CHEMISTRY THAT MATTERS™

LNP™ COMPOUNDS & COPOLYMERS FOR POSSIBLE MOBILITY SOLUTIONS

2019 REVISION 1.0

GLOBAL LNP TEAM

CONTACT DETAILS: SABIC COMPOUNDS & COPOLYMERS

STRUCTURAL & CIRCUIT SOLUTIONS

AMR:
Emily (Yuanqinq) He
Yuanqing.He@sabic.com

EMEA:
Willem Hamersma
willem.hamersma@sabic.com

PAC & GLOBAL:
Morgan Zou
morgan.zou@sabic.com

WEAR & FRICTION

AMR & GLOBAL
Ed Williams
Edward.WilliamsIii@sabic.com

EMEA:
Ton Hermans
ton.hermans@sabic.com

PAC:
Tatsuya Uchiyama
Tatsuya.Uchiyama@sabic.com

AESTHETICS & COLOR

AMR & GLOBAL:
Jeff Xu
jeff.xu@sabic.com

EMEA:
Ton Hermans
ton.hermans@sabic.com

PAC:
Tatsuya Uchiyama
Tatsuya.Uchiyama@sabic.com

CONDUCTIVE

AMR:
Jeff Xu
jeff.xu@sabic.com

EMEA & GLOBAL:
Willem Hamersma
willem.hamersma@sabic.com

PAC:
Tatsuya Uchiyama
Tatsuya.Uchiyama@sabic.com

IMPACT & FLOW / FST / HEAT RESISTANCE & WEATHERABILITY

AMR & GLOBAL:
Nithin Raikar
nithin.raikar@sabic.com

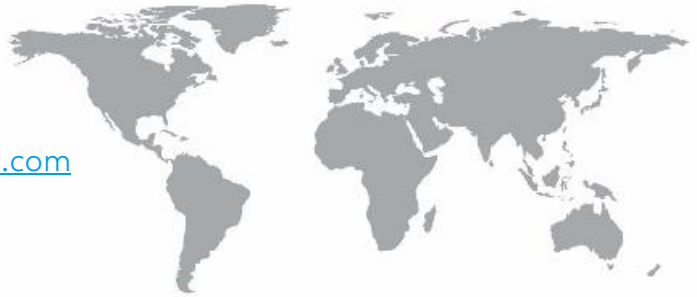
EMEA:
Ton Hermans
ton.hermans@sabic.com

PAC:
Power (Huazhen) Yao
huazhen.yao@sabic.com

BUSINESS CONTINUITY TEAM:

AMR: Robin Hough Robin.hough@sabic.com
PAC: Tina Tang Tina.tang@sabic.com
GLOBAL: David Ngiam David.Ngiam@sabic.com

EMEA: Marian van Driel Marianvan.driel@sabic.com
GLOBAL: Cryst Oh Cryst.Oh@sabic.com



THERMOPLASTIC RESINS

High

Temperature

Price

Performance

Low

PI
PPSU
EXTEM™ (PI)
ULTEM™(PEI)

PEEK
LCP
HTN
Fluoropolymers

COPOLYMERS(PC)
NORYL™ (PPO)
CYCOLOY™ (PC/ABS)
GELOY™ (ASA)
CYCOLAC™ (ABS)

