

# PRODUCT GUIDE

## RECYCLING OF THERMOPLASTICS

BYK-MAX



RECYCLOBYK

SCONA



## Additives for the recycling of thermoplastics (1/2)

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	SSE		TSE
<b>VOC and odor reduction</b>															
BYK-MAX OR 4206							●		PE, PO	PO	0.5–2.0	●	●	Odor reduction of substances such as H <sub>2</sub> S, NH <sub>3</sub> and amines in PE	
BYK-MAX OR 4207							●		PP		0.5–2.0	●	●	Odor reduction of substances such as H <sub>2</sub> S, NH <sub>3</sub> 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 recyclates	
<b>Stabilizer packages</b>															
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 As supplied (%)	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	SSE		TSE
<b>Polymeric modifiers</b>															
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 <sub>2</sub> 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

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This issue replaces all previous versions.

