





# **RAYTEK**

## Recommended use:

according to the design of the final product.

**Description:** RAYTEK products represent the line par excellence dedicated to plastic additives, not just colors. Each product has peculiar properties that regulate its use, dosage and other technical properties.

\* Any QA specifications agreed with customers are disclosed in the individual data sheets.







UV protection, deformation, breathability.
These are some of the challenges for which our customers compete in today's packaging market.
Formulated on the base of meticulous and careful studies in our laboratory, RAYTEK masterbatches have been designed precisely to give a concrete answer to these issues. Know How based on literature studies in chemistry and physics combined with a dash of love for trials: these are the main ingredients that make up our unique recipes.







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#### LITESCREEN

Highly perishable and sensitive products, such as vitamins and nutrients, ensure our wellbeing on a daily base. But what about their protection against some adverse environmental conditions? A well-designed packaging is simply not enough: the same light that filters through the packaging tray, irradiating the content, can be extremely harmful. It can affect the properties of foodstuff with disastrous effects. So how to protect products from a UV light induced damage? The LITESCREEN line has been specially designed to interfere with the light waves of the visible and ultraviolet spectrum, so that the radiation is not allowed to go through. By means of color technology, it is possible to ensure UV light protection of the content inside a single packaging.

Technical note: Each color has a specific area of use.

<sup>\*</sup>Table reference.

LITESCREEN					
Color	Name	Dosage	Plastics		
	Raytek White M2 51/25H	3.5%	HDPE - PP		
	Raytek Orange M8 A298/5E	4.0%	HDPE - PP		
	Raytek Red A 383/2AP	3.0%	HDPE - PP		
	Raytek Purple a 972/1V	4.0%	HDPE - PP		
	Raytek Light Blue A656/1AM	3.0%	HDPE - PP		
	Raytek Green A 793/5AZ	3.0%	HDPE - PP		

## **SHELLIGENT**

How to deal with the deformation of a plastic packa-

ging? This is the challenge that those working on product design constantly face. Indeed, the choice of dyes and additives determines the shrinkage and warping of plastic packaging after any exposure to heat. If the shrinkage during cooling of the packaging is not uniform, it causes dramatic warping. This results in the inability to bond to other product components (lids and joints) or leads to an aesthetic alteration. SHELLIGENT masterbatches include anti-warping additives, called nucleating agents, to control size stability.

**Technical note:** SHELLIGENT products are designed to reduce the side effects of certain colors on semi-crystalline thermoplastics, reducing warping and ensuring geometrical consistency.

<sup>\*</sup>Some application examples in the table below.

SHELLIGENT				
Name	Dosage	Product		
Raytek Green A 798/2AN		food beverage, caps and closures		
Raytek Light Blue A 663/1Ai				
Raytek Black CY PE 2B/1EP	2%			
Raytek Yellow A 182/2R	-			
Raytek White M8 A 55/5D				

## **ONE PACK**

All in one. Everything you need concentrated in a single masterbatch where the necessary components are compressed together into a super concentrated, super functional product. The incorporated additives can work with the dyes in it synergistically. Even variations of the

same color can be achieved with different additive combinations. Convenient, right? There will be no more need to include colors and additives separately for a certain mixture: we have already taken care of that.

#### **PHOSPHORE**

The color masterbatches within the PHOSPHORE product line take advantage of light absoption in order to activate their distinctive properties. They are divided into two categories: phosphorescent and fluorescent. Phosphorescent dyes allow a gradual release of the stored energy over time. In other words, they glow in the dark after absorbing energy in form of light. Fluorescent colors on the other side re-emit the energy absorbed before with light of a different and more intense wavelength than the original one, enabling new colorations that stand out to the human eye. These color effects can amaze even the most demanding customers.

### **OVER**

The constant interaction between plastics and organic materials in industrial areas and consumer goods can be harmful. One example is the personal hygiene sector, where plastic materials in sensitive areas of the human body are in direct contact with the skin causing adverse health issues. The same problem can be seen in agriculture applications where plants and soil are at risk of suffocating or developing mold. So, is it possible to make plastic breathable? We have found the answer with our OVER masterbatches. This line, specially designed for plastic films, contains materials suitable to microperforate the final film. Thanks to this solution, the film produced turns out to be breathable. The barrier properties typical of plastic materials are modified while still ensuring a durable article. Try it to believe!

### **CLEANER**

CLEANER is a purge masterbatch. It was initially developed for internal use with the aim of optimizing our production. It ensures in general a better cleaning of extruders and similar machines. This step is essential in the color business to avoid contaminations of any kind. Even the slightest residue trapped in blind spots can leave visible traces decreasing the plant productivity considerably. Its purpose is precisely to improve cleaning times for the benefit of higher production output, reducing waste and disposal costs.

<sup>\*</sup>Some application examples in the table below.

CLEANER   DOSAGE 2.0%   170-260°C			
Name	Application		
Raytek Cleaner MP A 977/5W	Injection molding with/wit- hout hot runner		
Raytek Cleaner M2 981/2W	Blow molding		

