample any product or service (“Product”) into any commercial or developmental application that is intended for:

a. long-term or permanent contact with internal bodily fluids or tissues. “Long-term” is contact which exceeds 72 continuous hours;

b. use in cardiac prosthetic devices regardless of the length of time involved (“cardiac prosthetic devices” include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);

c. use as a critical component in medical devices that support or sustain human life; or

d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

Dow requests that customers considering use of Dow products in medical applications notify Dow so that appropriate assessments may be conducted.

Dow does not endorse or claim suitability of its products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful, and technically suitable for the intended use. **DOW MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF ANY DOW PRODUCT FOR USE IN MEDICAL APPLICATIONS.**

This document is intended for use in North America.
Published March, 2016.
© 2016 The Dow Chemical Company