

SABIC ATEX SOLUTIONS

NEW LNP™ STAT-KON™ AND STAT-LOY™ PRODUCTS,
DESIGNED WITH ATEX IN MIND!

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With today's ATEX plastic compounds based on standard conductive filler technology it remains challenging to design applications that consistently meet [ATEX regulations](#) and [customer specific requirements](#), such as:

- The right level of electrical conductivity
- Sufficient heat resistance
- Thermal endurance
- Long term retention of impact strength under humid conditions
- Good aesthetics and colorability for hazard recognition and branding



As one of the leading suppliers of conductive plastics for ATEX applications, SABIC has started developing an improved range of products that are designed with the latest ATEX market requirements in mind.

The first two products coming out of this program, combine SABIC's unique [proprietary PC Co-Polymer materials](#) and compounding expertise are:

- **LNP™ STAT-KON™ DD000XI**: a carbon black PC based compound with very robust impact- and hydrolysis resistance vs other standard materials
- **LNP™ STAT-LOY™ D3000IEU6**: a unique colorable PC alloy material with improved impact- and hydrolysis resistance vs other standard materials

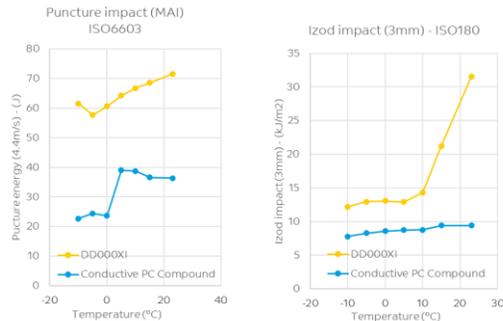
Comparison of LNP STAT-KON DD000XI and STAT-LOY D3000IEU6 to traditional plastic compounds

Property	Standard	Unit	STAT-LOY™ D3000IEU6 Alloy	Typical conductive GF-PA6 Alloy	Typical conductive PC Alloy	STAT- KON™ DD000XI compound	Typical conductive PC compound	FARADEx™ DS0036I compound	LEXAN™ EXL1414 resin
Flexural Modulus	ISO 178	MPa	1825	-	2050	2300	2890	2600	2250
Flexural Strength	ISO 178	MPa	70	-	79	90	100	80	85
Tensile Modulus	ISO 527	MPa	1750	7700	1725	2500	2600	2800	2150
Tensile Strength	ISO 527	MPa	45	105	50	45	60	55	60
Elongation to Break	ISO 527	%	>60	6	> 10	10	4	-	-
IZOD-notch.@23 °C	ISO180/1A	kJ/m ²	60	14	70	24	6	14	70
IZOD-notch.@-30 °C	ISO 179	kJ/m ²	60	-	-	10	-	-	60
HDT 0.45 MPa	ISO 75	°C	123	217	128	139	138	136	140
HDT 1.8 MPa	ISO 75	°C	105	196	113	129	127	125	128
Density	ISO 1183	g/cm ³	1.16	1.38	1.18	1.21	1.24	1.29	1.19
Moisture absorption	ISO 62	%	0.15-0.3	~2	-	0.06-0.12	0.06-0.12	0.13	0.15
Shrinkage x-flow	ISO 294-4	%	0.6 - 0.8	0.4 - 0.8	0.6 - 0.9	0.6-1.0	0.6-1.0	0.4-0.6	0.4 - 0.8
Surface resistivity	ASTM 257D	Ω	1.0E+09	1.0E+11	1.0E+11	1.E+6- 1.E+10	1.E+02- 1.E+6	1.0E+03	1.0E+15

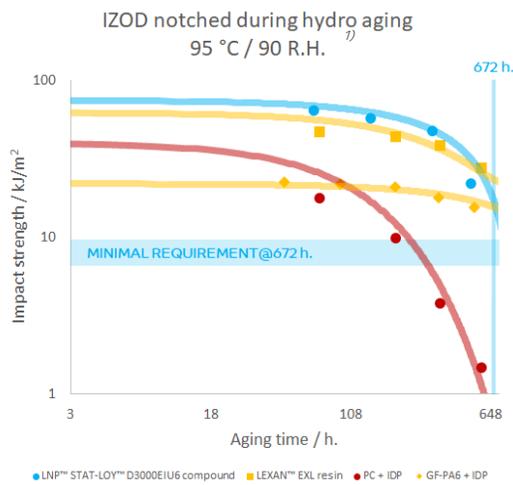
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	CCB filled PC	STAT-KON DD000XI
Flow capability	●	●
Processing window	●	●
Impact	●	●
Heat aging	●	●
Hydro ageing	●	●
Heat resistance	●	●
UV stability	●	●

LNP STAT-KON DD000XI compound offers **HIGHER PRACTICAL IMPACT²⁾** when compared to CCB filled PC compounds of similar heat resistance, potentially offering benefits in high demanding assembly and use conditions



