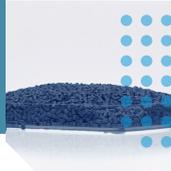


TECHNYL®

The leading range for automotive cooling systems



A complete portfolio for automotive cooling applications for internal combustion engines, hybrids and fully electric vehicles

MAIN BENEFITS

- Solutions available for **all five thermal management circuits** on the market today: hot air, cooling, air conditioning, battery and fuel stack cooling circuits
- Customized solutions with different thermal and coolant fluid resistance **based on PA6, PA66 and PA6.10**
- PA6-based solution for **moderate temperatures typical of EVs**
- **Sustainable and black laser transparent** versions of the leading PA66-based solution, **TECHNYL® A 218 V30 BK 34NG**
- Efficient PPA replacement solutions

MARKETS



AUTOMOTIVE



KEY PRODUCTS FOR INJECTION-MOLDING

EXCELLENT COOLANT AGEING PERFORMANCE AT:

		PPS / PPA SUBSTITUTION		
12 000h / 80°C	3000h / 120°C	+30% life extension versus 34NG	1000h / 135°C	2000h / 130°C
C 218 V30 Black 34NG LP	A 218 V30 Black 34NG (LP)	A 218G2 V30 Black 34N	D 218CR V33 Black	D 218 V30 Black
PA6	PA66	PA66 Modified	Blend PA66 / PA6.10	PA6.10
Solution for battery cooling	PA66 market reference for Hydrolysis resistance	PA66 solutions: pushing the limits	Solutions to substitute PPA	Best performing solutions of PA family

Also available with 50% Glass Fiber (« V50 »)

NEW! **TECHNYL® PURE**
A 219E1 V30 BK
High-Purity product

NEW! **TECHNYL® 4EARTH**
A1E 218 V30 BK 34NG LP
Product based on recycled PA66

NEW! **TECHNYL® STAR®**
AF 219 V30 BK LT
Black laser transparent

NEW! **TECHNYL® PURE**
A 219E1 V30 BK
High-Purity product

EXCELLENT COMPATIBILITY WITH REFRIGERANTS AND DIELECTRIC OILS

DOMO

caring
is our formula

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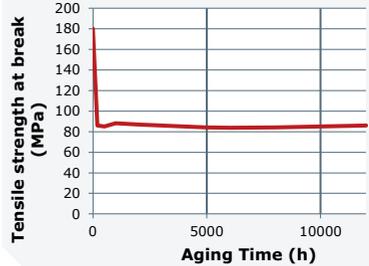
KEY APPLICATIONS



PA6

For moderate coolant aging temperatures like those encountered in electric vehicles, DOMO has developed a specific PA6-based compound with coolant aging that has been successfully tested for **12,000h at 80°C**.

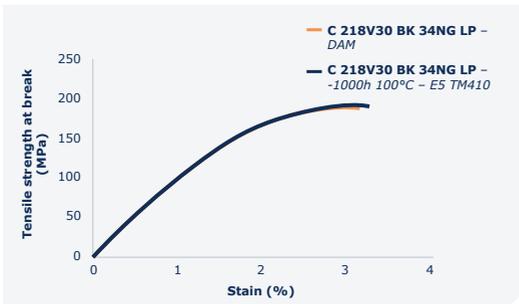
The **very stable tensile strength** at break values proves its suitability for EV-cooling components.



TECHNYL® C218 V30 BK 34 NG LP is also suitable for **immersion cooling**, with **mechanical performance** retained after 1000h @100°C in several dielectric e-fluids:

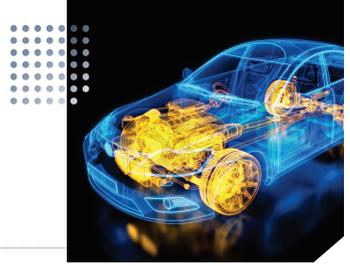


Oil supplier	Oil name	Oil type	C 218 V30 BK 34NG LP
	Shell ES TM410	Base oil	<input checked="" type="checkbox"/>
	Total F18-10999	Base oil	<input checked="" type="checkbox"/>
	Blue EV thermofluid	Base oil	<input checked="" type="checkbox"/>
	Mivolt DF7	Ester	<input checked="" type="checkbox"/>
	Novac 7300	Fluorinated	<input checked="" type="checkbox"/>



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PA66

The well-established virgin **PA66 GF30, TECHNYL® A 218 V30 BK 34NG**, is a proven solution for **hydrolysis resistance**.

The newly recycled-based version is a **unique, sustainable coolant-resistant solution** providing similar performance levels compared to the virgin-based alternative.

