LUVOTECH® eco+ PPS GF40 BK (REC50)

High-performance material with the best of both worlds

The demand for materials with a lower carbon footprint is increasing. But what does the daily handling of recyclates look like in technically demanding areas of application?

- Is the technical performance of the material sufficient for the application?
- Can larger tolerances and batch fluctuations be compensated?
- Are enough raw materials available to cover the increasing demand in the long term?

LEHVOSS offers a solution with its recyclate mixtures.

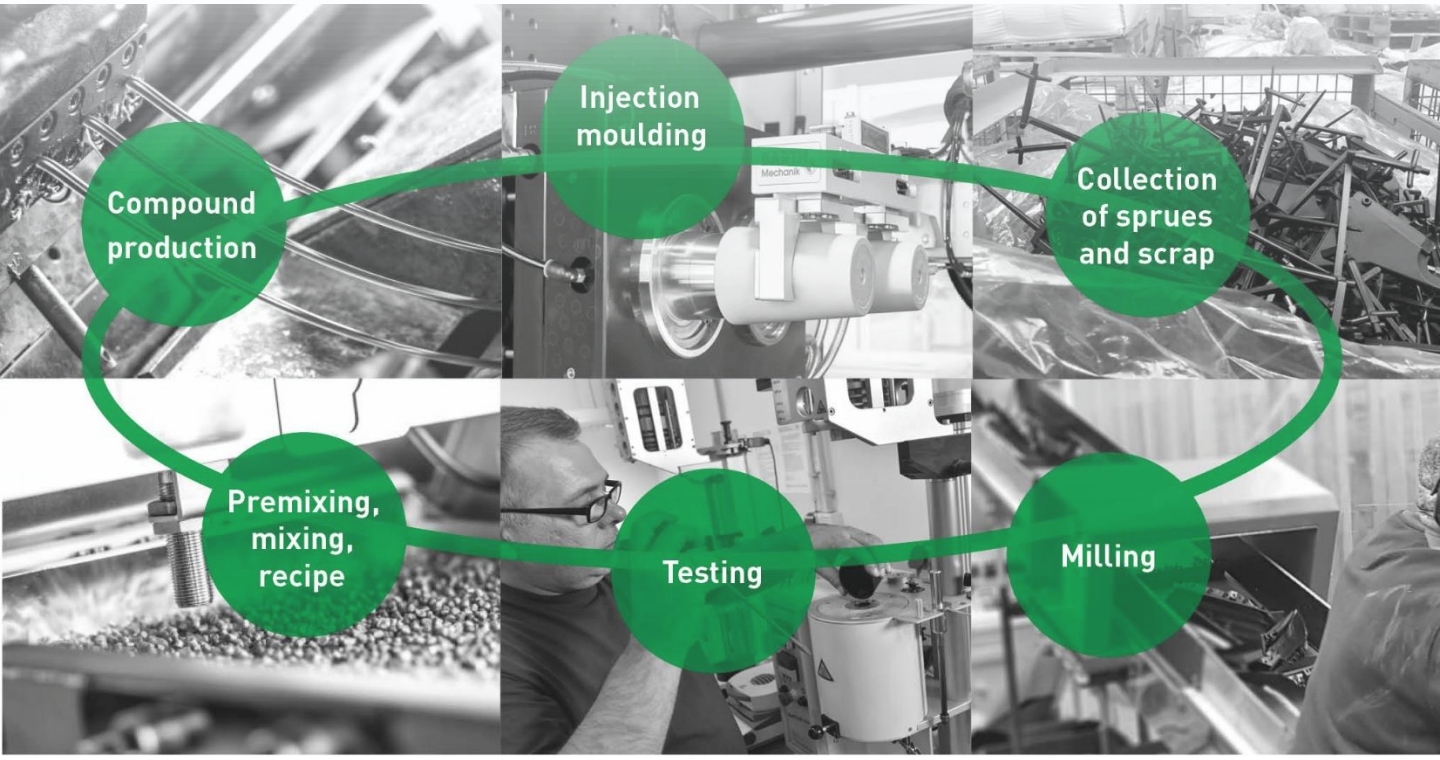
- High and consistent LEHVOSS quality
- Minimization of the carbon footprint by around 50%
- Meets the requirements of automotive standards
- Extensive performance data
- Mixture of 50% new and recycled raw materials
- Secured raw material sources (PIR)
- Significant cost savings compared to new goods

1 kg LUVOTECH® eco+ PPS GF40 BK (REC50) based on 50% recycled material reduces greenhouse gas emissions compared to virgin PPS GF40 by approx. 50% to 2.6 kg CO_2-eq per kg.