VALOX (PBT)
XENOY™ (PBT/PC)
XYLEX™ (PC/sPE)
PA
POM

Polystyrene
Polyvinyl Chloride

Polyethylene
Polypropylene

Amorphous

Crystalline

Clarity, Colorability, Impact Strength

Chemical Resistance, Flow, Electrical Properties

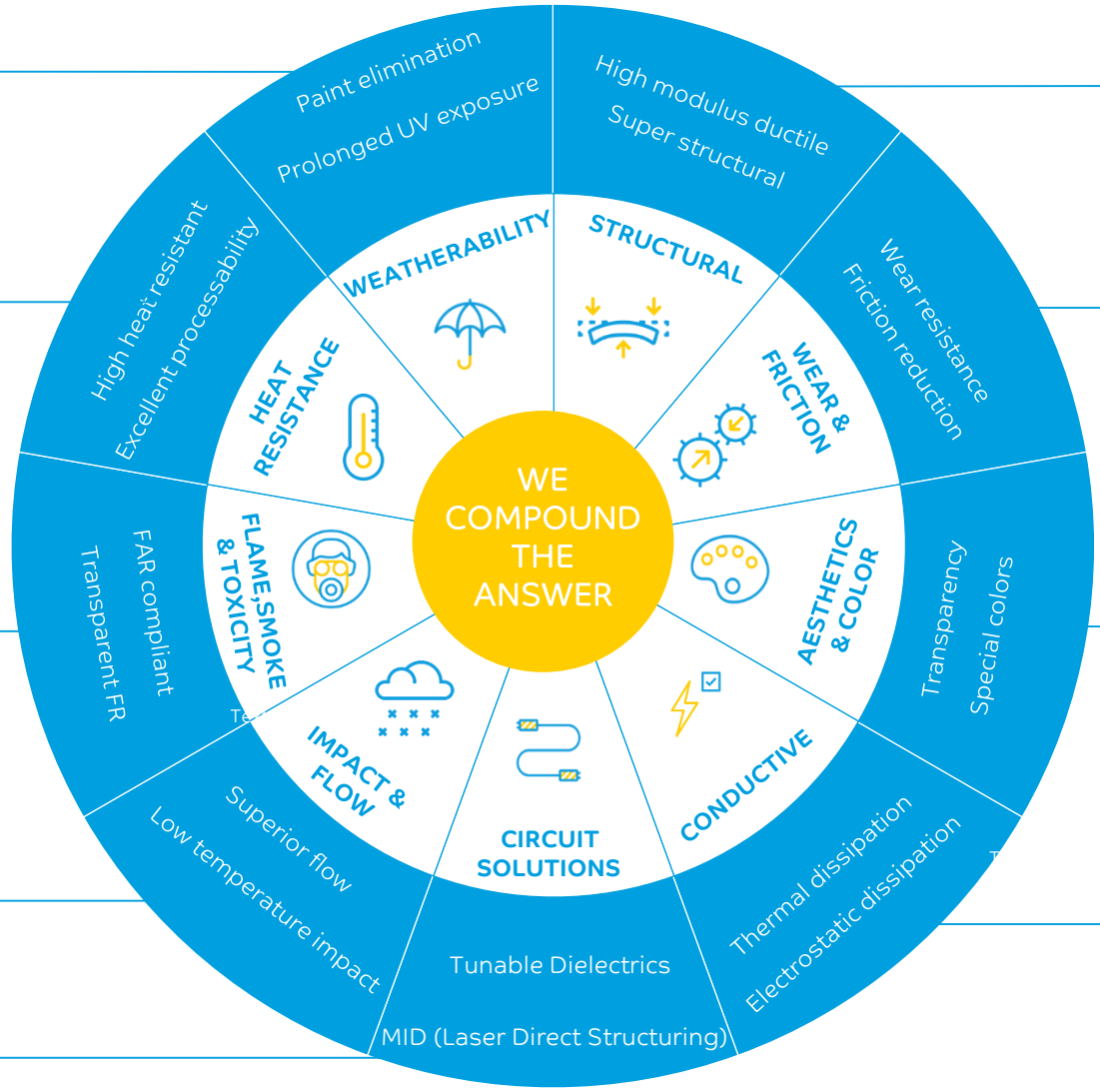
High Performance Polymers

Engineering Polymers and Blends

Bulk Polymers

Family

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS



SABIC SLX Resin

SABIC XHT Resin
SABIC CXT Resin
SABIC PPC Resin

SABIC FST Resin
SABIC CFR Resin
SABIC PBT ENH Resin
SABIC PC/ABS CX Resin

SABIC EXL Resin
SABIC HFD Resin
SABIC PC/ABS CX Resin

THERMOCOMP compound

THERMOTUF™ compound
THERMOCOMP™ compound
VERTON™ compound

LUBRICOMP™ compound
LUBRILOY ™ compound

SABIC LUX-C & FX Resin
COLORCOMP™ compound

STAT-KON™ compound
STAT-LOY™ compound
FARADEX™ compound
KONDUIT™ compound

LNP™ COMPOUNDS: POTENTIAL OPPORTUNITIES IN MOBILITY

ENGINE & GEAR BOX BRACKETS
Heat Stability
Creep and Fatigue
Vibration
Impact
VERTON™ RF compounds

