PFI
Germany

Confidence and Transparency within the Leather Industry by OEKO-TEX®

Practice-oriented Training at the International Shoe Competence Center Pirmasens (ISC)

Who We Are

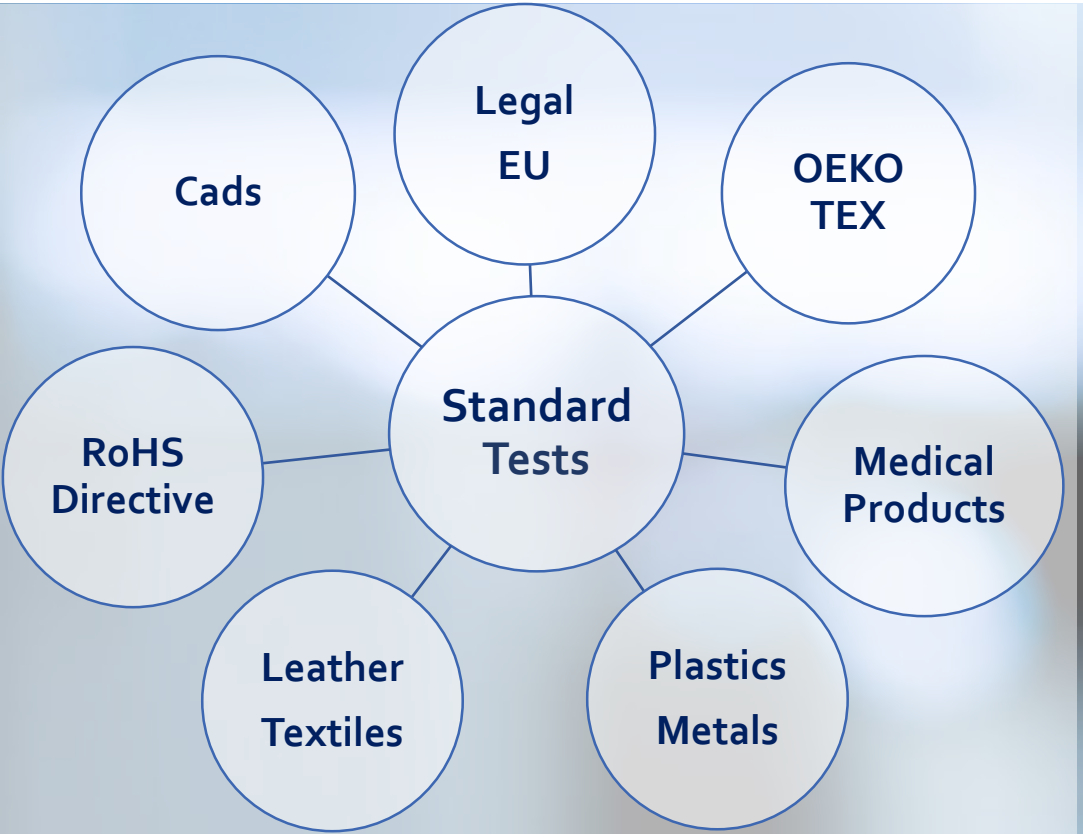
Since 1956 in Pirmasens

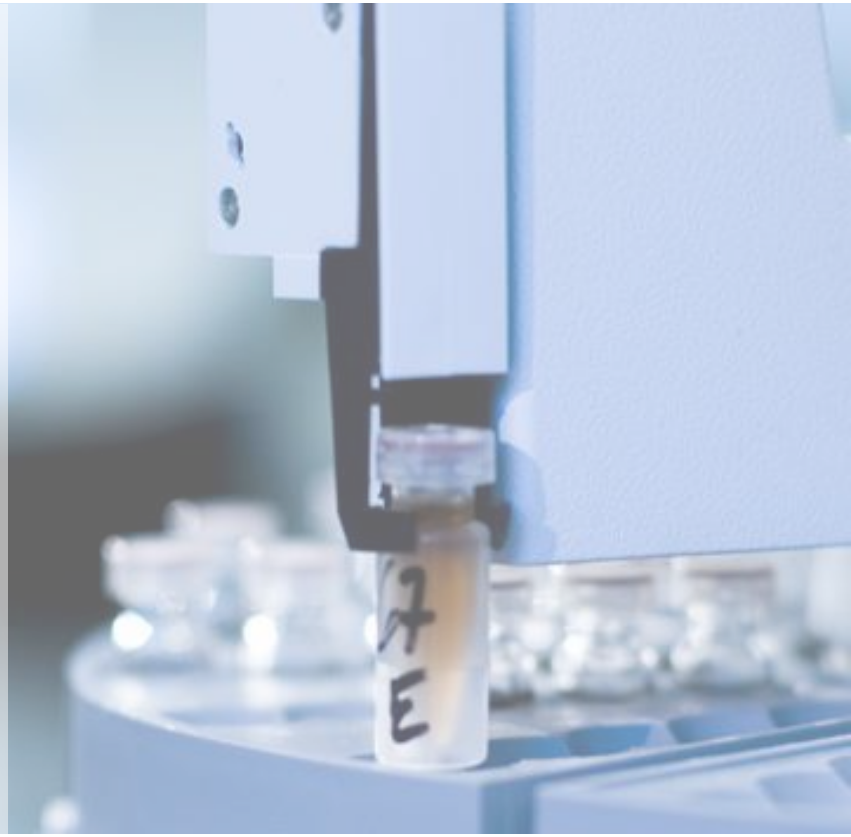
PFI
Germany

Fields of Work

TESTING TEST EQUIPMENT
RESEARCH **TRAINING**
CERTIFICATION INSPECTION

PFI - Analytical Chemistry

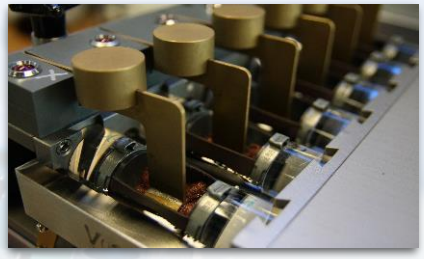




PFI - Physical Material Testing

Colour fastness to light

Permanent folding behaviour



Determination of water resistance

Abrasion resistance

Bending properties of the sole

Water resistance shoe

International Shoe Competence Center - Training

Professional Training and Education

Basic

Intermediate

Advanced

International Shoe Competence Center - Training

Modular Course Offer

- Last Development
- Pattern Engineering
- Materials & Components
- Fit & Comfort
- Different Makes
- Tooling
- Quality Management
- Process Optimisation
- Industry 4.0
- Automation
- Sustainable Production
- Sustainable Materials
- Testing
- REACh
- Hazardous Substances
- Foot Anatomy
- Gait Analysis

Leather – a Very Special Material

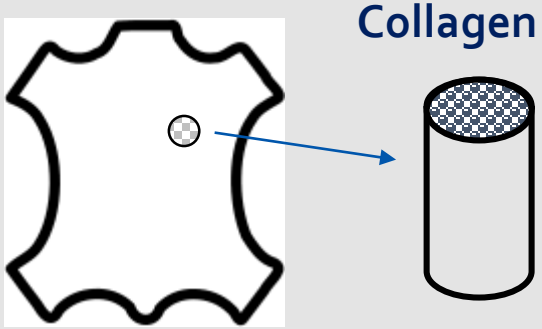
Different Applications

Big Variety of Leather Types

The older The Better

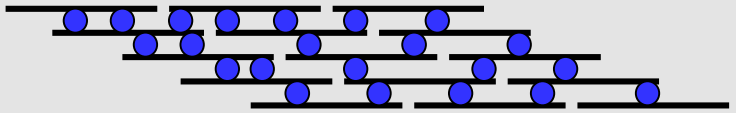
Upcycling

From Skin to Leather



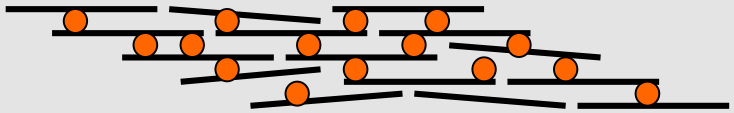
Collagen fibril

Skin



dried

Primary stage after Tanning



Tanning of Leather

