RecyClass

Plastics in Vehicles

CATEGORY	FULL COMPATIBILITY	NOT RECOVERED FROM THE ASR*	LIMITED COMPATIBILITY	NON COMPATIBILITY
Description	Features in this column are preferred solutions, which will be recovered and recycled at industrial scale. They will not disturb the recycling process, guaranteeing the best recyclability and quality of recycled material.	Features in this category are currently not recovered in industrial-scale recycling plants, as they are not equipped to recover and recycle polymers with densities above 1.09 g/cm³/1.12 g/cm³. Foams and films, which are separated via suction systems, are also included.	Elements in this column are not preferred but can be tolerated in the recycling stream. Their presence might affect the quality of the recycled material or lead to material losses during recycling.	This column classifies detrimental and disqualifying features that should be avoided when designing plastic parts for automotive industry, as these strongly impact the recycling process and/or the quality of the recyclates.
Internal Components	ABS; PE; PP PP filled with a density below 1.09 g/cm^3 PS; PC-ABS	Polyamide; PET; PMMA; POM; PBT PP with density above 1.09 g/cm^3 ABS, PC/ABS and PC filled material with a density above 1.12 g/cm^3 PU foam used in seats		Multilayer structures of different polymers; Blends that are not compatible with recycling; Thermosets with or without fillers; Foamed polymers whose density results in contamination of existing recycling streams; Biodegradable Polymers
Exterior Components	ABS; PE; PP PP filled with a density below 1.09 g/cm^3 PS; PC-ABS	Polyamide; PET; PMMA; POM; PBT PP with density above 1.09 g/cm^3 ABS , PC/ABS and PC filled material above 1.12 g/cm^3		Multilayer structures of different polymers; Blends that are not compatible with recycling; Thermosets with or without fillers; Foamed polymers whose density results in contamination of existing recycling streams; Biodegradable Polymers
Components under the hood	ABS; PE; PP PP filled with a density below 1.09 g/cm^3 PS; PC-ABS	Polyamide; PET; PMMA; POM; PBT PP with density above 1.09 g/cm^3 ABS , PC/ABS and PC filled material with a density above 1.12 g/cm^3		Multilayer structures of different polymers; Blends that are not compatible with recycling; Thermosets with or without fillers; Foamed polymers whose density results in contamination of existing recycling streams; Biodegradable Polymers
Components removed during depollution phase	ABS; PE; PP PP filled with a density below 1.09 g/cm^3 PS; PC-ABS	Components removed during the initial depollution phases are: battery, airbags, and tires. As a result, the plastics used in these parts are currently not recovered nor recycled in the automotive recycling stream		Multilayer structures of different polymers; Blends that are not compatible with recycling; Thermosets with or without fillers; Foamed polymers whose density results in contamination of existing recycling streams; Biodegradable Polymers
Dismantled components	**Bumpers**: PP in combination with POE, EPDM (non-crosslinked) and mineral fillers. Thresholds for POE, EPDM (non-crosslinked) and mineral fillers are under investigation by RecyClass. Other impact modifiers approved by the RecyClass A & EEE Technical Committee **Headlights**: PC **Backlights**: PC or PMMA With lightsupport made with a compatible material such as PC or PC-ABS			Multilayer structures of different polymers; Blends that are not compatible with recycling; Thermosets with or without fillers; Foamed polymers whose density results in contamination of existing recycling streams; Biodegradable Polymers
Additives and fillers	Additives and fillers that will not change the density outside of the desired range for the selected polymer; Additives needed for processability that will not hinder recyclability; Additives and fillers approved by the RecyClass A & EEE Technical Committee			Biobased fibers Bio-/oxo-/photodegradable additives and fillers
Flame Retardants		Components containing flame retardants with a clear density above 1.13 g/cm³ or a marker, making them easy to identify, track and remove		Any flame-retardant typologies leading to compound densities below 1.13 g/cm³; Brominated, chlorinated, fluorinated or phosphate flame-retardants
Coatings	Coatings removable in the recycling process Coatings approved by the RecyClass A & EEE Technical Committee		Coatings compatible with the recycling process (to be tested)	Non-removable or not tested coatings
Foams		Easy to separate foams; PU foams used in seats		Non-separable foams
Rubbers	Non-crosslinked rubbers approved by the RecyClass A & EEE Technical Committee		TPU (to be tested)	Crosslinked or vulcanised rubbers Natural rubbers
Rubber co-moulded components	Compatible material selection approved by the RecyClass A & EEE Technical Committee POE up to 10 wt% in PP or PE; EPDM (non-crosslinked), up to 10 wt% in PP or PE; TPS up to 10 wt% in PP; TPS up to 5 wt% in PE		POE above 10 wt% in PP or PE (to be tested) EPDM (non-crosslinked), above 10 wt% in PP or PE (to be tested) TPS between 5 and 10 wt% in PE; TPS above 10 wt% in PP (to be tested)	
Impact Modifiers	PP in combination with POE or EPDM (non-crosslinked). Thresholds for POE and EPDM (non-crosslinked) are under investigation by RecyClass Other impact modifiers approved by the RecyClass A & EEE Technical Committee			Any other impact modifiers (to be tested)
Compatibilizers for Polymer Blends	Compatibilizers for polymer blend tested and approved by the RecyClass A&EEE Technical Committee			
Paints	Paint on exterior components removable after grinding and washing, at least 90 %		Paint on exterior components that are removable after grinding and washing, at least 60 %	Paint on exterior components that are removable after grinding and washing below 60 % Painted interior or functional components
Colours	Grey and dark colours		Light colours	
ISO 1043	Embedded coding on each component			

*ASR stands for automotive shredder residue.
Polymer resin can be either fossil or bio-based, virgin or recycled.
Approved technologies can be found here.

Release date: March 2026