Industrial enclosures: LNP™ STAT-KON™ DD000XI



Colored enclosures: LNP™ STAT-LOY™ D3000IEU6

New and upcoming LNP™ PC co-polymer based solutions for ATEX regulated applications:

Non Flame Retardant			Flame Retardant (in development)	
Black	Colorable	Translucent	Black	Colorable
<ul style="list-style-type: none"> Black only Impact retention Anti static (10⁹) High heat Excellent Hydro aging 	<ul style="list-style-type: none"> Excellent colorable Impact retention Anti static (10⁹) High heat Excellent Hydro aging 	<ul style="list-style-type: none"> Transmission > 80 % Haze 10 – 100 % Anti static (10¹¹) Medium heat Medium hydro aging 	<ul style="list-style-type: none"> Black only V-0 @1.0mm* V-1 @0.8mm* Anti static (10⁷) High heat High initial impact 	<ul style="list-style-type: none"> Colorable V-0 @2.0mm* V-1 @1.6mm* Anti static (10⁴) High heat Med. initial impact
DD000XI	D3000IEU6	63000CTC	ER010963	ER010840

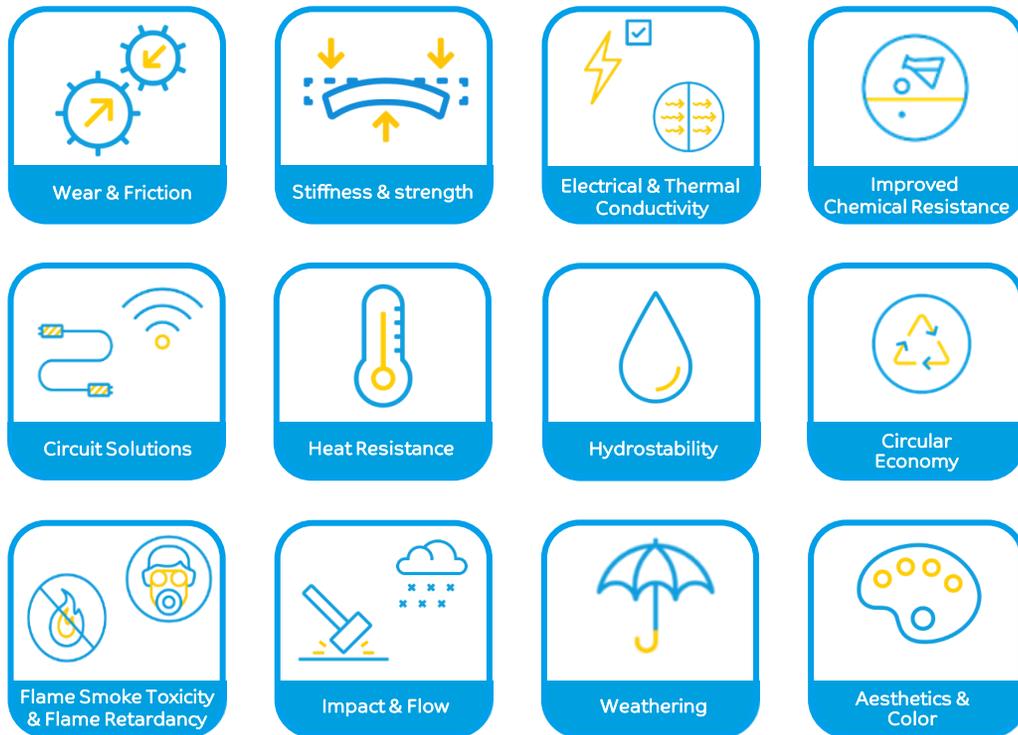
UNIQUENESS, DIFFICULTY AND TIME TO MARKET

1) commended aging settings for Ts = 75 °C, 504 h, @90 °C/90 % RH + 336 h, @95 °C (dry), 2) Comparative data generated for SABIC DD000XI and PC based reference in SABIC labs. 3) Targeted UL94 V-rating based on limited lab samples measured in SABIC facilities

SABIC SPECIALTIES PORTFOLIO OVERVIEW

As the 'home of unique offerings' within SABIC, the Specialties business is focused on challenging technology endeavors that deliver fundamental progress to the way the world travels, communicates, works and lives. Leveraging global application technology centers and deep materials processing expertise, Specialties' solutions are provided to a wide range of industries to support global Megatrends such as [Healthcare & Water Management](#), [Automotive Electrification](#), [Renewable Energy](#), [Connectivity](#) and [Sustainability](#), helping our customers to make the difference.

SABIC's Specialties portfolio under the brands of [ULTEM™](#), [EXTEM™](#), [SILTEM™](#), [NORYL™](#), [LNPT™](#), [ELCRES™](#) and [ELCRIN™](#) includes engineering thermoplastic resins, copolymers, blends, compounds, composites, films, filaments and additives which can be described by 12 properties and strives to push boundaries



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