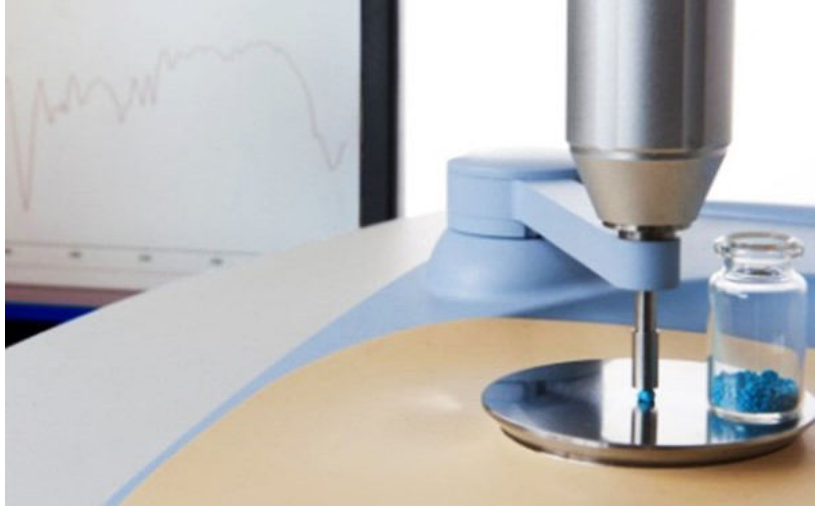
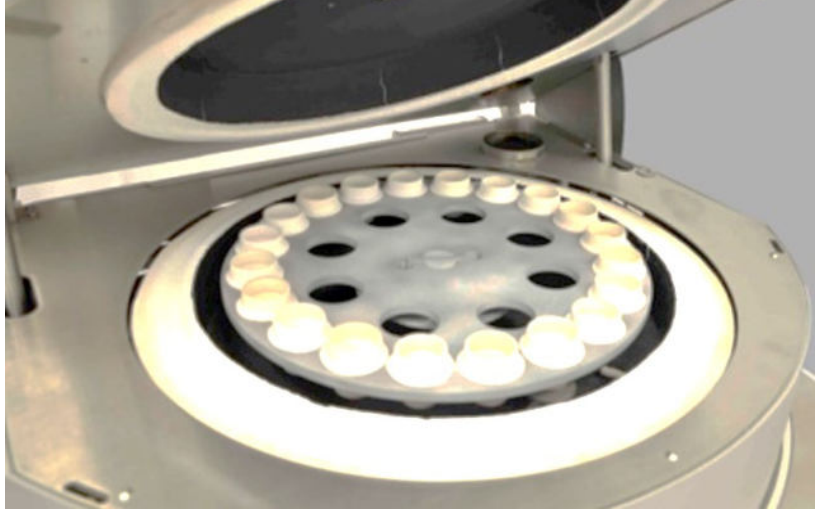
GWP KUNSTSTOFFLABOR

