

ARLANXEO – strong global synthetic rubber player

ARLANXEO at K 2016

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ARLANXEO at K 2016

Value-creation



Innovation



High Performance Elastomers (HPE) – broad portfolio of synthetic rubber for various applications

Facts

- Part of: ARLANXEO
- Customers: ~ 800
- Market position: No. 1-2 in High Performance Elastomers

Products & Brands

- NBR: Nitrile Butadiene Rubber
Perbunan[®] **Krynac[®]** **Baymod[®] N**
- HNBR: Hydrogenated Nitrile Butadiene Rubber
Therban[®]
- EVM: Ethylene Vinyl Acetate Rubber
Levapren[®] **Levamelt[®]** **Baymod[®] L**
- CR: Chloroprene Rubber
Baypren[®] **Baypren[®] ALX**
- EPDM: Ethylene Propylene Diene Rubber
Keltan[®] **Keltan[®] Eco**

Applications



NBR



HNBR



CR

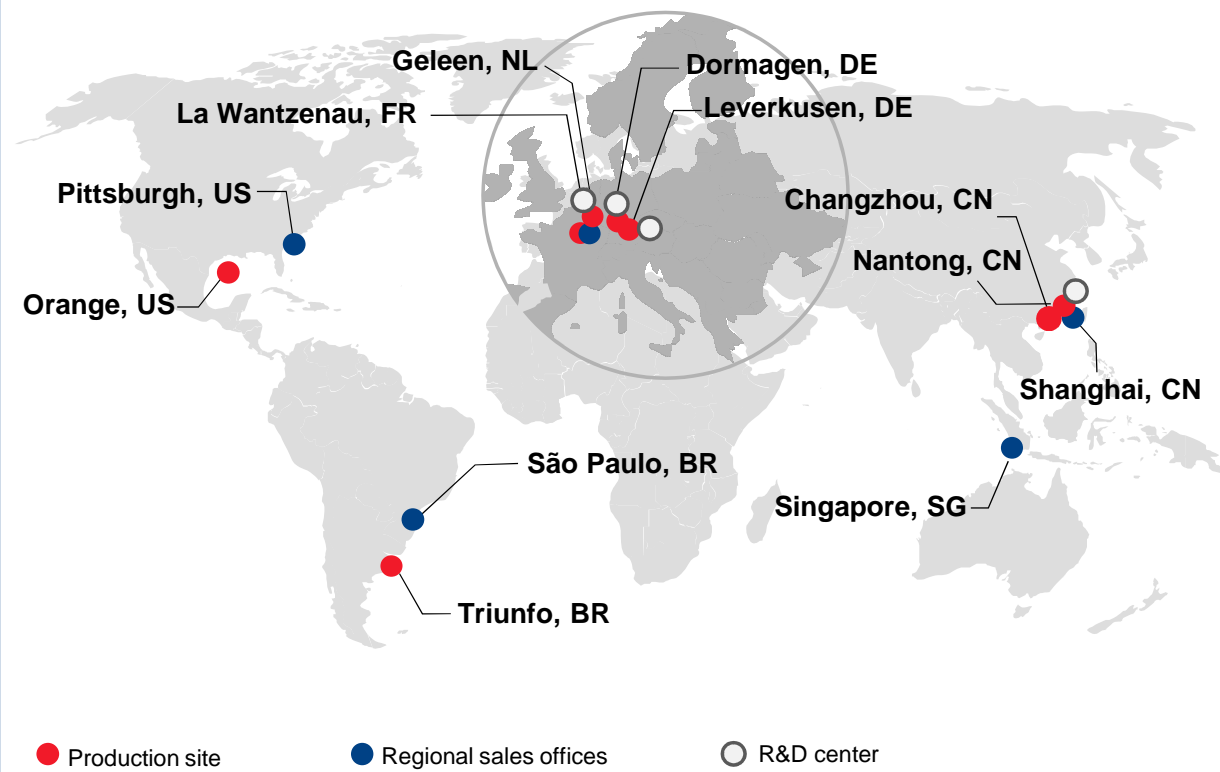


EVM



EPDM

Global footprint to serve demand of the rubber processing industry



- Production plants in all key regions
- World's largest EPDM plants in Geleen, Netherlands and Changzhou, China
- State-of-the-art CR world-scale plant in Dormagen, Germany
- Globally largest NBR plant in La Wantzenau, France
- Only global EVM supplier to offer VA* in the range of 40-90 wt%
- Advanced HNBR technology

