

Chemicals for Sustainable Leather Manufacture

53rd LERIG

Prasanna Maduri, Campus Manager, 29 January 2020

Stahl at a glance (2018)



Human capital



48% EMEA 20% Asia-Pacific 17% India-Pakistan 16% Americas



Research & development



Focus: technologies and processes that improve environmental impact



Products & markets



Leather Chemicals



Performance Coatings



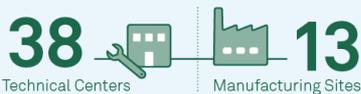
Polymers



Automotive | Footwear, Apparel & Accessories | Architectural & Interior Design | Industrial Applications | Leisure & Lifestyle | Home Furnishing



Responsible operations



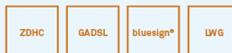
Energy & CO₂ emissions



Trusted partnerships

NGOs, Academic cooperation: UN Global Compact | UNIDO, Solidaridad | Global universities | ZDHC

Proactive industry involvement:



Stahl Policy

Sustainability & Climate Change

Stahl has aligned itself to the Paris Climate Agreement the 17 Sustainable Development Goals established at the UN General Assembly in 2015



The chemistry we create

Chemistry that triggers our senses while lowering the environmental impact.

Leather Chemicals

- Wet-end
- Waterproofing
- Improvement
- Finishing
- Aftercare

Shoe Finish & Aftercare

- New materials
- Shoe Finish
- Aftercare
- Cleaning
- Upgrading

Performance Coatings

- Elastomer coatings
- Seat & trim
- Coated fabrics
- Powder coatings
- Flame retardants

Polymers

- Bio-based portfolio
- Architectural polymers
- Printing and packaging
- Electronics & plastics
- Carbodiimide crosslinkers

Anticipating to emerging trends

The world is changing. Ever since our foundation in 1930, we listen to the world around us and anticipate to emerging trends.

- Regulations
- Safety
- Durability
- Sustainability
- People's needs
- Consumer trends



Our vision on Responsible Chemistry

Low-impact chemicals

- We are committed to **phase out restricted substances** and replace and reduce solvents and substances.
- We help others to make **more sustainable materials**.

Biotechnology

- We aim to **replace non-renewable resources**.
- We use **science and technology** to redesign our materials, processes and products.
- We **measure and assess** to evaluate the product impact.

Circular economy

- We use **waste and by-products** for durable and sustainable new materials.
- We give **used materials a new life** with our aftercare products.
- We need a better understanding of the end-of-life of our products

We measure the impact with [Life Cycle Assessment \(LCA\)](#)



**Responsible
Chemistry**



**Low-Impact
Manufacturing
Chemicals**



Biotechnology



Circularity

Life Cycle Assessment



Climate Change



Abiotic Depletion



Land Use



Water
Consumption



Eutrophication



Acidification



Toxicity



Photochemical
Ozone Formation



Ozone Depletion

LCA indicators



Climate Change



Abiotic Depletion



Land Use



Water
Consumption



Eutrophication



Acidification



Toxicity



Photochemical
Ozone Formation



Ozone Depletion

One-stop-shop

- We are a **one-stop-shop** covering the entire value chain of everyday materials
- We work directly with **leading luxury brands and OEMs**
- We offer **global services** for our clients:
 - Stahl Campus®
 - Stahl Design Studio®
 - Brand services
 - Expert services
 - Centers of Excellence



Centers of Excellence

- Leather Finish
- Shoes & Leather Goods
- Edge Dyes
- Performance Coatings
- Powder Coatings
- Leather Furniture Upholstery
- Apparel & Home Furnishing
- Automotive

Stahl Campus®

- Promoting good practices and transparency
- Training all kinds of stakeholders

Stahl Design Studio®

- Your go-to partners for the newest trends and latest technological possibilities

Training & education

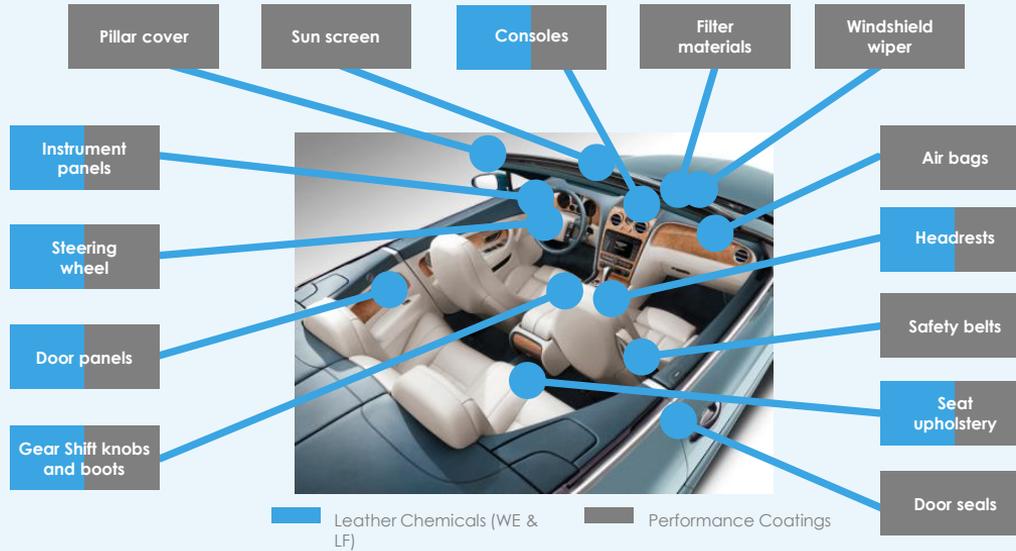
- Safety, Health & Environment (SHE) training
- Compliance e-training
- International Management Training Program
- Stahl Campus®





Leather Chemicals & Performance Coatings

A unique story of complimentary



Leather Chemicals & Performance Coatings

A unique story of complimentary



Leather Chemicals (WE & LF) Performance Coatings



Leather Chemicals (WE & LF) Performance Coatings

Leather Process with Key Environmental Impact



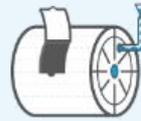
1 Raw hides

- Source
- Salt usage



2 Beamhouse

- Water usage
- Substances
- Effluent quality



3 Tanning

- Salt usage
- Water usage
- Energy usage

Raw Material to Wet Blue



4 Retanning

- Substances
- Water usage



5 Finishing

- Substances
- Solvents
- Energy Usage

Dyeing & Finishing

Stahl Sustainable Technology in Leather



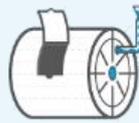
1 Raw hides

- Localize
- Salt Free



2 Beamhouse

- **PROVIERA**
- **DRYFAST**
- 100% biodegradable
- ↓ Global Warming
- ↓ BOD/COD



3 Tanning

- **EASYWHITE**
- Chrome Free
- Less Water
- Salt Free
- Pickle-Free

Raw Material to Wet Blue



4 Retanning

- **STAHLITE**
- Toxin Free
- Reduces COD
- ↑ Air Quality
- ↑ H₂O Quality



5 Finishing

- **STAHL NEO**
- Solvent Free
- Toxin Free
- ↑ Air Quality
- ↑ H₂O Quality

Dyeing & Finishing

**If it can be imagined,
it can be created**