GWP Society for Materials Testing mbH
Plastics laboratory

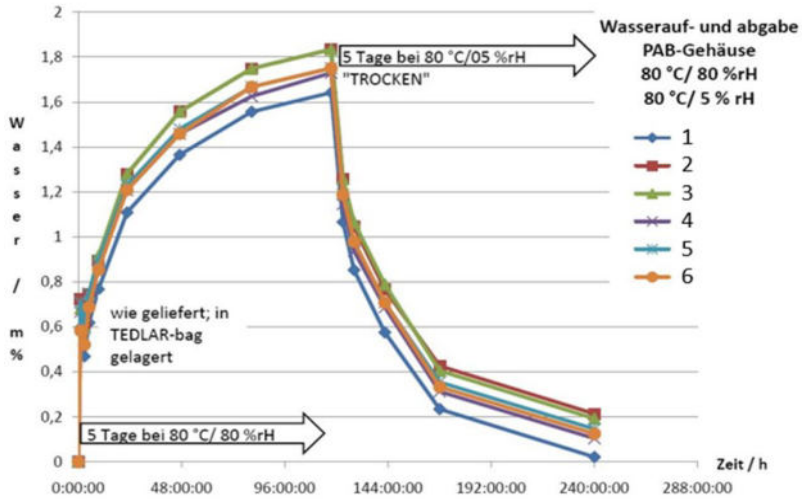




PLASTICS ANALYTICS

- Analysis of the base material
- Determination of fillers and additives
- Determination of chain length and degree of cross-linking
- Thermal analyses
- Rheological investigations
- Determination of the flow properties
- Contamination investigation

KNOWLEDGE CREATES PROGRESS®

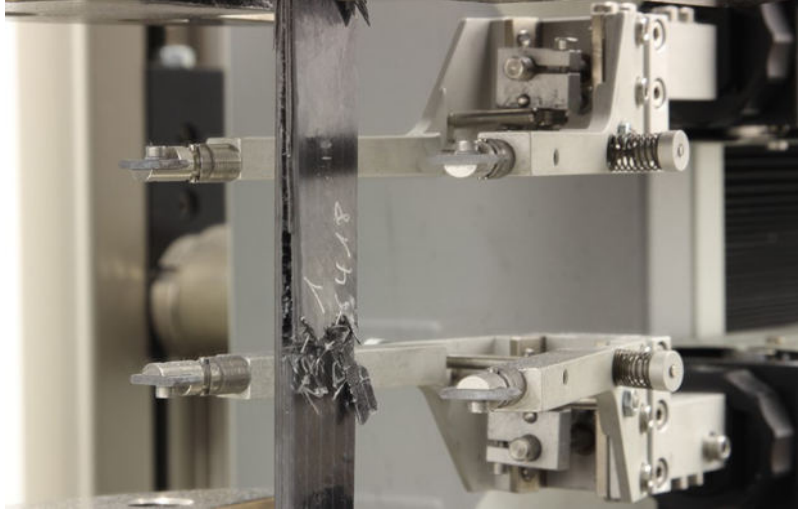


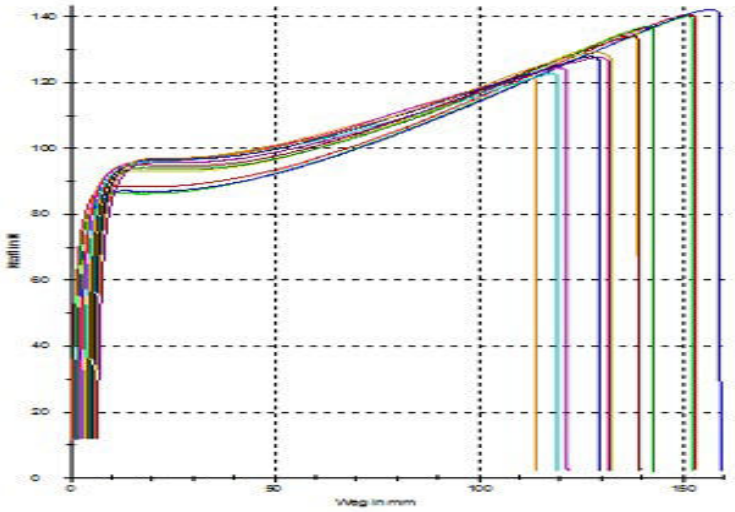
DAkkS
Deutsche Akkreditierungsstelle
D-PL-19907-01-00