		TECHNYL®	TECHNYL® 4EARTH®
		A 218 V30 BK 34NG (LP)	A1E 218 V30 BK 34NG LP
Viscosity index	mL/g	140	150
Tensile modulus	MPa	10,000	9,500
Tensile strength at break	MPa	195	189
After (500h/130°C) in coolant	MPa	85	90
Elongation at break	%	3.0	2.8
Unnotched impact strength	kJ/m ²	70	72

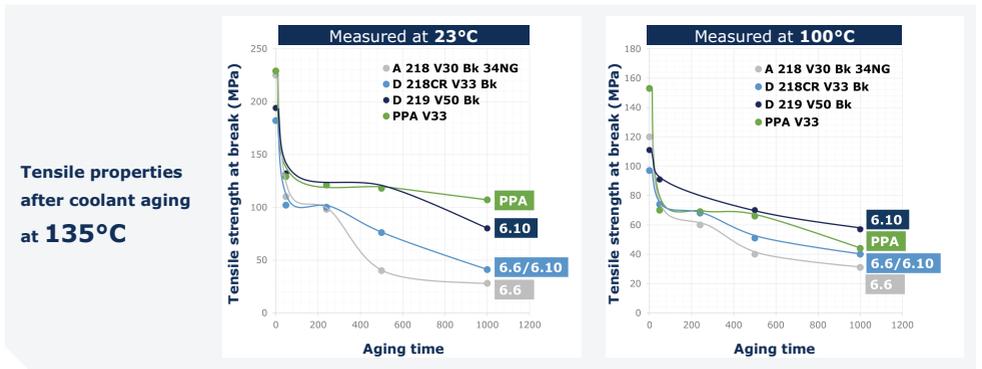
Additionally, the PA66 GF30 solution is **also available in the following variations:**

Black laser transparent
TECHNYL® STAR AF 219 V30 BK LT
 developed for **laser-welded applications**

High-purity
TECHNYL® PURE A 219E1 V30 BK
 developed for **sensors and connector applications in cooling systems**

PA6.10 for replacement

For more demanding usage conditions, there are also **alternative engineered materials** based on **PA6.10** or **PA66/6.10**, able to substitute PPA compounds, offering **comparable dimensional stability and cooling performance**.



TECHNYL® D 218 V30 BK matches PPA values in terms of dimensional stability, showcasing its ability to substitute PPA in this application field. The retention of mechanical properties of PA6.10-based products after coolant aging is also very good, and when properties are measured at usage temperature, the gap with PPA is considerably reduced, with **TECHNYL® D 219 V50 BK** even outperforming PPA. The range also includes the high-purity **TECHNYL® PURE D 219E1CR V33 BK**.

TECHNYL®

The leading range for automotive cooling systems



EXTRUSION PRODUCTS FOR COOLING & AIR CONDITIONING LINES

To respond to the different requirements of cooling and air conditioning lines, the **TECHNYL® extrusion range** offers varying levels of burst pressure resistance and flexibility.

These products exhibit **very good compatibility** and a **high barrier to refrigerants**. The **PA6.10-based products** also show **very good coolant resistance**.

TECHNYL® SHAPE DA 438CR BK can also be laser-welded with glass-filled products such as the new black laser transparent **TECHNYL® STAR AF 219 V30 BK LT**.

Tensile Modulus DAM			Burst Pressure for 6 / 8 tubes
3000 MPa 23°C	Blend PA6.10/PA66 TECHNYL® SHAPE DA 438CR BK	For high-pressure refrigerant lines Limited flexibility	80 bar 80°C
2000 MPa 23°C	PA6 TECHNYL® SHAPE C548B BK	Multi-purpose extrusion product Medium flexibility – impact modified	50 bar 80°C
800 MPa 23°C	PA6.10 TECHNYL® SHAPE D 458P BK	For low-pressure AC line & cooling lines (water / glycol) High flexibility - Plasticized	43 bar 80°C

KEY PRODUCTS



Injection-Molding

TECHNYL® C 218 V30 Black 34NG LP
TECHNYL® A 218 V30 Black 34NG LP
TECHNYL® PURE A 219E1 V30 BK
TECHNYL® 4EARTH® A1E 218 V30 BK 34NG LP
TECHNYL® STAR® AF 219 V30 BK LT
TECHNYL® A 218G2 V30 BK 34N
TECHNYL® A 218G2 V50 BK 34N
TECHNYL® 218CR V33 BK
TECHNYL® 218CR V50 BK
TECHNYL® D 218 V30 BK
TECHNYL® D 219 V50 BK



Extrusion

TECHNYL® SHAPE DA 438CR BK
TECHNYL® SHAPE C 548B BK
TECHNYL® SHAPE D 458P BK



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caring
is our formula