SKZ Das Kunststoff-Zentrum

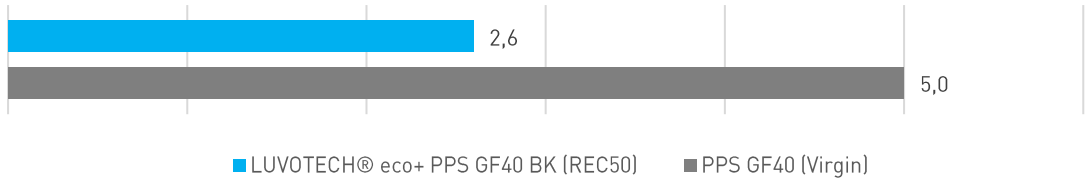
Basis of calculations:
DIN EN ISO 14040,
DIN EN ISO 14044 und
DIN EN ISO 14067

LEHVOSS Compounds



Carbon Footprint

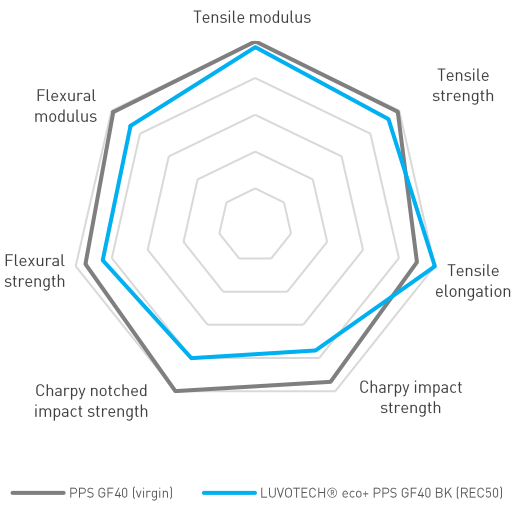
Comparison of greenhouse gas emissions in kg CO_2-eq per



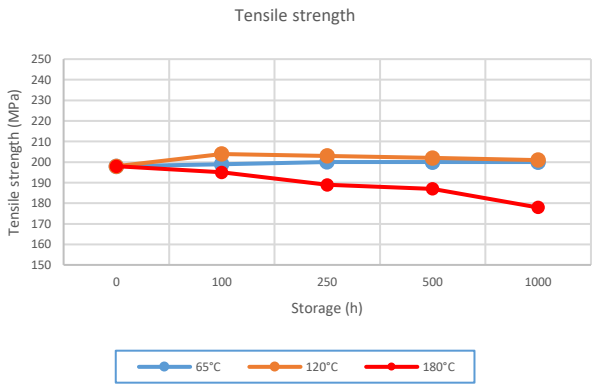
Technical performance

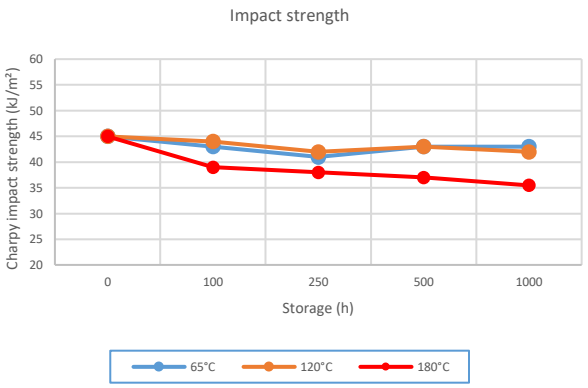
Close to virgin grades, meets automotive standards

Characteristic		PPS GF40 (virgin)	LUVOTECH® eco⁺ PPS GF40 BK (REC50)	VW 50137 PPS-7-A (2020-05)
Tensile modulus	MPa	15500	15000	-
Tensile strength	MPa	198	185	min. 165
Tensile elongation	%	1.8	2	min. 1.3
Charpy impact strength	kJ/m²	50	40	min. 30
Charpy notched impact strength	kJ/m²	10	8	min. 7
Flexural strength	MPa	284	255	min. 250
Flexural modulus	MPa	14800	13000	-