HEATING VENTILATION AIR CONDITIONING
Heat Resistance
Good wear/friction
THERMOCOMP™ compounds
LUBRICOMP™ compounds

GEARS/BUSING/GASKET
Good wear/friction
Tight Tolerance
Chemical resistance
LUBRICOMP™ compounds

TRANSMISSION
Heat Resistance
Good wear/friction
LUBRICOMP compounds
THERMOCOMP compounds

WIRE COATING
Heat Resistance
Chemical Compatibility
Non-Halogen FR
Flexibility
THERMOCOMP compound

ELECTRONIC HOUSING
EMI/RFI shielding
Antistatic
FARADEX™ compounds
STAT-KON compounds

FUEL SYSTEM COMPONENTS
Chemical Compatibility
Low Permeability
Antistatic
STAT-KON™ compounds

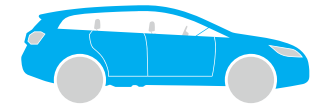
THROTTLE BODIES
Dimension Stability
Tight Tolerance/CTE
Chemical Compatibility
Wear
Heat Stability
THERMOCOMP compounds

SENSORS
Dimension Stability
Heat Stability
Chemical Compatibility
THERMOCOMP compounds

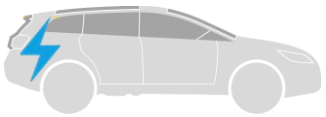
VALVE ROCKER COVER
Dimension Stability
Heat Stability
Chemical Compatibility
Colorability
VERTON RF/UF compound

PULLEYS
Dimension Stability
Tight Tolerance
Chemical Compatibility
Wear
VERTON RF/UF compound

POTENTIAL SOLUTIONS ACROSS THE ENTIRE VEHICLE



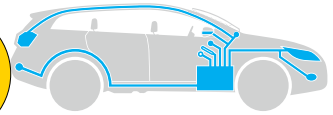
Exteriors



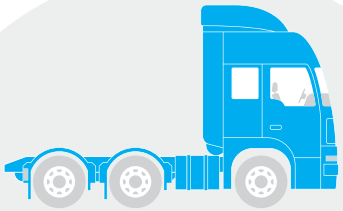
EV Solutions

EXPERTISE
built over 70 years serving the mobility industry

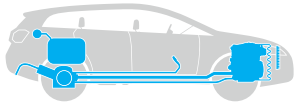
Interiors



Lighting



Heavy Truck

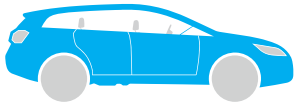


Under-the-Hood & Fuel Systems

TABLE OF CONTENT

LNP™ COMPOUNDS & COPOLYMERS POSSIBLE SOLUTIONS FOR VEHICLE EXTERIORS

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS: EXTERIORS



Exteriors

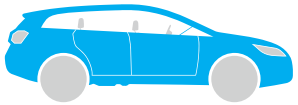
STRUCTURAL

APPLICATIONS	GRADE	DESCRIPTION	FEATURES
Tail gate	LNP VERTON™ WV00A compound LNP VERTON RV008 compound	PBT long glass fiber and PA66 long glass fiber	Low weight, low cost, good strength
Door handle	LNP VERTON RV00CES compound	PA long glass fiber	Lower weight versus metal; Mechanical performance versus standard fiber in this safety critical application
Mirror components	LNP VERTON RV00AE compound	PA66 long glass fiber	High stiffness, Good damping behavior, Low creep, Aesthetic surface finish, System Cost Reduction & weight Reduction vs. metal.

