

High performance materials for automotive

For more than 25 years DSM has worked with the automotive industry to design better, smarter, safer, lighter – and increasingly greener components.

By connecting its unique competences in life sciences and materials sciences, DSM is able to create downstream value through in-depth understanding of, and the ability to successfully address, the challenges faced by its customers and customers' customers.

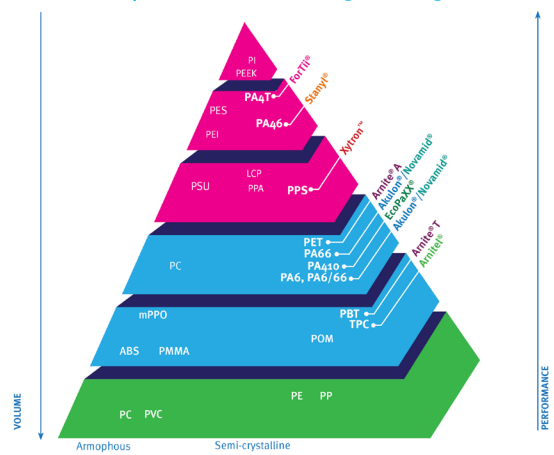
DSM has a broad portfolio of high performance materials. These include Stanyl® high-heat PA46, ForTii® high performance PA 4T, EcoPaXX® 70% bio-based PA410, Akulon® PA6 and PA66, Arnitel® thermoplastic copolyester, Arnite® polyesters (PBT and PET), and Xytron® PPS

We offer a unique material portfolio, bringing you for example:

- Stanyl and Akulon Diablo, offering outstanding thermal stability over extended periods of time at elevated temperature. The technology provides a significant improvement in long-term temperature resistance components such as air intake manifolds with integrated intercoolers, ducts, charge air cooler end caps, mixing tubes and resonators used in the latest car engines.
- ForTii Ace (PPA) takes metal replacement and light weighting to the next level. The extreme high aromatic content of ForTii Ace (over 50% weight percentage) results in a unique set of properties amongst which high chemical resistance and Linear and stable mechanical performance up to 150°C.

DSM is a true innovator in the field of applications where the lowest wear & friction is needed. We have proven with our competence and knowledge on tribologics that Stanul (PA46) offers true benefits in applications like timing system wear faces, FEAD, gears and bearings.

Product portfolio DSM in Engineering Plastics



DSM EP product	Tmelt (C)	Main features
PA4T ForTii®	325	reflow solderable, low CLTE, high structurals
PA46 Stanyl®	295	high stiffness retention, high abrasion resistance, low friction at elevated temperatures
PPS Xytron™	280	extreme chemical resistance
PA66 Akulon® S	260	good hydrolysis resistance
PET Arnite® A	255	good electricals, dimensional stable
PA410 EcoPaXX®	250	70% bio-based, carbon neutral
PBT Arnite® T	225	good electricals, dimensional stable
PA6 Akulon® K	220	high heat ageing and welding strength
PA6 Akulon® F + Novamid®	220	high oxygen barrier properties
PA6/66 Novamid®	190-200	optical properties
TPC Arnitel®	170-210	elastomeric, high temperature resistance

	Akulon (PA6)	Akulon (PA66)	Stanyl (PA46)	Arnite (PET)	Arnite (PBT)	Arnitel (TPE)	Xytron (PPS)	ForTii (PA4T)	EcoPaXX (PA410)
Powertrain	X	X	X				X	X	X
Air and fuel	X	X	X			X	X		X
Safety components	X	X		X		X			
Interior	X	X				X			
Exterior	X	X			X				
Chassis & structural parts	X	X				X	X	X	
Auto electronics	X	X	X		X		X	X	

Table 1: our product portfolio

Our competences form the backbone of innovation at DSM, covering specific aspects of scientific insight and expertise. They range from knowledge and best practices accumulated over time, to the advanced technological equipment and facilities we use today. Juts to mention some examples:

- Advanced CAE (Computer Aided Engineering) capabilities and services
- Strong global technical support and application development support
- Dedication to innovate by collaboration with key partners, throughout the value chain.

Global partner in automotive

Ultimately, partnership is about people. That's why our brightest minds, from scientists to sales and marketing professionals, are keenly focused on customer relationships – and supported by state-of-the-art facilities, technologies and processes. We manufacture on three continents to guarantee a steady supply of materials and have research facilities and sales and marketing offices around the globe to create a solid network that includes research and technology support and account management. Whether in Russia, China, the United States or the United Kingdom, when you work with DSM you can be assured of having dedicated people 'on the ground' who not only know the automotive industry but also the nuances of your local market.

Our locations worldwide



DSM Engineering Plastics

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