Chrome tanning is the most important tanning method in shoe production

- High strength
- Good elasticity
- High shrinkage temperature
- Good Color fastness

Vegetable tanning is getting more and more important !

→ **Combinations of different Tanning Agents possible**

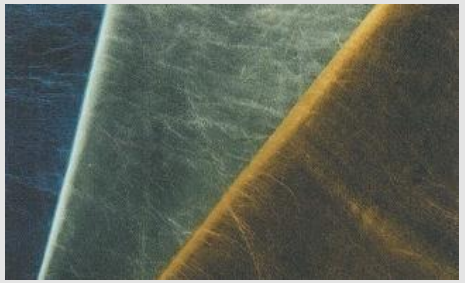
Tanning of Leather

Tanning Method		Primary Production Stage
Mineral Tannins: Chromium, Zirkonium, Titanium, Aluminium		**WET-BLUE**
Vegetable Tannins: Barks, Roots, Leaves of Plants and Trees		**WET GREEN / BROWN**
Synthetic Tannins: Syntanes: Aldehydes, Resins, Isocyanates		**WET WHITE**

Leather – Finish Types

Smooth

Nappa



Foil coated

Shrinkage

Rough

Embossed

EU-Legal requirements for Leather

REACH regulation EG 1907/2006

Persistent Organic Pollutants Regulation (POPs)2019/1021

Biocide Regulation EU 528/212

PFI Germany

EU Legal requirements for Leather

Parameter	Source
Chrome VI	Tanning, Storage Conditions
Azo-Dyes	Dye
Pentachlorophenol (PCP)	Preservation
Formaldehyde (recommendation)	Preservation, Basic Compound
Dimethylfumarate	Anti-Mould
Nonylphenolextoxylate (NPEO)	Tenside
Short Chained Chlorinated Paraffines (SCCP)	Fatliquor, Flame Retardent
PFOS and PFOA related compounds	Hydrophobisation
Biocides (declaration)	Preservation

Legal requirements – Not sufficiant

Legal regulations take a long time

Scientific results are often faster

Consumers are sensibilised by media

Manufacturer and Trader do not want negative headlines

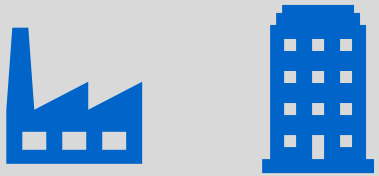
PFI
Germany

What do WE expect ?