* Vinyl Acetate

Levapren[®] – superior polymer with integrated insensitivity to high temperatures

Characteristics

- Radical solution polymerization with good physical properties
- Halogen-free*
- No points of attack for ozone or UV light
- Excellent weather and heat resistance (up to 175 °C)
- Balanced oil resistance, low temperature properties through proper choice of VA content

Benefits

- Levapren[®] with superior heat propagation resistance
- Levapren[®] as material of choice for dynamic applications under severe environmental conditions
- Additional advantages: halogen-free combustion with non-corrosive emissions
- Flame retardancy can be achieved by adding specialized fillers

K Key innovations

- Levapren helps to reduce damage caused by fire
- Ideal for wind turbine applications



* No formation of HCl in case of fire

Therban[®] – hydrogenated nitrile rubber for a superior performance at high temperature range

Characteristics

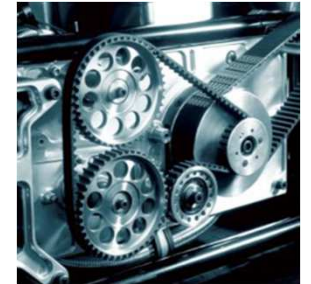
- Designed for demanding applications requiring exceptional durability in aggressive environments
- Exceptional oil- and extreme temperature resistance
- Very good compression set behavior and excellent resistance to abrasion, heat, ozone, fuel, chemicals and technical oils
- Ability to function at temperatures from -40°C to 165°C

Benefits

- Outstanding performance at high and low temperature
- Longer service life than articles based on conventional elastomers
- A sustainable alternative to metal chain drivers
- Challenging applications for automotive, railway and aerospace industry as well as mechanical engineering, oil and gas industries

K Key innovations

- Two grades for lower temperature applications
- Ideal for Automotive, Oil Exploration and others
- New generation with further step change improvements



Baymod[®] N– Powdered nitrile butadiene rubber serving as not extractable and ‘simple to use’ modifier

Characteristics

- Free flowability ensures automatic processing
- Highly compatible with different polar base polymers (e.g. PVC)
- Linear grades are soluble in many organic solvents
- Pre-crosslinked grades provide excellent surface properties required in extrusion processes

Benefits

- Excellent chemical, oil and hydrolysis resistance
- Permanently flexible and elastic while being impact resistant
- Enables as an additive very low extraction of liquid plasticizers
- Improved coefficient of friction and noise reduction in brake applications

K Key innovations

- NBR powder products for PVC modification applications
- Baymod NXL 33.61 VP: improved color stability and extrusion properties



Tire & Specialty Rubbers (TSR) – a leading manufacturer of Performance Polymers

Facts

- Part of: ARLANXEO
- Customers: > 250
- Market position: No. 1-3 in synthetic rubber
- Production capacity: > 1,000,000 t/a

Products & Brands

- Product & brands:
 - Butyl: X_Butyl™
 - BR: Butadiene rubbers (Buna® CB / Nd EZ)
 - S-SBR: Solution styrene butadiene rubbers (Buna® VSL / FX)
 - E-SBR: Emulsion styrene butadiene rubbers (Buna® SE)