CONDUCTIVE

APPLICATION	GRADE	DESCRIPTION	FEATURES
Proximity and velocity control devices	LNP STATKON™ DX11411R compound	PC, electrical conductively modified	High frequency radar absorption capability with practical impact
	LNP STATKON DX04490R compound	PC electrically conductive modified	Radar absorption
	LNP STATKON EX11402R compound	PEI, electrical conductively modified	High frequency radar absorption capability with high heat resistance
	LNP STAT-KON WD000 compound	PBT, Carbon Powder	Extended lifetime

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS: EXTERIORS



Exteriors

WEATHERABILITY

APPLICATION	GRADE	DESCRIPTION	FEATURES
Grilles & Exterior Trims & Mirror housing	COPOLYMER **SLX2271T** resin	Low viscosity PC copolymer blend	**Our SLX2271T resin has less SLX** resin for transparency & tinted colors keeping sufficient UV stabilization and cost balance. Contains release agent and is V2 rated
Spoilers & In Colored body Panel	COPOLYMER **SLX1432** resin COPOLYMER SLX2271T resin	Medium viscosity PC copolymer blend	**Our SLX1432 resin has more SLX** resin for high UV performance in opaque colors with minimum color tolerance limit DE CMC<1.0. Contains release agent.

Key issues, concerns, motivations of customers & prospects	Top SABIC solutions for response	Possible strengths & advantages vs. competition
UV resistance & In colored UV resistance	COPOLYMERS SLX resin portfolio	In-colored UV resistance
Design freedom	SLX2271T	Best in class non painted solution
In mold coloring	SLX1432	Deep gloss colors

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – DOOR HANDLE'S

LNP VERTON™ RV00CES compound
PA66- 60%LGF – Easy molding & Heat stabilized

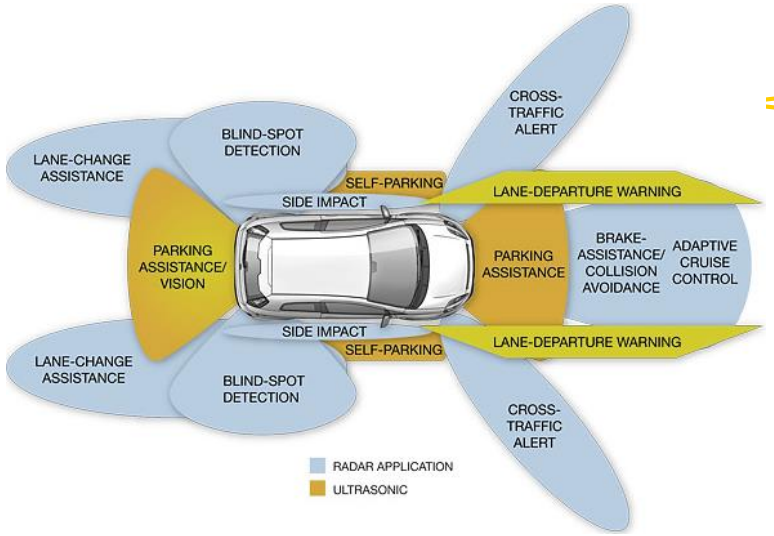
Abuse resistance improves safety. Lower cost solution as compared to PPS/GF.

FEATURE	BENEFIT
High Modulus above 12Gpa	Improved impact performance as compared to PPS/GF
Good aesthetics	No fiber mark/flow mark
Isotropic shrinkage	Better dimensional stability than PPS/ GF
Paintable	Solvent based systems to validate

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – EXTERIOR SENSOR APPLICATIONS

RADAR SENSING UNIT MOUNTED BEHIND THE FASCIA OF A VEHICLE

Short-Distance Radar Sensors



Applications supported by High Resolution Radar:

Park Assist, Pre-crash Detection, Stop and Go Driving, Back-up Warning, Blind Spot Detection, Side Impact

Radar frequency based technology is deemed superior to that used by ultrasonically driven sensors.