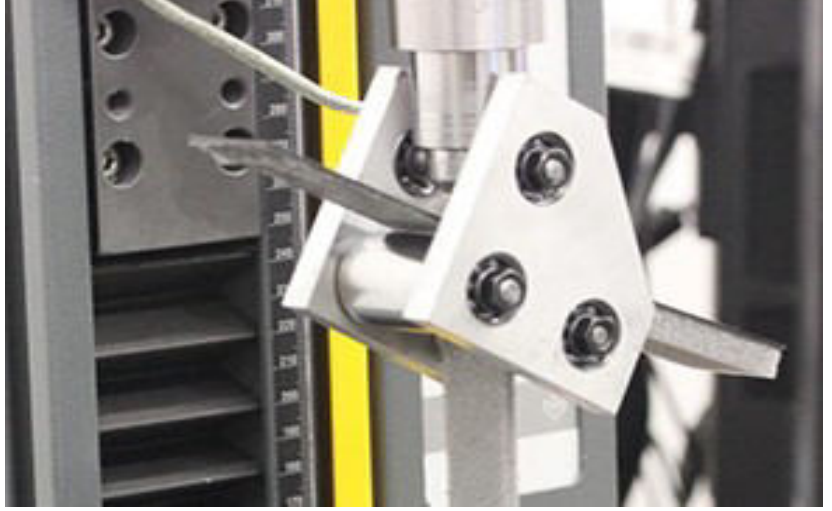
Details see annex to the certificate

METHODS

- DSC
- TGA
- FTIR
- Microscopy-FTIR
- EDX
- Pyrolysis GC/MS
- DMA
- VICAT
- Melt flow index
- GPC

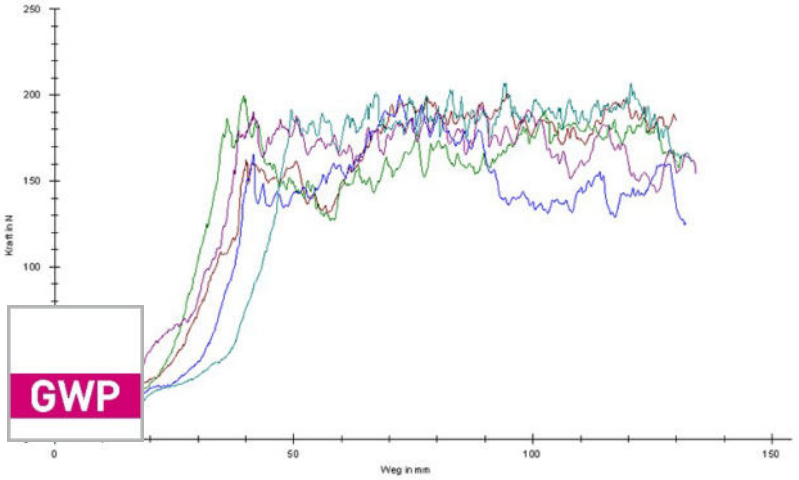






MECHANICAL TESTS

- Polymers, foams & elastomers: In our accredited laboratories, we can cover a wide range of standard tests in accordance with standards and customer-specific special orders.



PERFORMANCE

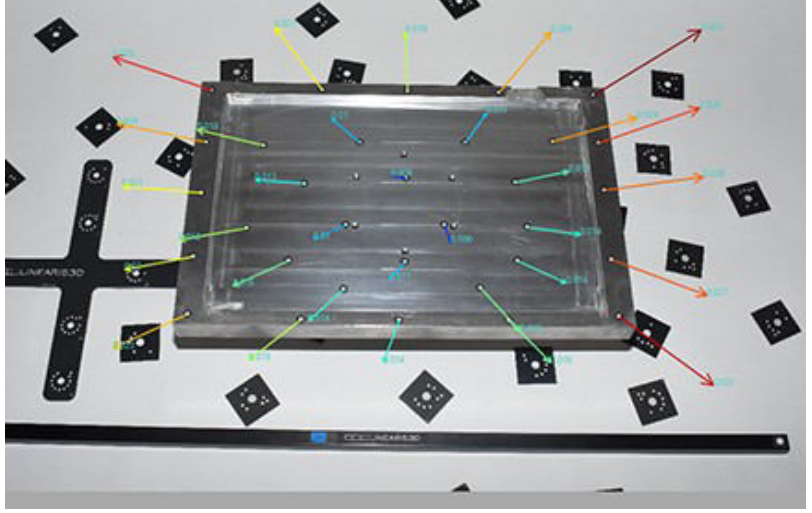
- Tensile, compression, bending and puncture tests
- Shear tensile tests and various peel tests
- Roller peel test, angle peel test
- Adhesive tensile strength, adhesive strength
- Elastomers: compression set

