

viscotec

Starlinger viscotec
viscoZERO
technology for PE,
PP, PS and PET

Kevin Hinterreiter

**Plastics Recycling Conference
Warsaw**

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STARLINGER

LET OUR EXPERIENCE WORK FOR YOU



- Machine manufacturer established in 1835
- > 970 employees worldwide
- 380 Mio. EUR turnover, 99 % export rate
- viscotec is a division of Starlinger

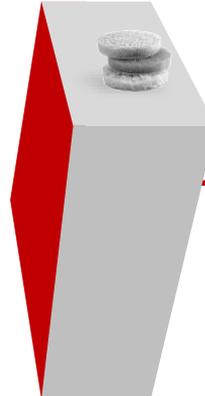
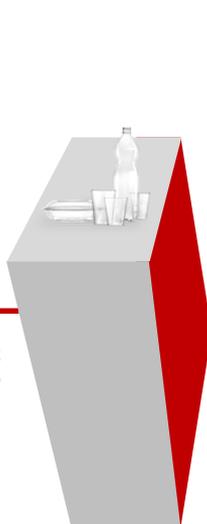
STARLINGER

3 DIVISIONS

textile packaging



viscotec
foodgrade without compromise



RECYCLING
TECHNOLOGY

STARLINGER viscotec

CORE COMPETENCE IN rPET SHEET AND DECONTAMINATION



- since 2012 in St. Martin, Austria
- 100 employees
- Increase of factory space in 2016 and in 2020
- US subsidiary American Starlinger-Sahm in South Carolina

379 PLANTS INSTALLED WORLDWIDE

EQUALS **3.5 MILLION TONS** OF ANNUAL rPET CAPACITY

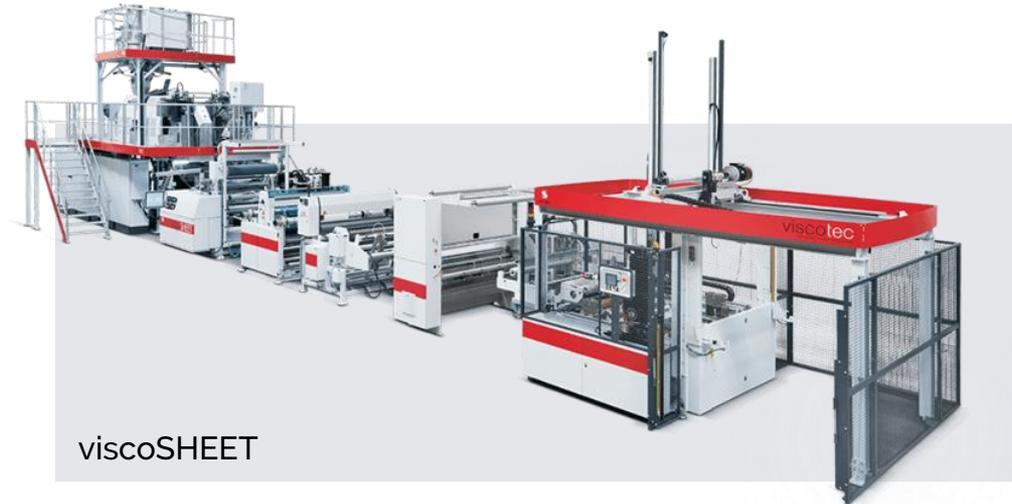


ENTIRE SHEET EXTRUSION LINE

TURN-KEY SOLUTION

BENEFITS

- Highly automated
- Constant, reproducible quality
- Safe & easy to operate
- Low maintenance



viscoSHEET

PRE-TREATMENT SOLUTIONS

FOR EXCELLENT SHEET AND FOOD GRADE rPET

BENEFITS

- Crystallization
- Drying, dedusting
- Decontamination
- iV increase



crystallizer



deCON unit



viscoSTAR



viscoZERO

Melt phase decontamination

ZERO contamination

ZERO waste

ZERO odour

ZERO limits



MELT-PHASE DECONTAMINATION

viscoZERO PROCESSES PP, PE, PS AND PET

- Superclean post-consumer material
- iV increase for PET
- Odor removal
- Spin finish removal

Also available
as upgrade
for existing
recycling lines





viscoZERO APPLICATIONS

INPUT MATERIALS

- **Post-industrial** Fibres & textiles
Skeleton waste
Strapping
- **Post-consumer** Flakes