LNP STAT-KON™ DX11411R compound, PC, electrically conductive modified
LNP STAT-KON DX04490R compound, PC, electrically conductive modified
LNP STAT-KON EX11402R compound, PEI, electrically conductive modified
LNP STAT-KON WD000 compound, PBT, Carbon Powder

Tunable high frequency radar absorption allows for metal replacement and associated weight and cost-out

FEATURE	BENEFIT
High Impact	Cold temperature ductility
High frequency radar absorption	Elimination of radar absorption filters
Entry level grade (DX04490R)	Radar absorption
High Modulus (DX11411R)	Resist warpage from XENOY™ overmold
High Heat Resistance (EX11402R)	Overmolding capability w/ thermoset Silicon gasket
Metal replacement (EX11402)	Design freedom and weight out
Chemical Resistant (WD000)	Extended lifetime

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEATHERABILITY SOLUTION – FRONT GRILLES

COPOLYMER SLX2271T resin
Low viscosity PC copolymer blend

High flow, UV resistance PC copolymer with release
Potential to repair surface scratches via special polishing procedure.

FEATURE	BENEFIT
Long term weatherable	Up to 10 years of direct UV exposure
In mold colorable	Elimination of paint, secondary operations, and VOC emissions
Color and aesthetics (transparent coloring)	Paint like gloss and depth of color
Chemical resistance	Improved performance vs. PC resin
Property retention	Retention of gloss, color after UV exposure
Good flow and release	Ability to fill complex tools, less parts sticking

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEATHERABILITY SOLUTION – REAR SPOILERS

LAND ROVER EVOQUE rear spoiler Lower plate

COPOLYMER SLX2271T resin
Low viscosity PC copolymer blend

High flow, UV resistance PC copolymer with release

FEATURE	BENEFIT
Long term Weatherable	Up to 10 years of direct UV exposure
In mold colorable	Elimination of paint, secondary operations, and VOC emissions
Color and aesthetics (transparent coloring)	Paint like gloss and depth of color
Chemical resistance	Improved performance vs. PC resin
Property retention	Retention of gloss, color after UV exposure
Good flow and release	Ability to fill complex tools, less parts sticking

LNP™ COMPOUNDS & COPOLYMERS POSSIBLE SOLUTIONS FOR VEHICLE INTERIORS

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR VEHICLE INTERIORS

Interiors

STRUCTURAL

APPLICATION	GRADE	DESCRIPTION	FEATURES
Seat Pan	LNP VERTON™ RV00AES compound	PA66, long glass fiber	Lower weight versus metal; Better mechanical performance versus short fiber
Seat Belt Pre tensioner housing	LNP VERTON RV00CESS compound	PA66, long glass fiber	Lower weight versus metal; Better mechanical (impact and failure mode) performance versus short fiber in this safety critical application; Mouldability
Power sliding door unit	LNP THERMOCOMP™ PF008 compound	PA6, short glass fiber	Low moisture absorption; High modulus; Good hydrolytic stability; Excellent chemical resistance to fuels, oils and greases
Steering lock housing	LNP VERTON RV00CEXS compound	PA66 long glass fiber	Lower weight versus metal; Mechanical performance versus standard fiber in this safety critical application
Head up display component	LNP THERMOCOMP UFW49RSC compound	PPA, glass fiber Mineral, Heat Stabilized	High temperature performance(HDT 255°C), good surface appearance.