DAkkS
Deutsche
Akkreditierungsstelle
D-PL-19907-01-00

Details see annex to the certificate

STANDARDS

- DIN EN ISO 178
- DIN EN ISO 527
- DIN EN ISO 6603
- DIN EN ISO 1412
- DIN EN ISO 14126
- DIN EN ISO 6603
- DIN EN 1464
- ISO 4578
- DIN EN ISO 10365
- ASTM D3167
- DIN EN 28510
- ISO 11339
- ASTM D1876
- DIN EN ISO 4624
- DIN ISO 7619-1



ENVIRONMENTAL SIMULATION CLIMATE TESTS ON PLASTICS

- Simulation of climatic and thermal conditions

- Search for weak points
- Lifetime estimation
- Function test

- Tests automotive components
- Medical devices
- Interior and trim parts
- Coated and painted components

PERFORMANCE

- Thermal shock test
  Test chamber: 300 l
  Test material: up to 50 kg
  Temperature heat chamber: +50 to +220 °C Temperature cold chamber: -80 to + 70 °C
  Transfer time: < 10 s

- Climate change tests
- Test rooms up to 1000 l
- Suitable test chambers for pyrotechnics
- Temperature ranges: -40°C to +180°C Humidity ranges: 0% r.h. to 97% r.h.
- Temperature change rate: ±5 K/min
- Photogrammetry (shape changes)

STANDARDS

- DIN EN/IEC 60068-2-14, DIN EN ISO 2819, MIL 810, MIL 883

- DIN EN 60068-2-1,-DIN EN 60068-2-2, DIN EN 60068-2-14, DIN EN 60068-2-30
  DIN EN 60068-2-7
  DIN 17025
  PV 1200 (VW standard)
  PK 303.4 (BMW standard)

GWP

DAkkS Deutsche Akkreditierungsstelle D-PL-19907-01-00

Details see annex to the certificate

SUN SIMULATION ON PLASTICS

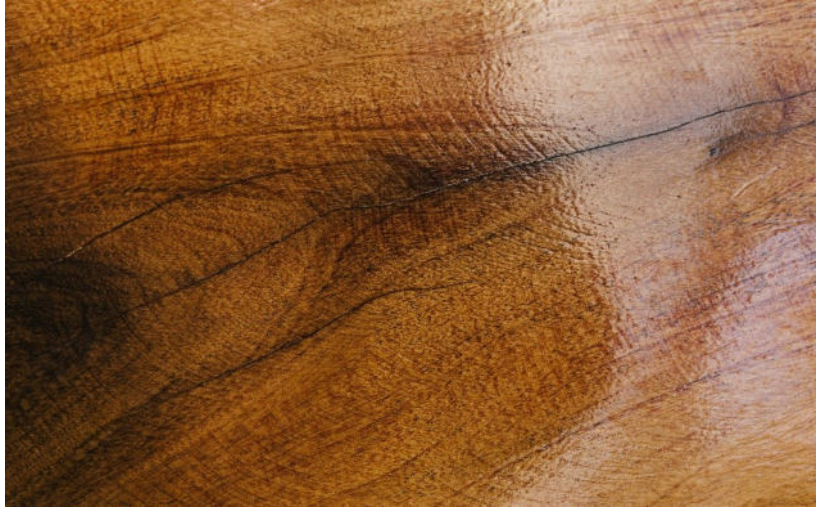
Laboratory weathering to simulate damage caused by humidity, full spectrum sunlight and high temperatures

