

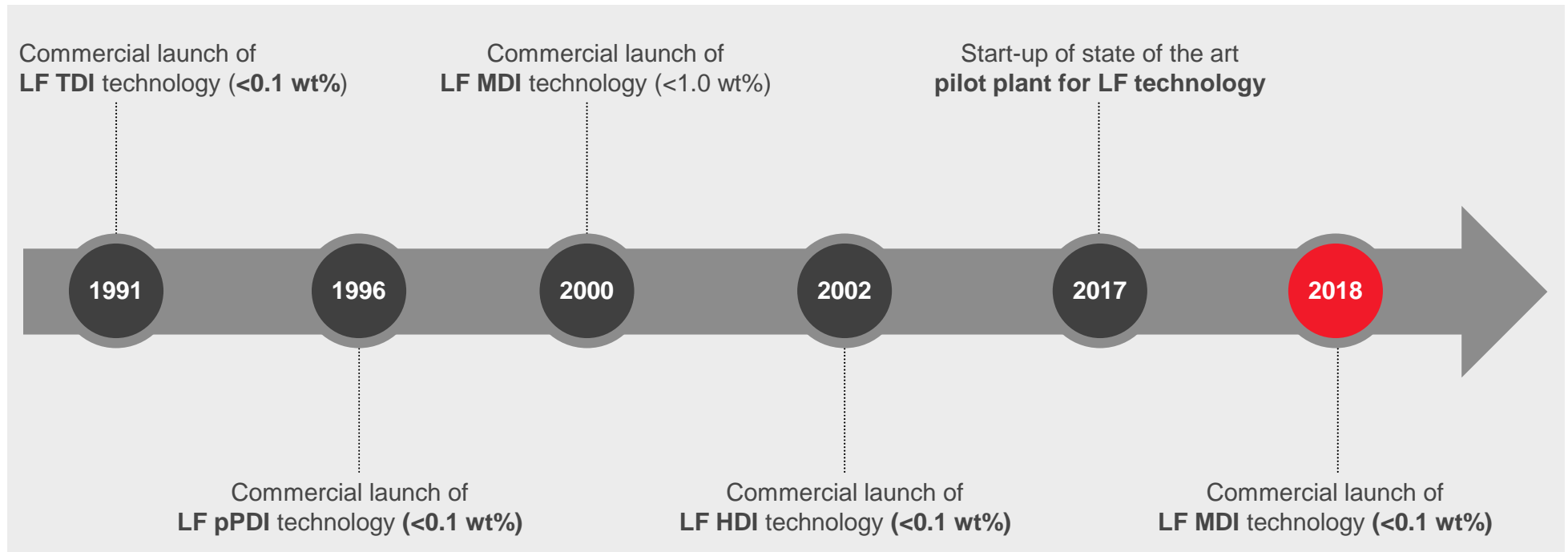
Low Free prepolymer toolbox

An Overview

LANXESS Urethane Systems

August 2020

LANXESS' low free monomer technology (LF) has been developed over past decades



As a global leader LANXESS offers the broadest portfolio of low free monomer prepolymers

Breakthrough innovation with <0.1 wt.% free MDI monomer prepolymers to meet regulatory requirements



Regulatory compliant

- Protects users from potential exposure to free isocyanates
- Minimizes EH&S workload, and eliminates the handling of raw materials containing elevated levels of hazardous isocyanates
- Enables “**label-free**” formulations (reduced hazard classifications)

Customized solution

- **Tailored viscosity and NCO content** for end-use application
- **Lower viscosity** enables use of less or no solvent in formulations
- Provides **more consistent** systems and thus consistent quality

Excellent Performance

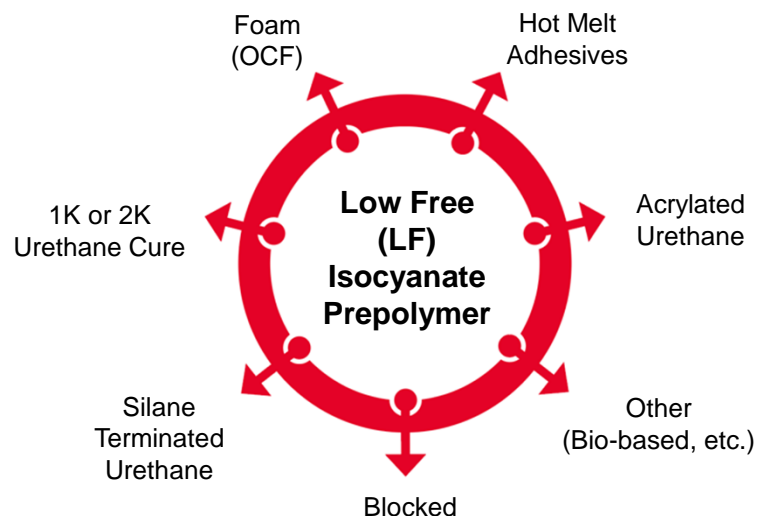
- Tailored chemical structure to provide **improved performance**
- **Excellent toughness**, dynamic properties, and durability
- Used in the **most demanding applications**, including adhesives, OCF, coatings, oil and gas, wheels and tires, and many others

- LANXESS is a leading innovator of Low Free (LF) isocyanate technology
- LANXESS offers leading edge LF urethane prepolymers with:
 - Levels of free isocyanate below 0.1 wt.% to address regulatory concerns
 - Wide range of chemistries

 **Adiprene® LF**
Low Free Prepolymers

Low free (LF) isocyanate prepolymer chemistry improves ability to expand uses in urethane adhesives

Enhancing functional groups expands capabilities



Broad toolbox

Polyols	Polyester, PTMEG, PPG, PCL, PC
Isocyanates*	TDI, MDI, pPDI, HDI, IPDI, H ₁₂ MDI, polyisocyanates
Curatives	Diamines, Diols, Triols
Additives	Catalysts, antioxidants, plasticizers, flame retardants, pigments, and fillers

* LANXESS does not produce or sell isocyanates

- Urethane systems designed for field applied, ambient and moisture-cured sealants and binders, factory applied, heat-cured, and polyurethane dispersions
- Extensive formulation expertise and processing knowledge
- Strong and committed technical support

LANXESS Urethane Systems supports innovation with customized urethane systems

QUALITY WORKS.

LANXESS

Energizing Chemistry

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Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that the results refer exclusively to the specimens tested. Under certain conditions, the test results established can be affected to a considerable extent by the processing conditions and manufacturing process.

