



Positive assessment of multilayer films containing Mitsubishi Chemical Group's SOARNOL™ (EVOH), which is certified as fully recyclable.

Aachen, 25/03/2024. The barrier material SOARNOL™ ethylene vinyl alcohol copolymer (EVOH) from the Mitsubishi Chemical Group with an ethylene content ≥ 29 mol% is classified as compatible for the mechanical recycling of polyethylene films. In combination with the compatibilizer SOARESIN™ RG500, it is a valuable material in both injection moulding and blown film applications due to its recycle-improving properties.

Even if a multilayer coextruded packaging film contains more than 15 % by weight (wt.%) of SOARNOL™, it is fully recyclable under certain conditions as long as it contains a sufficient amount of tie resin and SOARESIN™ RG500 as a compatibilizer. Additional printing inks or other components may affect the recyclability of final packaging based on such films.

As part of a recycling compatibility study commissioned by the Mitsubishi Chemical Group, the cyclos-HTP Institute (CHI) confirmed in 2022 the recycling compatibility of multilayer films with SOARNOL™ EVOH, using the institute's own CHI-C8-PEF-1 and CHI-C8-BFPE methods. The certified compatibility of the tested SOARNOL™ in combination with SOARESIN™ RG500 in the waste stream of flexible packaging applies both to recycle applications in injection moulding and to films and can be used for a positive preliminary assessment with regard to CHI-RA standard.

The test methods used were developed by CHI on the basis of existing processes in the recycling industry. Sorting, washing, extrusion/melting into recyclates and the relevant applications are carried out on lab scale and critically tested in relation to a reference. The reference material is a commercial PCR-PE made from polyethylene films and specified for injection moulding and film applications.

Institute cyclos-HTP

The cyclos-HTP Institute was founded in 2014 as a company for the classification, assessment and testing of the recyclability of packaging and goods as well as research and development and is the leading institution in Europe for the assessment and optimization of packaging with regard to its recyclability. Based on the profound expert knowledge of the experts and process engineers at HTP and CHI, the first ever recognized, scientifically based, standards-compliant and practicable standard for certification was developed back in 2011 and has since been perfected in many thousands of applications.

Further information can be found at: www.cyclos-htp.de

Mitsubishi Chemical Group

Mitsubishi Chemical Group Corporation (TSE: 4188) is a supplier of specialty materials. The company's mission is to promote "KAITEKI" with its innovative solutions, which stands for the well-being of people and the planet. The company offers in-depth expertise and is a pioneer, particularly in key areas such as mobility, digitalization, medicine and the food industry. In this way, the Mitsubishi Chemical Group enables industry transformation and technological breakthroughs as well as longer, more fulfilling lives. Around 70,000 employees worldwide work together to develop advanced chemical solutions. The company's motto is "Science.Value.Life" (Source: Mitsubishi Chemical Group).

Further information at: www.mcgc.com/english/