- Light fastness plastics
- Light fastness test automobile
- Light fastness test textiles
- Weathering test on laminated safety glass
- Weathering test plastics

COLOUR AND GLOSS MEASUREMENTS

The colour and gloss measurements before and after weathering tests

- Determining the colour difference
- Colour search
- Colour strength determination
- Metamerism
- Evaluation of light fastness on a grey scale
- Determination of the gloss

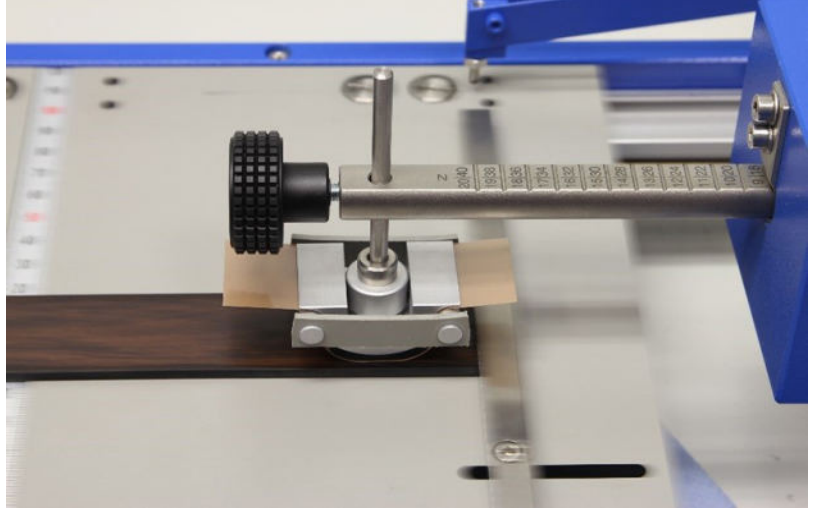


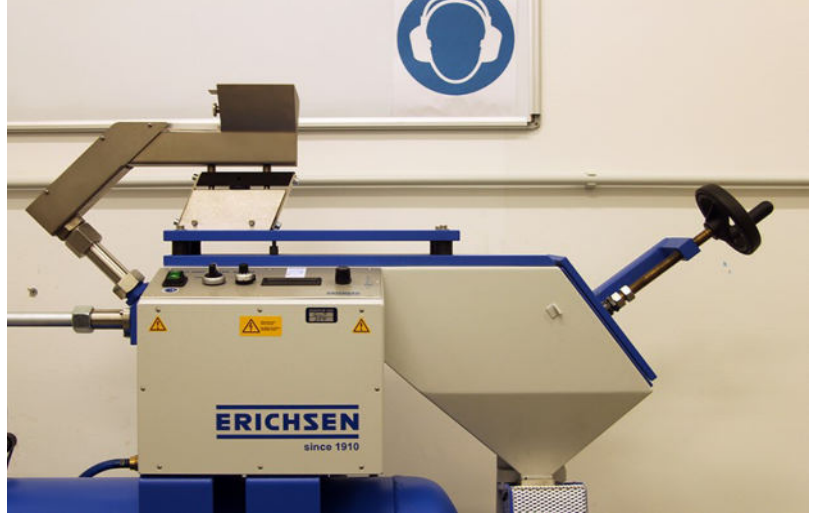
KNOWLEDGE CREATES PROGRESS®

GWP

DAkkS
Deutsche
Akkreditierungsstelle
D-PL-19907-01-00

Details see annex to the certificate





MECHANICAL SURFACE TESTING ON PLASTICS

- Plastics
- Coatings
- Lacquers
- Decorative trims

PERFORMANCE

- Abrasion resistance - colour fastness test*.
- Scratch resistance - Micro-scratch resistance
- Scratch Resistance*
- hot-scratch test
- Scratch hardness test according to Wolff-Wilborn
- Cross-cut test*
- Multi-impact test
- Development of customised tests