APPLICATIONS

- **High iV** Fibres
Strapping
- **Odor free & food grade**
Granulate
Sheet

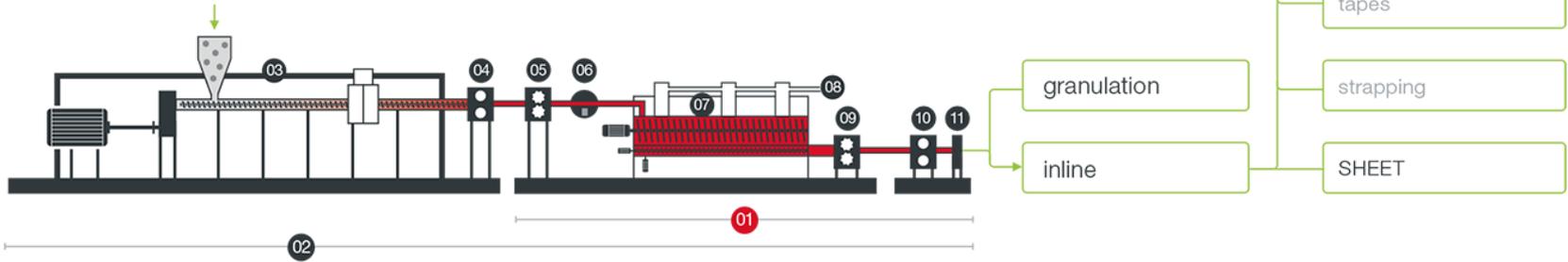
viscoZERO PROCESS

Available as

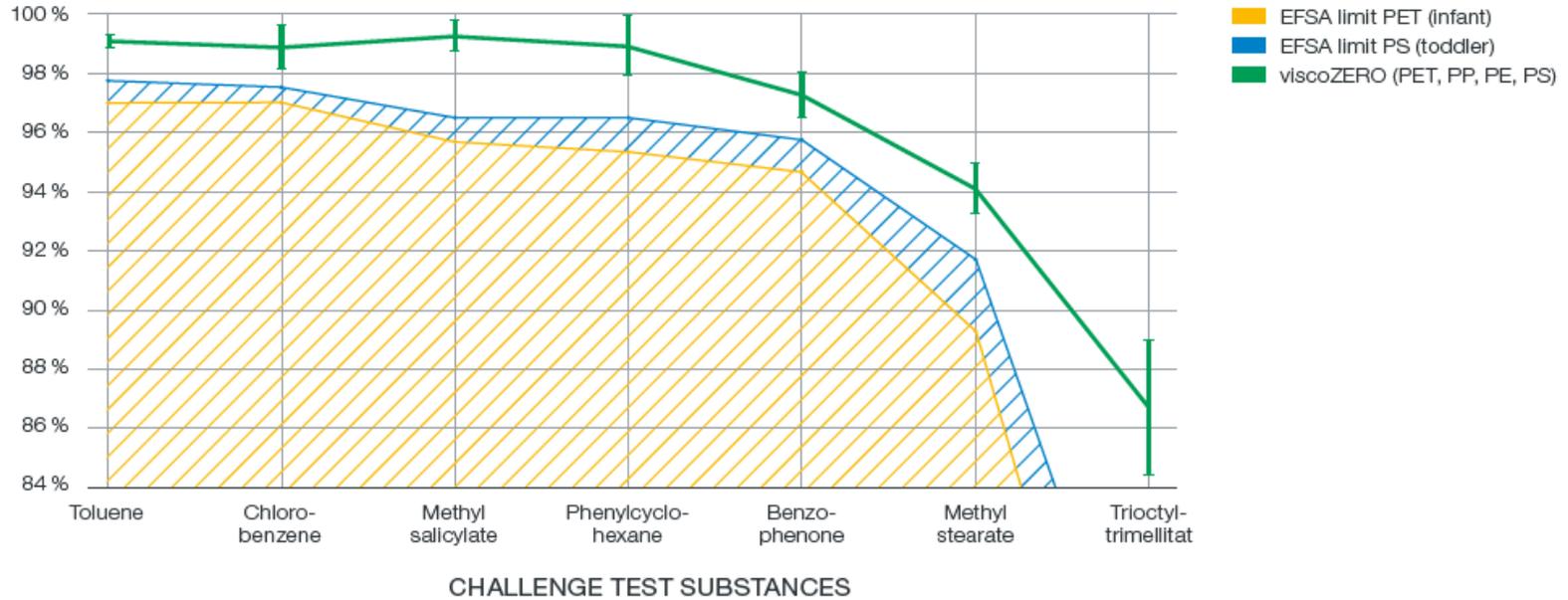
- 01 stand alone
- 02 in combination with recycling extruder

Components

- 03 recycling extruder
- 04 pre-filtration
- 05 melt pump
- 06 start valve
- 07 viscoZERO
- 08 vacuum system / degassing
- 09 melt pump
- 10 screen changer
- 11 viscometer



CLEANING EFFICIENCIES



viscoZERO FACTS

Model		600	1500
Max. output ^{1,2}	[kg/h]	400-800	800-1600
Residence times from/to ²	[min]	10-40	15-40
Net volume of reactor	[dm ³]	600	1500
Equipment height	[m]	2.2	2.2
Floorspace	[m]	5 x 3	6 x 4
High-vacuum system	[mbar]	≤ 10	
Energy consumption	[kWh/kg]	0.03-0.05	
iV increase PET ³	[dl/g/min]	0.004-0.007	
Food grade according to		FDA pending	

Above table represents general data and average values. We reserve the right of technical modifications.

¹ depending on material (PET, PP, PE, PS) and residence time

² recommended residence time 20 minutes

³ iV increase equals 0.08 - 0.15 dl/g per 20 minutes

viscoZERO

Super-cleaned recycled
PP, PE, PS and PET
iV increase for
recycled polyester

World
Premiere



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