



SOLVAY

asking more from chemistry®



PRESERVE



FLUID
BARRIER
by **TECHNYL**®

PRESERVING TIME

Technyl[®] eXten is the market reference for bio-sourced materials dedicated to injection and extrusion applications. Technyl[®] eXten not only offers an extremely attractive alternative to standard polyamides, but also a cost-effective alternative to long carbon chain polyamides.

Technyl[®] eXten's excellent chemical resistance to salts and water vapor, coupled with its low humidity absorption characteristics, make this an excellent solution for the most demanding products.

SAFER, LONGER, CLEANER

Today's fluid barrier market requires designing products that can stand the test of time under increasingly demanding conditions.

In harsh environments such as fluid or gas handling and industrial applications, Technyl[®] materials can effectively replace metal in many cases, and provide unprecedented versatility and flexibility.

As the need to meet increasingly tight environmental standards rises, bio-sourced materials can overtake the technical capabilities of traditional materials while, at the same time, significantly reduce carbon footprint.

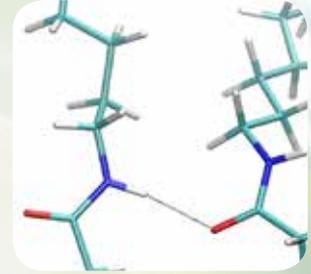
FOUR STEPS FOR SUCCESS

PRELIMINARY MATERIALS SELECTION

01

Working closely with your development team, our technical experts study the technical requirements related to the fluid barrier level to withstand. Experienced engineers combine several approaches to provide you with the best possible solution:

- A technical approach, with our Customer Technical Service team accompanying you in the pre-study phase for your new applications.
- An analytical approach, in which our engineers leverage their analytical chemistry skills and equipment, including support from our Corporate R&D team, to perform an in-depth study of the chemical phenomena linked to desired barrier properties.



Our experts at the Technyl Innovation Center design the Technyl® solution that best matches your project, while taking environmental standards and chemical constraints into consideration.

- Optimized formulation
- Elaboration of test methods
- Tests on materials using standard specimens
- Tension and bending tests
- Chemical tests

SOLUTION DESIGN

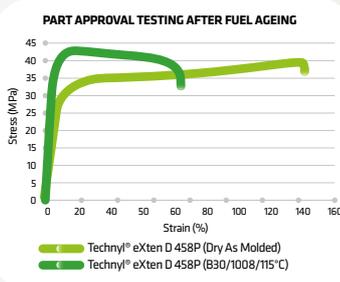
02

PROTOTYPING

03

Once your polyamide formulation is designed, we subject it to a battery of preliminary tests to ensure compliance with the target application and its ability to be processed easily and cost-effectively.

- Expertise in injection and extrusion
- Productivity estimates



Our application laboratory performs a series of tests to validate performance with respect to customer requirements (tubes, injected parts, etc.).

- Mechanical tests
- Chemical resistance tests (salt resistance)
- Fuel and air ageing tests
- UV ageing tests
- Bursting tests

Our team supports you through certification testing and provides technical proof to OEMs.

PART TESTING

04

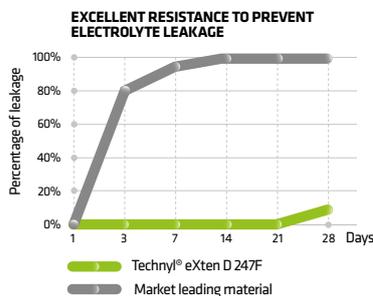
REASONS TO CALL THE TECHNLYL® FORCE

HIGH CHEMICAL RESISTANCE



Battery sealing gaskets
made of Technyl® eXten D 247F Natural

Thanks to its excellent chemical resistance, Technyl® eXten is an optimal solution for increasing the working life of batteries while preventing any electrolyte leakage or fire outbreak.

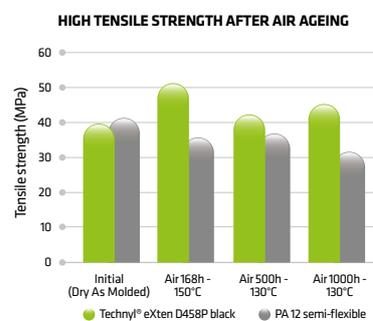


LONGER DURABILITY



Truck air brake system
made of Technyl® eXten D 458P

Unique mechanical properties at various temperatures and low permeability make Technyl® eXten grades the materials of choice for applications where long service life is a vital factor.

