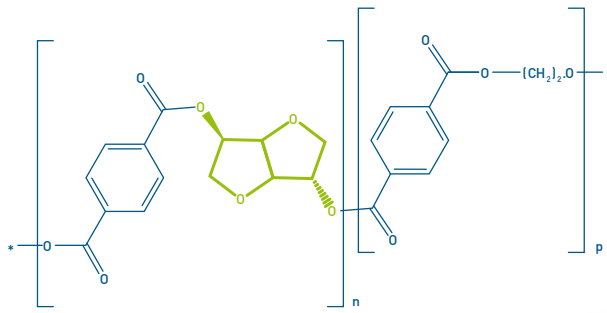
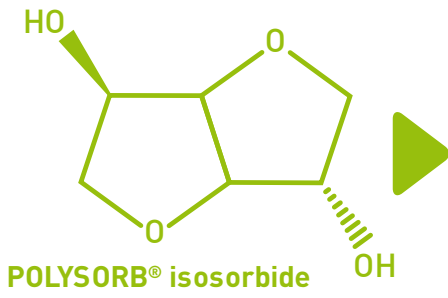


# Go beyond PET



POLYSORB®  
**Isosorbide**

## KEY BENEFITS

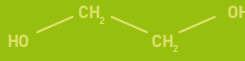
- ▶ Heat resistance
- ▶ Increased glass temperature
- ▶ Good chemical and mechanical resistance
- ▶ Optical properties



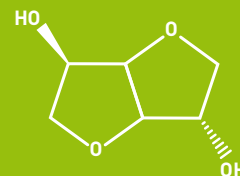
# POLYSORB® Isosorbide



+



+



## 3 STEPS REACTION

### ► Oligomerization step:

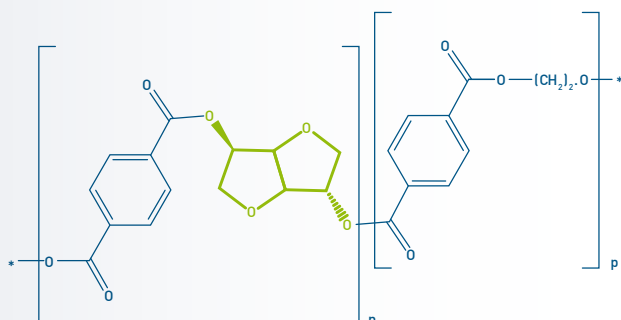
Formation of dihydroxy Oligomers of PET

### ► Transesterification step:

Increase of molecular weight  
Performed at molten state

### ► Solid State Polymerization:

Increase of molecular weight  
Performed at solid state for crystallized products



Poly(ethylene-co-isosorbide) terephthalate

## TUNED PROPERTIES WITH ISOSORBIDE

### Semi-crystalline

### Amorphous Polymer

PEIT

75 ← T<sub>g</sub> ← 95°C

PEIT with or without co-monomers

T<sub>g</sub> → 95°C

Classical range from 95  
up to 130°C

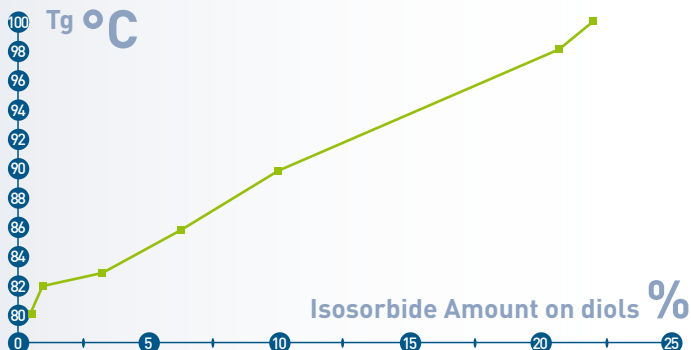
0%

15%

Isosorbide Amount on diols %

## ISOSORBIDE IMPROVES

### ► Heat stability (T<sub>g</sub>)

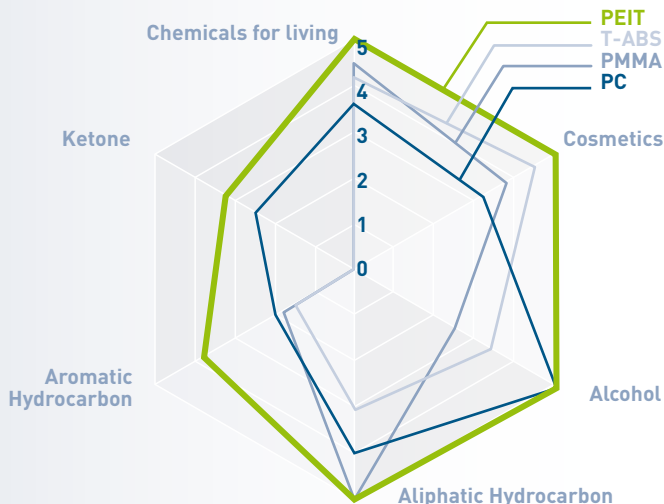


### ► Optical properties

	PET	PETg	PEIT
TOTAL TRANSMITTANCE	91%	91%	88-90%
HAZE 3,2mm	5%	1%	← 1%



### ► Chemical Resistance<sup>(1)</sup>



(1) SK Chemicals Data

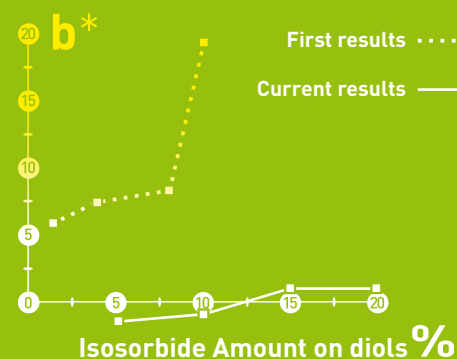
## TIPS TO REDUCE COLORATION

High purity POLYSORB® Isosorbide  
from Roquette

Avoid Presence of Oxygen

Polymerization conditions  
(time, temperature, catalyst)

Use appropriate Additives



Our experts can help you to gain value in Polyesters with isosorbide

TO ORDER NOW  
[www.roquette.com/contact-us](http://www.roquette.com/contact-us)

FOR MORE INFORMATION  
[www.roquette.com](http://www.roquette.com)



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