## Natural PE Flexible Films for Household and Commercial Packaging

	FULL COMPATIBILITY	LIMITED COMPATIBILITY	NON-COMPATIBILITY
MATERIAL COMPOSITION (TOTAL AMOUNT OF PE & AMOUNT OF PP ATTACHMENTS IN THE PACKAGING)	A >= 95%, B >= 80% and all packaging features are FULLY compatible with recycling	C >= 70% and all packaging features are FULLY compatible with recycling	Non-recyclable < 70% and all packaging features are FULLY compatible with recycling
DESCRIPTION (TEST PROTOCOL)	Materials that passed the testing protocols with no negative impact****	Materials that passed the testing protocols if certain conditions are met****	Materials that failed the testing protocols
(	materials that have not been tested (yet), but are known to be acceptable in PE recycling	materials that have not been tested (yet), but pose a low risk of interfering with PE recycling	materials that have not been tested (yet), but pose a high risk of interfering with PE recycling
DESCRIPTION (METHODOLOGY)	In case of at least one limited compatibility one penalty is applied, lowering the recyclability class from A to B or from B to C	In case of at least one limited compatibility one penalty is applied, lowering the recyclability class from C to non-recyclable	Non-recyclable
MATERIAL*	Oriented and non-oriented LDPE, LLDPE (including PE-plastomers), HDPE; EVA, EBA, EEA, EMA copolymers with acrylate monomers representing <= 5 wt% of the film; EMAA, EAA copolymers & inomers <= 20 %; C3C2-plastomers <=15 %	Multilayer PE/PP <u>with PP &lt;= 5 %</u>	Multilayer PE/PP with PP > 5 %; Any other polymer (e.g. PET, PVC, etc.)
COLOURS	Unpigmented; transparent	Light colours; translucent colours	Dark colours; black; carbon black
SIZE	Packaging surface > 100 cm <sup>2</sup>	Packaging surface between 30 and 100 cm <sup>2</sup> (sorting test)	Packaging surface < 30 cm <sup>2</sup>
PRODUCT RESIDUES (EASY TO EMPTY INDEX)	A if the index is < 5%; B if the index is < 10 %	C if the index is < 15 %	Index is >= 15 %
BARRIER***	SiOx and AlOx without additional coatings: EVOH <= 5 $\%$ + PE-9-MAH tie layers with MAH > 0.1wt% and EVOH:tie layer ratio <= 1	EVOH << 5 % + PE-g-MAH tie layers with MAH > 0.1wt% and EVOH tie layer ratio > 1; <= 15 % PA 6/66 copolymer with melting temperature < 192 °C and incorporating >= 10% PE-g-MAH tie layers.	EVOH > 5 %; Any other PA; Metallisation; PVOH; PVC, PVDC barrier layer; ALOx coating with PVOH primer; any other barrier layer; aluminium
ADDITIVES	Additives that do not increase the density higher than 0,97 g/cm <sup>3</sup>		Bio-/oxo-/photodegradable additives; foaming agents used as expanding chemical agents; Additives that do increase the density higher than 0,97 g/cm³ (CaCO3, talc, glass fibers, etc.)
LAMINATING ADHESIVES	Aliphatic polyurethanes <= 2.5 %: Laminating adhesives approved as fully compatible by RecyClass; To be tested if in combination with <u>other barrier than EVOH</u>	<u>Water-based acrylics &lt;= 2.5 %:</u> <u>Laminating adhesives approved</u> as limited compatible by RecyClass; To be tested if in combination with <u>other barrier than EVOH</u>	Aliphatic polyurethanes & Water-based acrylics >2.5 % (to be tested); Aromatic polyurethanes & Water-based acrylics; Laminating adhesive specially developed for high thermal applications above boiling and/or for high chemical resistance (to be tested); Any other laminating adhesives (Epoxy, etc.)
2 CLOSURE SYSTEM	LDPE, LLDPE (including PE-plastomers), HDPE	PP	Metal, aluminium, PVC, PET, PETG, PS, PLA, non PO or foams with density < 1 g/cm <sup>3</sup>
LINERS, SEALS AND VALVES	LDPE, LLDPE (including PE-plastomers), HDPE	PP, removable aluminium liddings	Metal, aluminium, PVC, PET, PETG, PS, PLA, foiled paper, non PO or foams with density < 1 g/cm <sup>3</sup>
OTHER COMPONENTS	LDPE, LLDPE (including PE-plastomers), HDPE	PP	Metal, aluminium, PVC, PET, PETG, PS, PLA, paper, foams with density < 1 g/cm <sup>3</sup>
FACESTOCK LABEL MATERIAL	PE	PP	Metallized labels, any other; paper labels
ADHESIVES FOR LABELS	Water soluble or water-releasable at less than 40°C		Adhesives non-soluble in water or non-releasable in water at less than 40°C
INKS	PU-based inks; Retentive inks compliant with <u>EuPIA Exclusion Policy;</u> Printed production or expiry date	Printing with coverage < 50 %**	NC-based inks; Bleeding inks; Inks non-compliant with EuPIA Exclusion Policy; Printing with coverage > 50 %** PVC co- and terpolymer binders; Any other chlorinated binders
OTHER DECORATIVE TECHNOLOGIES	Laser marking for production or expiry date	Laser marking with coverage < 50 %**	

RECYCLED CONTENT: No change in the recyclability assessment. A separate 'Recycled Plastics Traceability Certification' based on a Chain of Custody approach is available with RecyClass. Polymer resin can be either fossil- or bio-based, virgin or recycled.
Temporary solution
Guidelines are non-company specific. Barrier structures compatible with recycling are listed in <u>RecyClass Approval page</u>.

\*\*\*\* Approved technologies can be found here

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