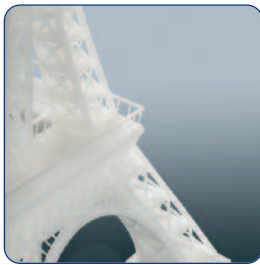


**SOLUTION FOR LASER SINTERING /**

# Invent polyamide powders for additive manufacturing

Laser sintering (LS) is a technology that enables the manufacturing of complex parts through layer-by-layer fusion of thermoplastic powders. It offers design freedom and cost saving versus injection moulding and exhibits the highest throughput among the other Additive manufacturing (AM) techniques.

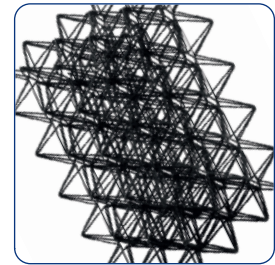
To push further the possibilities of laser sintering, Arkema has designed **Invent**, a specific range of polyamide powders resulting from the synergy of exclusive chemistries and decades of powder expertise. The unique benefits of the new **Rilsan<sup>®</sup> Invent** range opens a new world of design possibilities to your creativity.



**ORGASOL<sup>®</sup> INVENT  
SMOOTH (PA12)**



**RILSAN<sup>®</sup> INVENT  
NATURAL (PA11)**



**RILSAN<sup>®</sup> INVENT  
BLACK (PA11)**

**RILSAN<sup>®</sup> INVENT NATURAL AND BLACK**

**PA11 POWDERS**

- > 100% renewable organic carbon

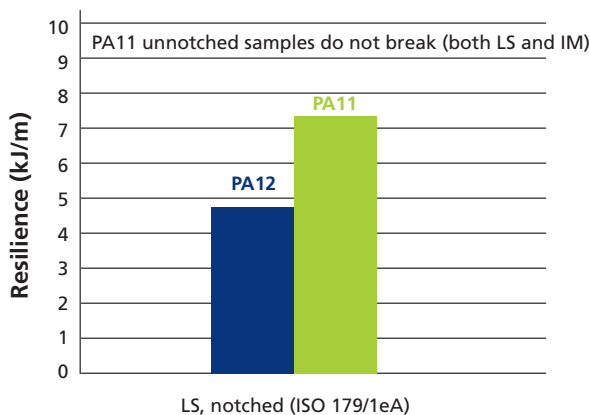
**BENEFITS**

- > Excellent processability
- > Superior mechanical properties
- > Higher elongation at break and impact resistance
- > Better elasticity and ductility
- > USP Class VI compliant (natural)
- > Deep mat finish (mass-coloration for black)

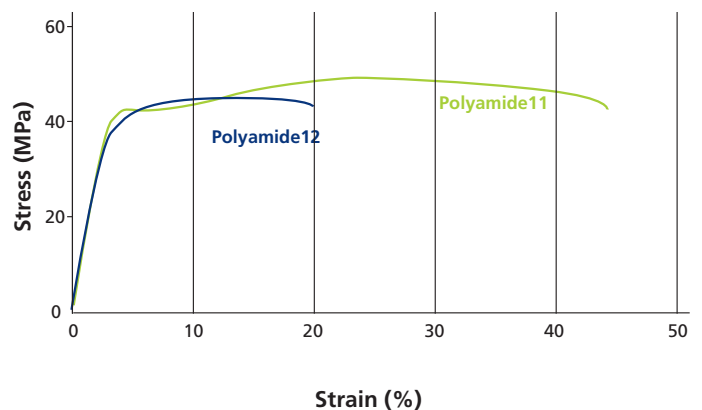
**APPLICATIONS**

- > Automotive
- > Aerospace/aeronautics
- > Medical (dental and foot orthoses, dental models, surgical guides)
- > Tooling
- > Functional prototypes

**CHARPY TEST RESULTS**



**TENSILE TEST RESULTS**



## ORGASOL® INVENT SMOOTH

### NATURAL PA12 POWDER

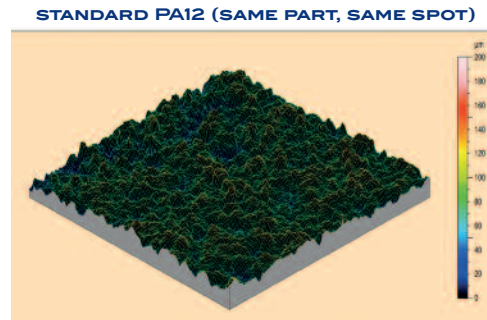
#### BENEFITS

- > Incomparable smooth finish (no post-treatment)
- > Very low refresh rate
- > Excellent colour stability

#### APPLICATIONS

- > Consumer goods
- > Functional prototypes
- > Lifestyle products
- > Industry
- > Production series

### SURFACE COMPARISON AT MICROSCOPIC LEVEL



## ARKEMA AND ADDITIVE MANUFACTURING

### SUPPLIER FOR MULTIPLE AM TECHNOLOGIES

- > PA powders from Arkema have been used in Laser Sintering for more than 10 years
- > Arkema also serves the 3D Printing and Stereolithography markets with UV curable Specialty Acrylates (Sartomer)

### ACTIVE STANDARDIZATION PLAYER

- > ASTM F42 (USA), UNM 920 (France) with follow up of ISO TC 261

### MEMBER OF AFPR (FRENCH RAPID PROTOTYPING ASSOCIATION)



Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on <http://www.arkema.com/en/products/productsafety/disclaimer/index.html>

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