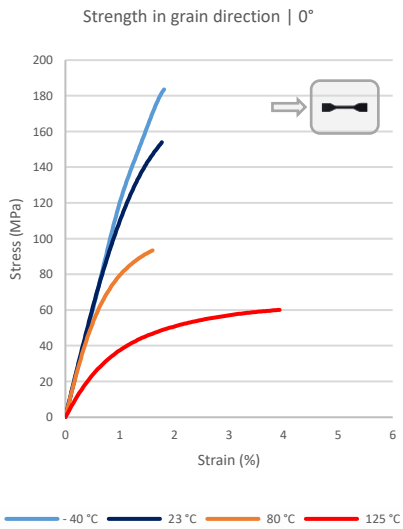


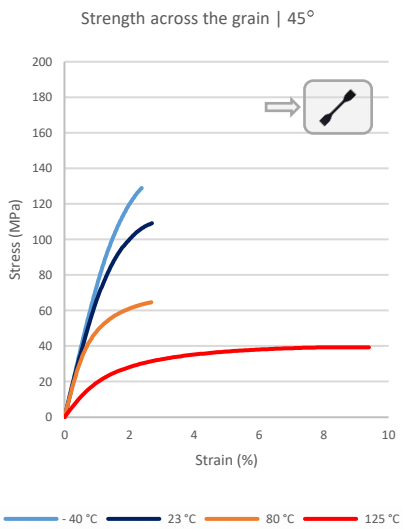
Mechanics after heat storage

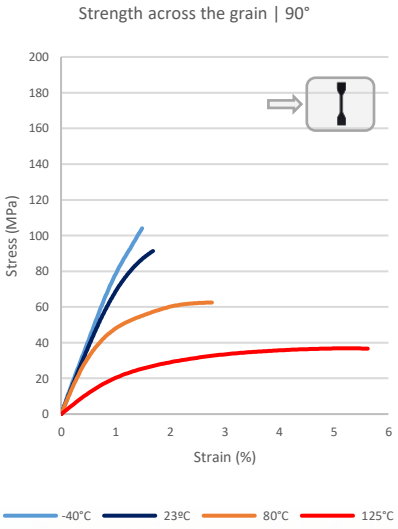




Mechanics of fiber direction under temperature influence

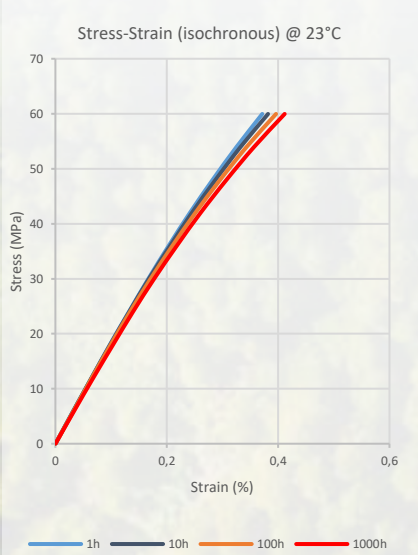


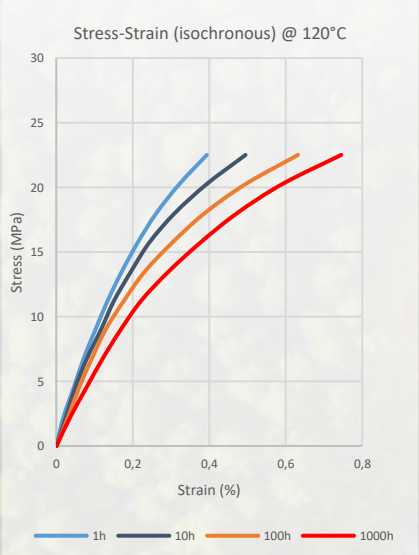


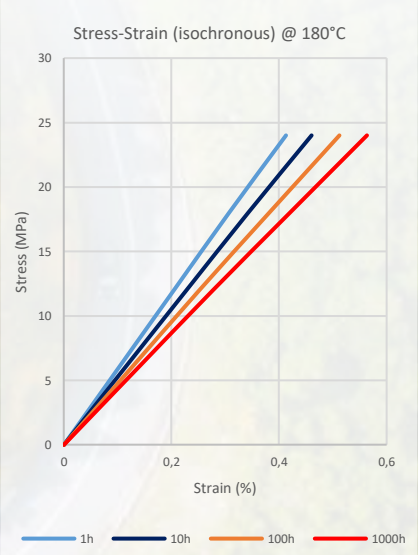


Differences to data sheet values (23°C | 0°) according to ISO 527 are due to the process used to produce the test specimens.

