

## PRODUCT GUIDE CONCENTRATES FOR THERMOPLASTICS

○ FLAME RETARDANT  
ADDITIVES

○ HEAT STABILIZERS



○ ODOR REDUCTION  
ADDITIVES

○ NUCLEATION ADDITIVES

○ SPECIALTIES



## Concentrates for thermoplastics (1/2)

Product	Polymer	Dosage	Process			Markets				Application remarks					
	Polyethylene	Polypropylene	As supplied (%)	Extrusion	Injection molding	LFT	Blow molding	Film/fiber	Transportation				Consumer goods	Packaging	Agricultural films
Anti-fog and anti-static additives															
BYK-MAX AF 4160* <sup>1</sup>	●	4.0–12.0	●					●				●		Efficient long lasting anti-fog additive; especially suitable for (L)LDPE film and sheets	
BYK-MAX AS 4170	●	0.5–2.0	●	●				●	●	●	●			Long-lasting reduction in surface resistance; additionally providing anti-fog properties	
BYK-MAX AS 4171		● 0.5–2.0	●	●				●	●	●	●			Long-lasting reduction in surface resistance; additionally providing anti-fog properties	
Anti-scratch additives															
BYK-MAX ASC 4181	●	● 0.5–1.0	●	●					●	●				Silicone-free surface additive; improvement of scratch resistance and surface slip	
BYK-MAX ASC 4182		● 1.0–3.0	●	●					●	●				Improvement of scratch resistance and surface slip	
Flame retardant additives															
BYK-MAX FR 4143* <sup>2</sup>	●	● 15.0–25.0	●	●					●	●				Halogen-free additives; formation of insulating intumescent protective layer	
BYK-MAX FR 4144	●	● 2.0–5.0	●						●	●				Flame retardant synergists for HFFR formulations; improvement of dripping behavior and char formation	
Heat stabilizers															
BYK-MAX HS 4301		● 1.5–3.0	●	●	●	●	●	●						LTHA of more than 1000 hours at 150 °C (e.g. in underhood application)	
BYK-MAX HS 4302		● 1.5–4.0	●	●	●	●	●	●	●			●		LTHA of more than 1000 hours at 150 °C (e.g. in underhood application)	
BYK-MAX HS 4303		● 1.5–3.0	●		●				●	●				LTHA of more than 1000 hours at 150 °C; especially suitable for GMT applications	
BYK-MAX HS 4332* <sup>3</sup>		● 1.0–3.0						●				●		Specifically designed for artificial turf applications	
BYK-MAX HS 4334* <sup>3</sup>		● 1.5–3.0	●	●	●				●	●				LTHA of more than 1000 hours at 150 °C (e.g. in structural applications); especially suitable for multiple heat processes	
Heat stabilizers and coupling agents (multifunction)															
BYK-MAX HS 4342* <sup>3</sup>		● 2.0–4.0	●	●	●				●	●				LTHA of more than 1000 hours at 150 °C; excellent glass fiber bonding in PP-GF (e.g. in structural applications)	
BYK-MAX HS 4344* <sup>3</sup>		● 2.0–4.0	●	●	●				●	●				LTHA of more than 1000 hours at 120 °C; excellent glass fiber bonding in PP-GF (e.g. in structural applications)	
BYK-MAX HS 4350		● 2.0–4.0	●	●	●				●	●				LTHA of more than 1000 hours at 150 °C; excellent glass fiber bonding in PP-GF (e.g. in structural applications)	

<sup>\*1</sup> To be combined with UV package

<sup>\*2</sup> Delivery form: compact

<sup>\*3</sup> Black-colored product



## Concentrates for thermoplastics (2/2)

Product	Polymer	Dosage	Process			Markets				Application remarks			
	Polyethylene Polypropylene	As supplied (%)	Extrusion	Injection molding LFT	Blow molding	Film/fiber	Transportation	Consumer goods	Packaging				Agricultural films
Light stabilizers													
BYK-MAX LS 4125	●	0.5–2.0	●	●		●	●	●	●		●	●	Outstanding for products with proportionally large surfaces (e.g. thick film, thick-wall products)
Nucleation additives													
BYK-MAX NU 4230 LDPE	●	2.0–5.0	●	●		●	●	●	●	●			Optmium balance between increased production speed and improved physical properties
BYK-MAX NU 4230 PP	●	1.0–3.0	●	●		●	●	●	●	●			Optmium balance between increased production speed and improved physical properties
BYK-MAX NU 4232	●	1.0–3.0	●	●		●	●	●	●	●			Designed for maximum increase of production speed
Odor reduction additives													
BYK-MAX OR 4206	●	0.5–2.0	●	●				●	●	●			Odor-absorbing to neutralize unpleasant odors especially in recycling systems
BYK-MAX OR 4207	●	0.5–2.0	●	●				●	●	●			Odor-absorbing to neutralize unpleasant odors especially in recycling systems
Processing additives													
BYK-MAX P 4104	●	●	0.8–2.0	●	●		●	●	●	●	●		Polymeric processing aid for reduced friction and viscosity, less melt fractures and higher throughput
BYK-MAX P 4200	●	●	0.5–2.0	●	●			●	●				Stripping agent for VOC and odor reduction for polyolefin recycling systems. Vacuum degassing required for optimum performance
Slip agents													
BYK-MAX SA 4190	●	●	0.3–1.0	●	●		●	●		●	●	●	Increasing surface slip and providing anti-blocking properties; better mold release in injection molding
BYK-MAX SA 4191	●	●	0.75–2.0	●	●		●	●		●	●	●	Increasing surface slip and providing anti-blocking properties; better mold release in injection molding
Specialties													
BYK-MAX STARTSTOP 4205	●	●	> 20.0	●									Preventing formation of “black spots” during idleness of extrusion lines

\*1 To be combined with UV package

\*2 Delivery form: compact

\*3 Black-colored product

### Abbreviations

GF Glass fiber

GMT Glass mat thermoplastic

HFFR Halogen-free flame retardant

LFT Long fiber thermoplastic

LTHA Long term heat aging

PP Polypropylene

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

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