X_Butyl™

Buna®

Applications



Tire



Consumer & pharma

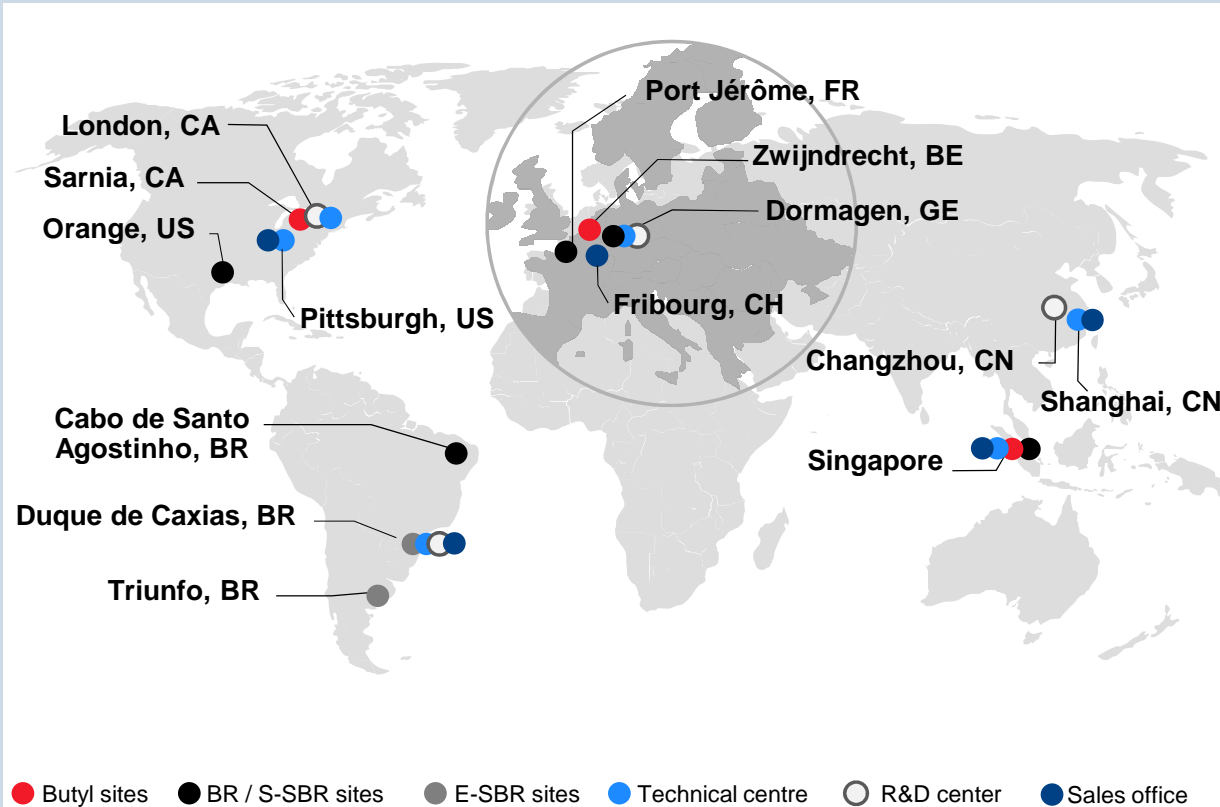


Plastics



Golf & sport balls

Broad and innovative portfolio with a truly global footprint



- Broad and innovative product portfolio for tire and non-tire applications
- Truly global footprint in all regions featuring state of the art production facilities
- Proximity to major markets, especially Asia including a strong recently built asset base

New development in Functionalized Solution Rubbers

New Technology

- Tires with improved rankings can only be achieved by using high performance and functionalized rubbers
- New technology for both S-SBR and Nd-BR

Benefits

- Increases the materials' interaction with fillers
- Improves the dynamic properties of tire tread compounds
- Building a more elastic network
- Reduces the rolling resistance
- Improves the fuel economy of the tire

K Key innovations

- Proprietary process
- Performance benefits for tire manufacturers and users
- Improved fuel economy



Key innovations at K 2016



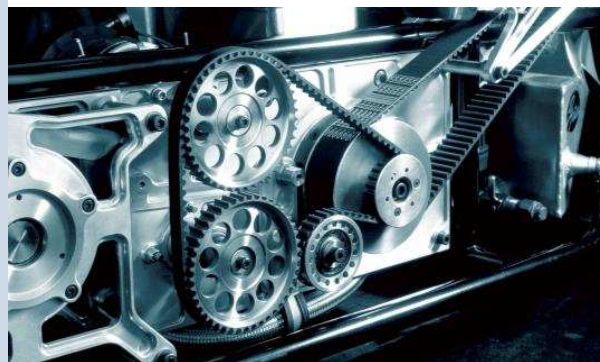
Levapren®



Therban® LT



Functionalized Solution Rubbers
Baymod® N



See you at K 2016!

June 28, 2016 – Dusseldorf, Germany



ARLANXEO

Performance Elastomers