HEALTH QUALITY **TRACEBILITY**
LEGAL REGULATIONS **ENVIRONMENT**
WORK SAFETY SOCIAL RESPONSIBILITY
SUSTAINABILITY CO_2FOOTPRINT
ALTERNATIVE ENERGY

PFI
Germany

Leather – Certification by OEKO-TEX®

Leather Standard by OEKO TEX®	STeP by OEKO-TEX ®
Product / Material Certification	**Process** Certification
	
Trendsetting special requirements Covers all requirements the market needs International testing standard International certification system	Sustainable Textile & Leather Production Modular certification for production Textile and Leather industry Brands and Retailer
OEKO-TEX® CONFIDENCE IN LEATHER LEATHER STANDARD	OEKO-TEX® INSPIRING CONFIDENCE STeP

Leather Standard by OEKO-TEX®

- Criteria catalogue with several hundred regulated individual substances
- High human and ecological product safety along the supply chain
- Test criteria are updated at least once per year
- Tests and certifications by independent OEKO-TEX® member institutes

Leather Standard by OEKO-TEX®

Certification Leather Standard by OEKO-TEX®

- Leather and leather articles from all processing levels
- Test Institutes help with the application
- Modular Certification System for a Finished Article

Certification of Leather from exotic or protected animals is not possible !

Artificial / Synthetic Leather is not a genuine Leather material !

Leather – Analytical Challenge

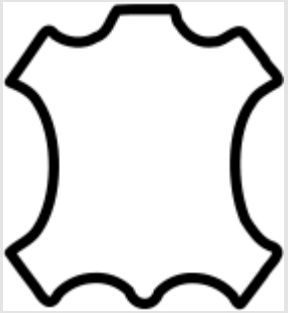
Leather is not a homogenous material

Skin

Origin

Tanning

Finish



Leather – Chrome VI

Chrome tanning is the most important tanning method in shoe production

Challenge: **Chrome III** ⇌ **Chrome VI** allergenic 

Heat, Light, Mould

Reduction Agents
Satured Fatty Acids

Chrome VI regulated by OEKO TEX®

- Chrome VI
- Chrome VI after Heat-Aging for 24h at 80°C

Leather – Process Preservatives

Prevention of Biological Decomposition Needed:

Skin, Tanning , Wet Blue , Wet White, Wet Green

No Additional Prevention Needed

Leather, Finished Leather

Leather Preservatives regulated by OEKO TEX®

OPP	(o-Phenyl-Phenol)
CMK	(4-Chloro-3-Methylphenole)
TCMTB	(2-Thiocyanomethylthio)benzothiazole)
OIT	(2-Octylisothiazol-3(2H)-on)

Leather – PU or PVC Coated

PU- or PVC Coating

Used for special Finishes

PU- or PVC Coatings regulated by OEKO TEX®

Test of plastic relevant parameters e.g.:

- Softeners, Phthalates
- Polcyclic Aromatic Hydrocarbons (PAH)
- Solvents (Dimethylformamide)

Sustainability in Leather Production

Customers, Supplier and Traders are sensitized

- Transparency is necessary in a future-orientated production
- Sustainability is expected at all levels

Challenges

- Tracebility/Marking only for complete skins/hides
- House slaughtering or small slaughterhouses
- World wide trading of all leather production stages

STeP by OEKO-TEX® a Tool for Sustainability

- STeP by OEKO-TEX® stands for Sustainable Textile & Leather Production
- Modular certification system for production of textile and leather articles
- Implementation of environmentally friendly production processes
- Improvement of health, safety and social responsibility at production sites
- Certification for manufacturers as well as brands and retailers

Tracebility of complete supply chain

Increase Sustainability

STeP by OEKO-TEX®

Comprehensive Analysis and Assessment of the Production

Modules for analyses of all important areas of a company :

- Chemicals management
- Environmental performance
- Environmental management
- Social responsibility
- Quality management
- Health protection and safety at work
- Leather specific operations

STeP by OEKO-TEX®

Leather specific types of operations

Beamhouse

Tanning

Retanning, dyeing, fatliquoring

Finishing of leather

Making up of leather products

Leather logistics

Leather – How to get a Certificate ?

Leather Standard by OEKO TEX®	STeP by OEKO-TEX ®
Product / Material	Process
Application	Application
Lab Tests	Assessment Catalogue
Companies Audit	Companies Audit Expanded
CERTIFICATION Valid 1 year Renewal 2 times, reduced Lab Tests	CERTIFIATION Valid 3 years

Quality means safety and security.

Dr. Ines Anderie

Phone: 06331 2490 712

E-mail: ines.anderie@pfi-germany.de