Creep behaviour at different temperatures

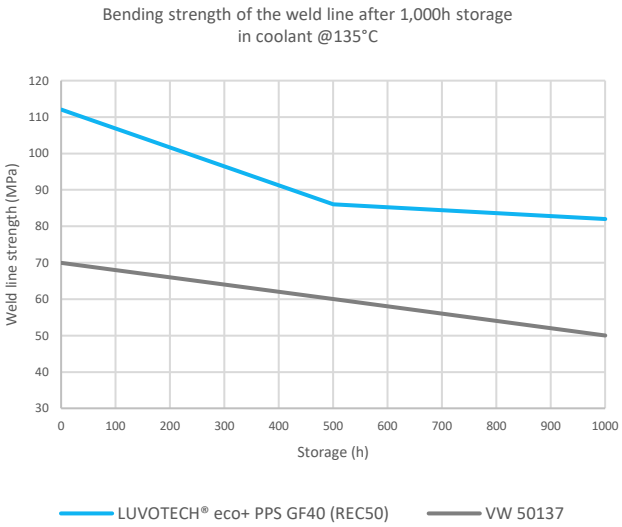


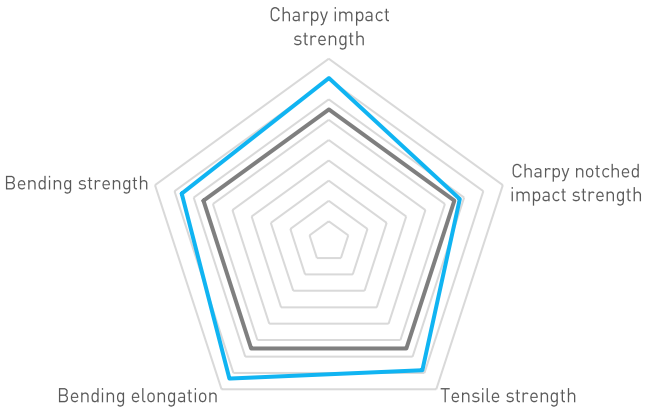


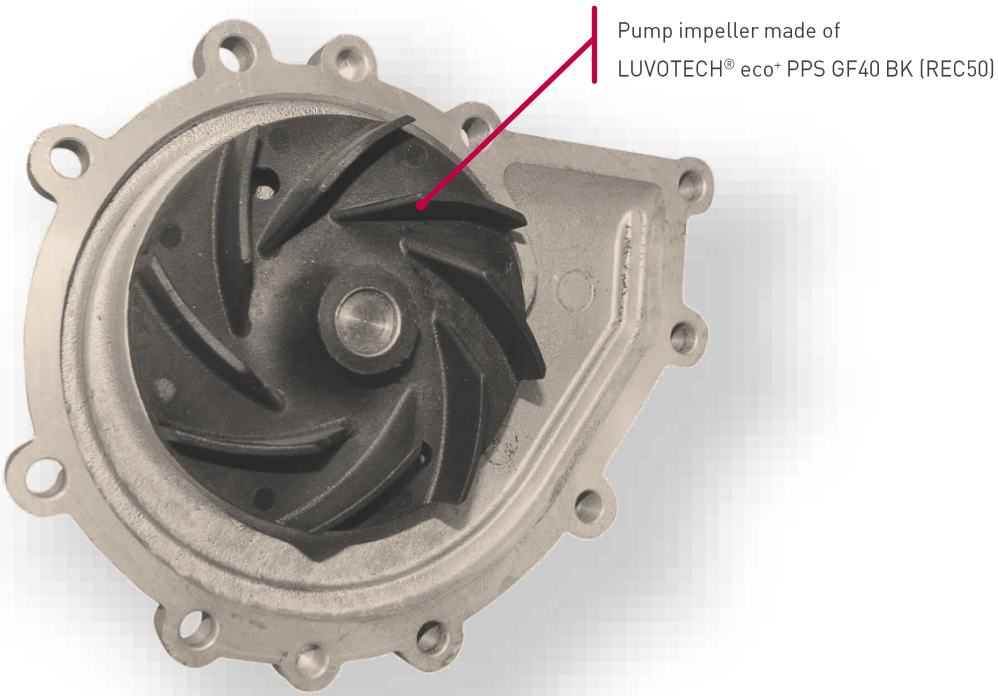


Mechanics after storage in coolant

Requirements according to VW standard 50127







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