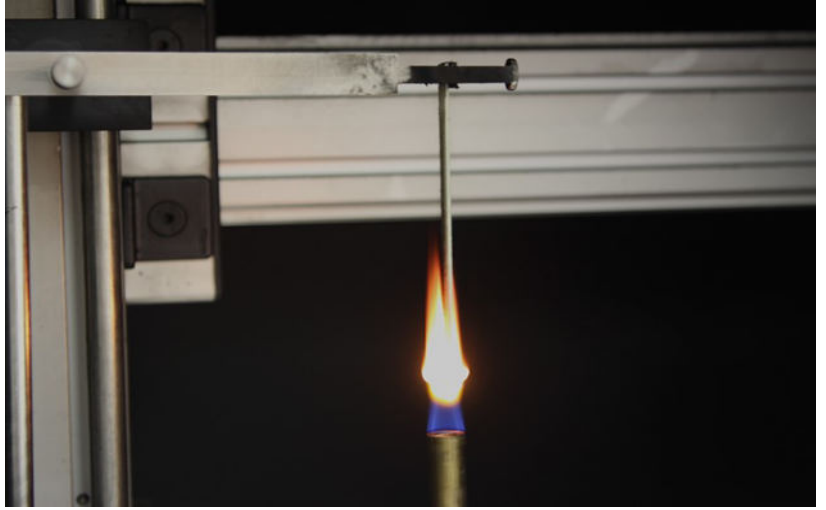
STANDARDS

- DIN EN ISO 20567-1, FORD FLTM BI 157-06, RENAULT D24 1702, PSA D24 1312
- DIN EN ISO 105-X12, PV_3906_EN, TL 226, SES N 3243
- TL226, PV 3987, DIN EN ISO 12947-1
- AS/NZS 1580.403.1, PV 3952, TL 226, BS 3900-E2, DIN 53799, ECCA T12, EN 13523-12, ISO 1518-1
- HONDA 7710Z-TVA-9000 6-14
- ASTM D 3363, BS 3900-E19, ISO 15184, JIS K 5600-5-4, SES N3243
- DIN EN ISO 2409:2013-06:, ASTM D3359 - 02

