

OPTICAL BRIGHTENERS FOR PLASTICS APPLICATIONS

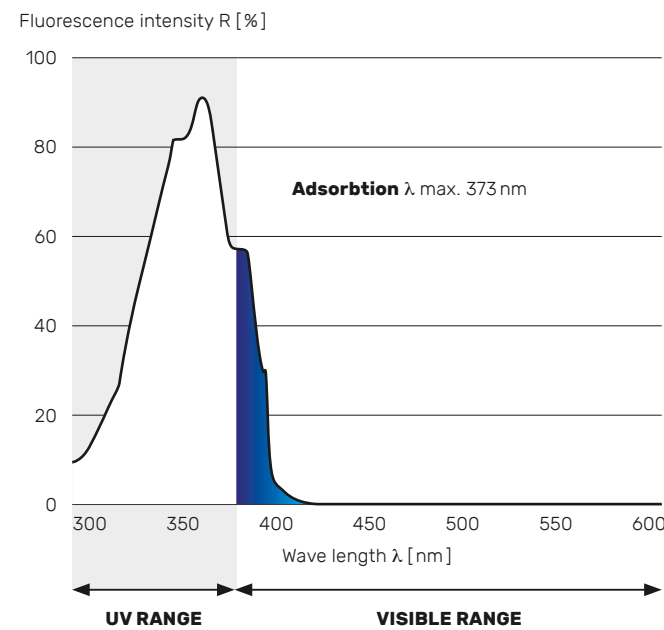


OPTICAL BRIGHTENERS FOR PLASTICS AND SYNTHETIC FIBERS

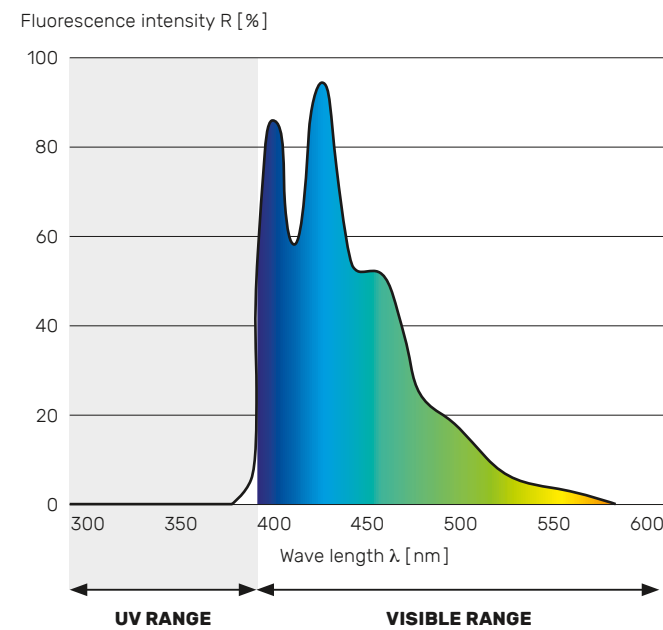
OBAs function by absorbing light in the UVA range (320–400 nm) and re-emitting light in the visible blue range (400–480 nm).

The mechanism involves the excitation of the brightener molecule by UV light that raises its energy level from the ground state to a higher excited state. As the molecule returns to a lower state it releases energy in the form of fluorescence.

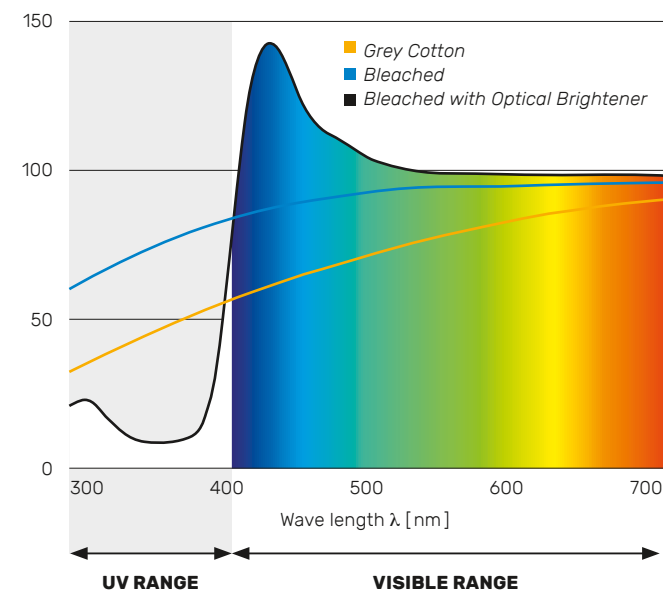
EXCITATION CURVE



EMISSION CURVE



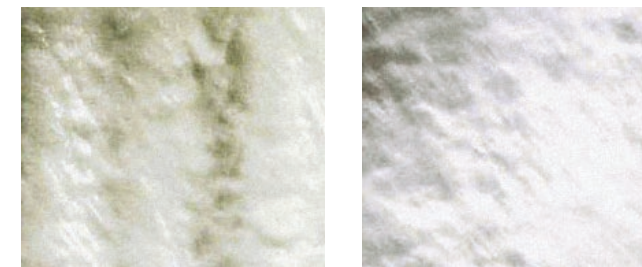
REFLECTION [%]



OPTICAL BRIGHTENERS FOR PLASTICS BUSINESS - CLARIANT PORTFOLIO

PRODUCT NAME	SHADE	FDA (21 § 178.3297)
TELALUX™ KS	Neutral	Yes
TELALUX KSC	Neutral	-
TELALUX KCB	Blue	-
TELALUX KSN	Neutral - bluish violet	-
TELALUX KS1	Neutral - violet	Yes
TELALUX NSM	Neutral	-
TELALUX OB	Neutral - violet	-
TELALUX OB1	Neutral - violet	-

The OBA has the ability to increase reflectance and impart a blue tint. It enables a higher degree of whiteness to be achieved in polymers. Their ability to hide the inherent »yellowness« of discolored (natural and recycled) polymers facilitates color improvement in various resins. Optical brighteners work in all colored plastics, however, they are more effective in lighter shades.



The OBA is highly soluble in the polymer and therefore effective at low dosages (100–1000 ppm).

OVERVIEW OF THE TELALUX RANGE AND AREAS OF APPLICATION OPTICAL BRIGHTENERS FOR PLASTICS AND SYNTHETIC FIBERS

PRODUCT NAME	PET PBT	PE	PP	PS	SAN	ABS	PC	PMMA	PA	PVC-U	PVC-P	EVA	PUR
TELALUX KS	■	■	■	■	■	■	■	■	■	■	●	-	●
TELALUX KSC	-	-	-	-	-	-	-	-	-	■	■	-	-
TELALUX KCB	■	■	■	■	■	■	■	■	■	■	■	■	-
TELALUX KSN	■	■	■	■	■	■	■	■	■	■	●	-	-
TELALUX KS1	■	-	-	●	●	●	-	-	■	-	-	-	-
TELALUX NSM	-	-	-	-	-	-	-	-	-	-	-	-	■
TELALUX OB	■	■	■	■	■	■	■	■	■	■	■	■	■
TELALUX OB1	■	-	-	●	●	●	-	-	■	-	-	-	-

■ Suitable ● Limited suitability - Not suitable

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