PRODUCT GUIDE

RECYCLING OF THERMOPLASTICS

SCONA

RECYCLOBYK

BYK-MAX

Additives for the recycling of thermoplastics (1/2)

Product	Effect									Typical recycles		Dosage	Processing		Application examples with recycles
										Polymers	Blends		SSE	TSE	
	Process stabilization	Heat stabilization	Light stabilization	Compatibilization	Coupling of fiber	Impact modification	Selective odor absorption	VOC and odor reduction	Viscosity modification			As supplied (%)			
VOC and odor reduction															
BYK-MAX OR 4206							●			PE, PO	PO	0.5–2.0	●	●	Odor reduction of substances such as H_2S, NH_3 and amines in PE
BYK-MAX OR 4207							●			PP		0.5–2.0	●	●	Odor reduction of substances such as H_2S, NH_3 and amines in PP
BYK-MAX P 4200								●		PP, PO	PO	0.5–2.0	○	●	PP or PP-GF automotive compounds with high content of recycles
Stabilizer packages															
BYK-MAX HS 4309	●	●		●						ABS, PA, PO	ABS/PP	0.2–2.0	●	●	Restabilization and compatibilization of ABS/PP recyclates, e.g. from WEEE
RECYCLOBYK 4370	●	●								PE, PP		0.1–0.5	●	●	Retention of melt flow properties and long-term thermal stability
RECYCLOBYK 4371	●	●								PE, PP	PE/PP	0.1–1.0	●	●	Restabilization of HDPE with PP impurities, recycling of battery cases
RECYCLOBYK 4372	●	●	●							PE, PP		0.1–0.5	●	●	Improvement of processing and long-term thermal and UV stability of the recyclate
RECYCLOBYK 4373	●	●		●						PP, PO	PP/EPDM	0.1–2.0	●	●	Restabilization and compatibilization of PP/EPDM bumpers contaminated with non-meltable components such as paint residues
RECYCLOBYK 4374	●			●						PE, PO	PE/PA, PE/polyester	1.0–5.0		●	Restabilization and compatibilization of multi-layer barrier films or PO blends with polar components (such as PA, PET, EVOH)
RECYCLOBYK 4375	●	●		●						PE, PP, PO		0.2–1.0	●	●	Use in PO blends in recycling applications to improve processing and long-term stability of the recyclate, recycling of battery cases
RECYCLOBYK 4376	●	●							●	PET, PBT, PA, PC		0.1–1.5		●	Increasing the melt strength of polyesters, such as PET for fiber applications

● Especially recommended ○ Recommended

Additives for the recycling of thermoplastics (2/2)

Product	Effect									Typical recyclates		Dosage	Processing		Application examples with recyclates
	Process stabilization	Heat stabilization	Light stabilization	Compatibilization	Coupling of fiber	Impact modification	Selective odor absorption	VOC and odor reduction	Viscosity modification	Polymers	Blends	As supplied (%)	SSE	TSE	
Polymeric modifiers															
SCONA TPPE 1102 GALL				●						PE, PO	PE/PA	2.0–10.0		●	Compatibilization of polar polymers/impurities (such as PA, EVOH, non-meltable components such as paint residues) in PE
SCONA TPPE 1212 PAHD				●						PE, PO	PE/PA	2.0–10.0		●	Compatibilization of polar polymers/impurities (such as PA, EVOH, non-meltable components such as paint residues) in PE
SCONA TPPE 2400 GAHD									●	PA		1.0–5.0		●	Viscosity increase for profile extrusion of PA
SCONA TPPP 1616 FA				●							PP/PS	5.0–10.0		●	Compatibilization of PS in blends with PP
SCONA TPPP 2003 GB				●						PP, PET	PP/PA, PP/EVOH	1.0–6.0	○	●	Improvement of tear strength in PET-based strapping; compatibilization of polar polymers (e.g. PA, EVOH) in PP
SCONA TPPP 6102 GA					●					PP	PP/PET	0.5–3.0	○	●	Use of PET in PP-GF 30 to reduce CO_2 footprint
SCONA TPPP 8112 GA					●					PP		1.0–2.0	○	●	PP based WPC
SCONA TSKD 9103				●		●				ABS	ABS/PP	3.0–10.0		●	Improvement of impact strength and compatibilization of ABS recyclates from WEEE
SCONA TSPE 2102 GAHD					●					PE		1.0–2.0	○	●	PE-based WPC
SCONA TSPOE 1002 GBLL				●		●				PA	PE/PA, PE/EVOH	2.0–18.0		●	Impact modification of PA, compatibilization of polar polymers (e.g. PA, EVOH) in PE
SCONA TSPP 10213 GB					●					PP, PO	PE/PP	1.0–2.0	○	●	rCF-reinforced PP, PP/PE-based WPC

● Especially recommended ○ Recommended

Abbreviations

ABS Acrylonitrile butadiene styrene
EPDM Ethylene propylene diene (monomer) rubber
EVOH Ethylene vinyl alcohol copolymer
GF Glass fiber
HDPE High-density polyethylene
PA Polyamide
PBT Polybutylene terephthalate
PC Polycarbonate
PE Polyethylene
PET Polyethylene terephthalate
PO Polyolefin
PP Polypropylene
PS Polystyrene
rCF Recycled carbon fiber
SSE Single screw extruder
TSE Twin screw extruder
WPC Wood plastic composite
WEEE Waste of electrical and electronic equipment

For additional information on additives and technical topics, please contact us:
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