GWP

DAkkS
Deutsche
Akkreditierungsstelle
D-PL-19907-01-00

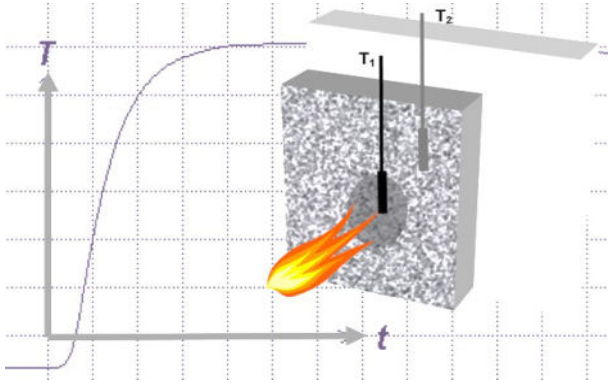
Details see annex to the certificate



FIRE TESTS ON PLASTICS

Fire tests for the characterisation of

- Flammability
- Fire behaviour
- Heat resistance



GWP

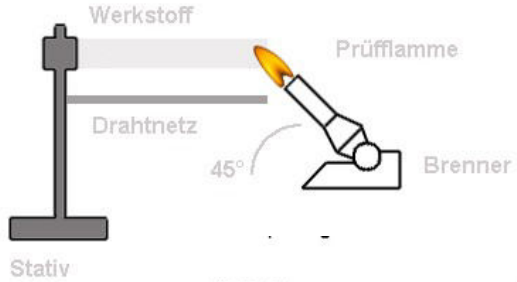
PERFORMANCE

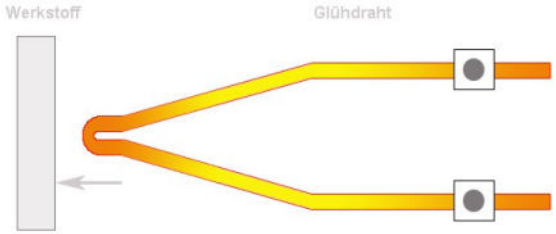
- Fire tests for motor vehicles , machinery for agriculture and forestry
- Flammability and fire velocity according to DIN 75200, FMVSS 302.
- Fire classification test UL94
  Fire tests with 50 W test flame horizontal and vertical
- Fire test to determine the oxygen index (LOI)
- Fire test with glow wire
- Fire test to determine the heat release rate (MARHE)
- Fire test on batteries

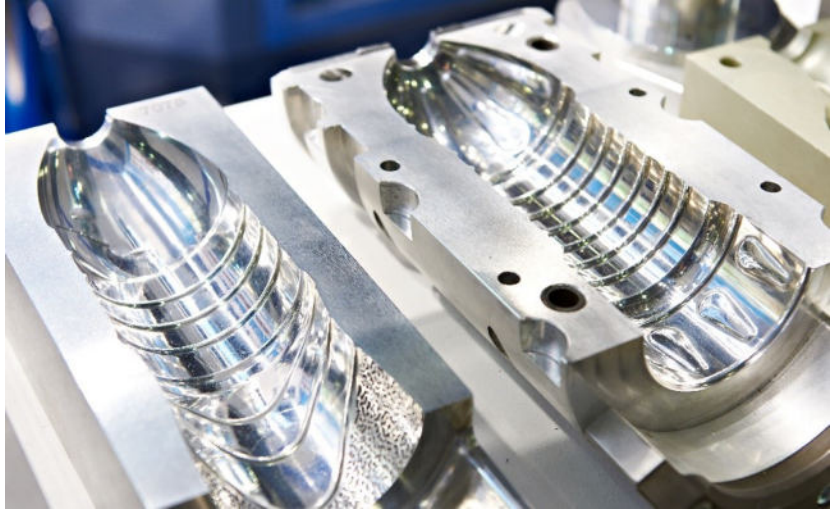
DAkkS
Deutsche
Akkreditierungsstelle
D-PL-19907-01-00