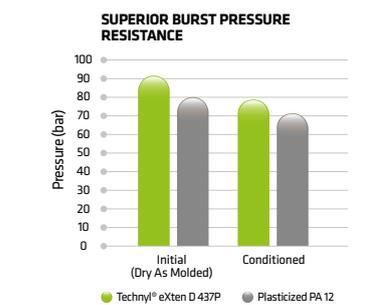


HOLDING UP UNDER PRESSURE



Technyl® eXten D 437P
for pneumatic / hydraulic system

In addition to their mechanical performance and class-leading chemical resistance, Technyl® eXten is ideal for applications where high pressure resistance is a key functional requirement.

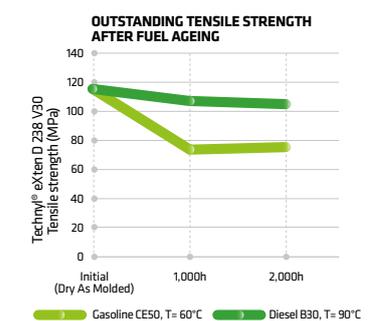


FUEL BARRIER RESISTANCE



Fuel quick fit connectors
made of Technyl® eXten D 238 V30

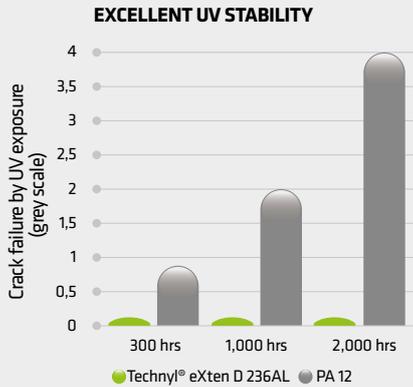
Thanks to its excellent resistance to hydrocarbons and salt, along with resistance to high temperatures, Technyl® eXten provides an ideal solution for fuel barrier applications.



INNOVATION IN ACTION



Solvay Engineering Plastic's bio-sourced Technyl® eXten provides an effective alternative to polyamide 12 protective coating for metal pipes. For example, unfilled Technyl® eXten D 236AL is copper-like colored, then melted onto the surface of aluminium pipes used in air conditioning systems' outdoor cooling units.



Product properties

- High-speed extrusion ability (high flow)
- Aluminum adhesion (with epoxy primer)
- Flexibility
- UV stability
- Excellent surface aspect
- Color-matching

Application markets

- Home appliances
- Building and construction
- Automotive



Coated metal tubes made of Technyl® eXten D 236AL

STRENGTH FROM THE INSIDE

PRODUCT NAME	DESCRIPTION	KEY FEATURES
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EXTRUSION GRADES, for flexible tubes and pipes

Technyl eXten D 458P (natural and black)	Plasticized PA 6.10, impact modified, heat stabilized	General purpose grade for flexible extruded products Equivalent to "PA 12 semi-flexible" grades
Technyl eXten D 437P (natural)	Plasticized PA 6.10, heat and UV stabilized	Translucent grade for flexible extruded products Equivalent to "PA 12 semi-flexible" grades
Technyl eXten D 236AL (Brown)	PA 6.10, UV stabilized	Brown grade for flexible extruded products Alternative to PA 12 flexible

INJECTION GRADES

Technyl eXten D 218 V30 (black)	PA 6.10, 30% glass filled	General purpose grade for all kinds of injected products
Technyl eXten D 238 V30 (black)	PA 6.10, 30% glass filled, impact modified	Shrinkage similar to PA 12 high notched impact resistance
Technyl eXten D 247F (natural)	PA 6.10, unfilled, impact modified	High chemical resistance specially adapted for battery gaskets
Technyl eXten D 218 CR V33 (black)	PA 6.10, 33% glass reinforced, heat stabilized, highly hydrolysis resistant	High resistance to road salts (Calcium Chloride CaCl ₂)





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