

# QUALITY PERFORMS.

## Stabaxol® in ester-based plastics

Expanding the performance

QUALITY WORKS.

**LANXESS**  
Energizing Chemistry

## STABAXOL® P 110: CUSTOMIZED POLYMERIC CARBODIIMIDE

With **Stabaxol® P 110** the LANXESS Additives business unit is addressing the trend towards customized antihydrolysis agents that are tailor-made for use in individual applications, and thus an enormous improvement with respect to stabilization performance, toxicology, emissions and handling.

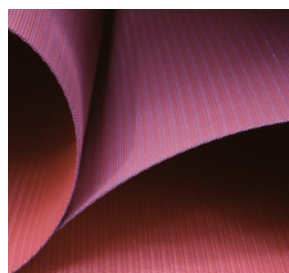
- Useable in PET, TPE-E and PLA
- Provides extremely improved hydrolysis stability already at very low dosage levels
- Up to 90% reduction in emission of free isocyanates compared to other hydrolysis stabilizers
- Material service time can be extended up to fivefold in certain applications



■ **Stabaxol®** in thermoplastic elastomers (TPE-E)

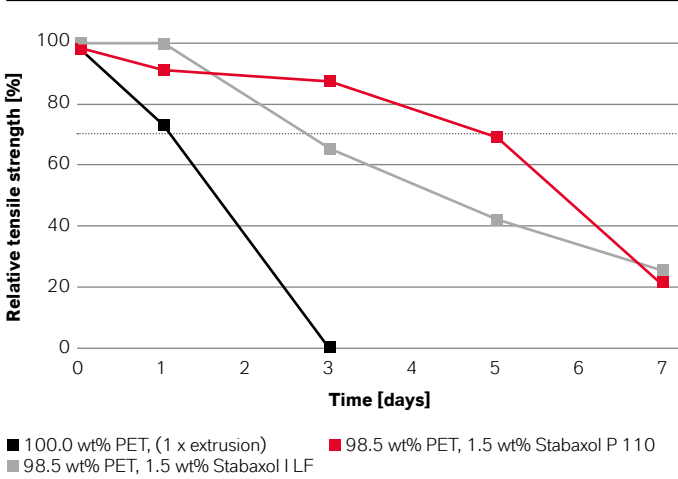


■ **Stabaxol®** in polylactide (PLA)



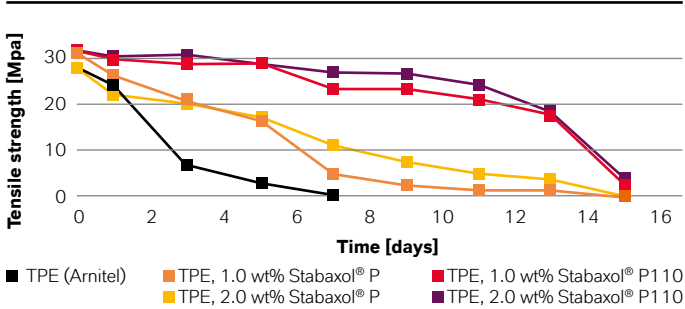
■ **Stabaxol®** in PET monofilaments

### Hydrolysis of PET at 110°C with 1.5% Stabaxol in saturated steam: relative tensile strength



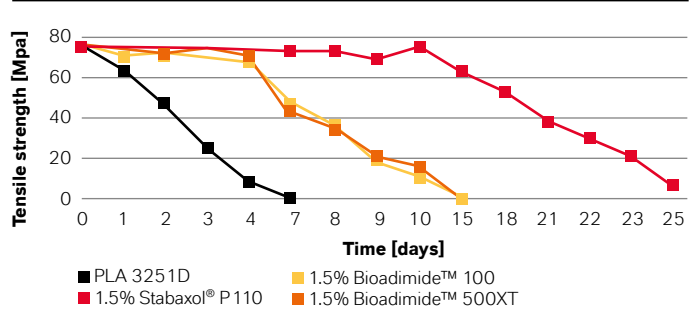
- Vulnerability to hydrolysis of PET with a very high tensile strength can be remedied by adding **Stabaxol® P 110** already at low concentrations.
- PET containing **Stabaxol® P 110** shows a fivefold increase in service time.

### Hydrolysis protection of TPE-E at 95°C in hot water: tensile strength

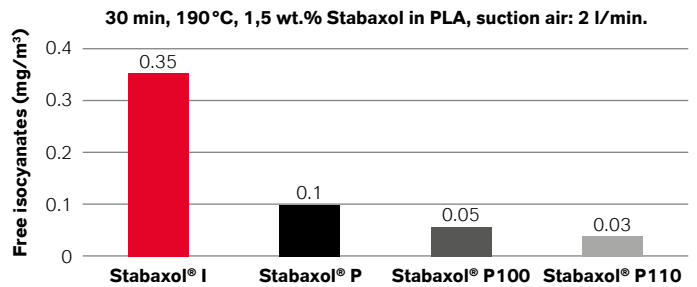


- Use of **Stabaxol®** clearly improved protection of TPE-E against hydrolysis.
- Even very low dosage rates of **Stabaxol®** were extremely effective for stabilizing PLA against hydrolysis.

### Hydrolysis protection of PLA at 65°C in water: tensile strength



### Emission tests with **Stabaxol®**



- Improved/reduced emission of isocyanates using **Stabaxol® P 110**



■ Stabaxol® P 110 is supplied in pellet form or as an easy-flowing powder.

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