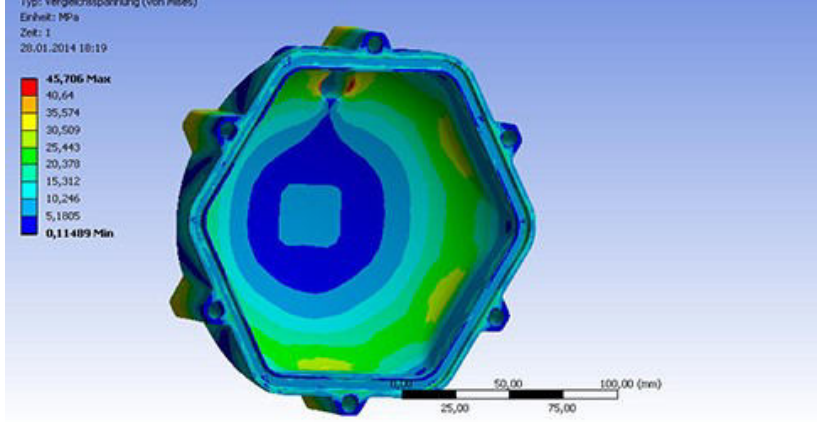
Details see annex to the certificate

KNOWLEDGE CREATES PROGRESS®



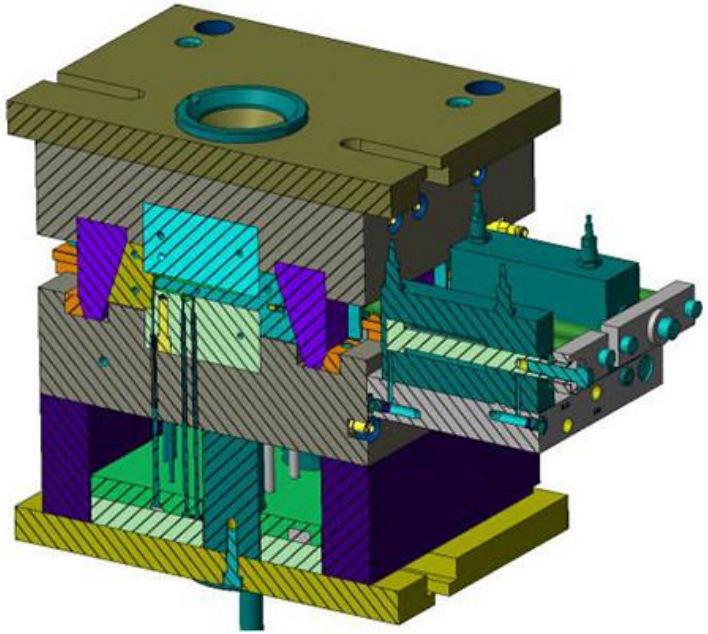






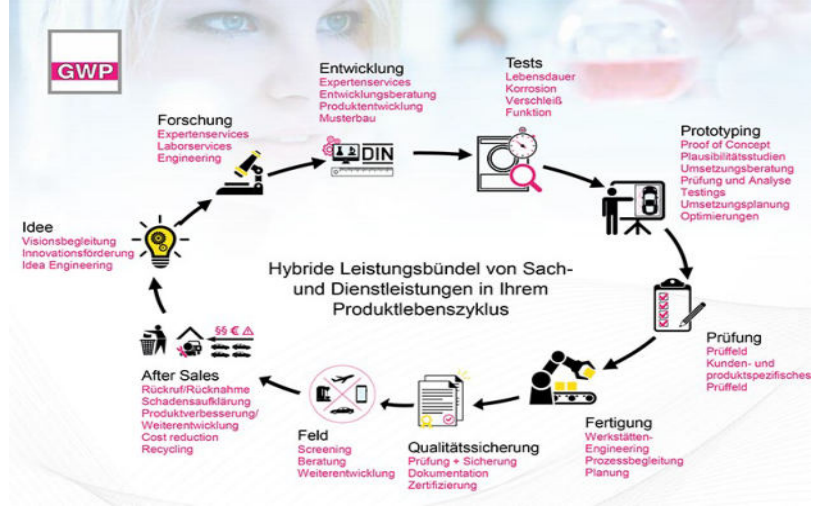
ADVICE ON MATERIAL AND PRODUCTION PROCESSES

- Development support for plastic, rubber and foam parts
- Design and calculation of plastic parts
- Design and optimisation of plastic welded joints
- Optimisation of all plastics manufacturing processes
- Damage analyses on plastic parts
- Creating value analyses, product evaluations, material analyses
- Developing cost reduction potentials for processes and materials



KNOWLEDGE CREATES PROGRESS®

GWP



GWP SOCIETY FOR MATERIALS TESTING MBH

LABORATORY AND EXPERT SERVICES

LABORATORY MUNICH
Georg-Wimmer-Ring 25
D-85604 Zorneding
Tel. +49 8106 994110
Fax +49 8106 994111
simon.loehe@gwp.eu

www.gwp.eu
gwp-kunststofflabor.de
info@gwp.eu

LABOR

- Analytics*
- Metallography*
- Microscopy*
- Computed tomography
- Material testing*
- Environmental simulation*
- Fire laboratory*
- Airbag lab*
- ParticleCheck*
- **Plastics Laboratory***
- Non-destructive materials testing

EXPERTS

- Damage analysis
- Research and development
- Product and component test
- Advice on the material and production process
- Process consulting
- Training / Seminars

DAkkS Deutsche Akkreditierungsstelle D-PL-19907-01-00

*Services in the accredited area. Details see attachment to the certificate

Status 2024/02