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR VEHICLE INTERIORS

Interiors

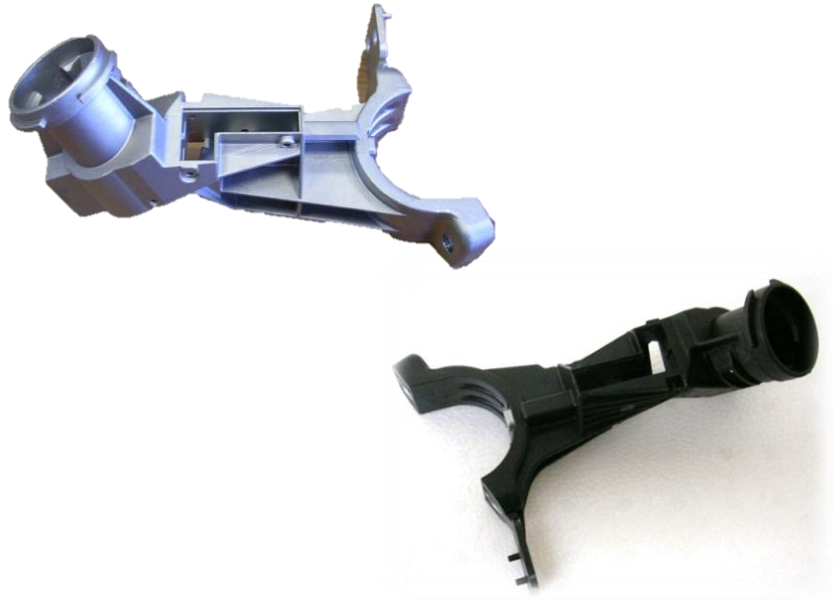
WEAR AND FRICTION

APPLICATIONS	GRADE	DESCRIPTION	FEATURES
Anti-BSR(Buzz-Squeak & Rattle) for Interior claddings, trims, bezels	LNP LUBRILOY™ N2000 (dev) compound	Alloy lubricated PC/ABS	Low COF (Coefficient of Friction), wear resistant, dimensional accuracy, paintable
	LNP LUBRICOMP™ NXCY620 compound	Silicon lubricated PC/ABS	Low COF (Coefficient of Friction), dimensional accuracy
	LNP LUBRILOY D2000 compound	Alloy lubricated PC	Low COF (Coefficient of Friction), wear resistant, dimensional accuracy, paintable
Gears, bearings & door bushings	LNP LUBRILOY R2000AXP compound	Alloy lubricated PA 6/6	Good wear, low COF(Coefficient of Friction)
Center console slides & rails	LNP LUBRICOMP ZL003 compound	15% PTFE lubricated PPO	Good wear, low COF (Coefficient of Friction), better resistance to acids & bases than PC

IMPACT AND FLOW

Applications	Grade	Description	Features
On-Board Diagnostic system	COPOLYMER EXL9330 resin	Opaque PC-Siloxane copolymer with excellent procesability	Non-chlorinated, non-brominated flame retardant product in most colors. UV-stabilized. UL rated f1/V-0/5VA

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – STEERING LOCK HOUSING



LNP VERTON™ RV00CEXS compound
PA66, 60%LGF, Easy Molding

Lower weight versus metal; Mechanical performance versus short fiber in this safety critical application.

FEATURE	BENEFIT
Lower density vs. aluminum	Cost saving potential (weight reduction)
Corrosion resistant	Elimination of protective coating
Outstanding creep and fatigue performance	Long lifetime expectations
Good flow ability	Design flexibility

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – HEAD-UP DISPLAY COMPONENT

LNP THERMOCOMP™ UFW49RSC compound
PPA + 45%GF + 20% Mineral, Heat Stabilized

LNP THERMOCOMP compounds enhance nearly any base resin for stiffness, heat resistance, dimensional tolerances - even specific gravity or processing parameters.

FEATURE	BENEFIT
High Temperature Performance	Longer product life cycle for stable business
High Flexural Modulus	Dimensional stability Low thermal expansion @ -40 – 85°C
Black color & good surface Appearance	Low reflection
High Modulus/ low CTE	

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – SEAT PAD

LNP VERTON™ RV00AES compound
Nylon 6/6 50% Long Glass Fiber

Combines light weight with strength needed as the primary back and body support.

FEATURE	BENEFIT
Good flowability / Metal replacement	Molding complex design
Density vs Aluminum	Weight reduction after redesign in plastic
Corrosion resistant	Elimination of protective coating
High structural performance	Matching bending stiffness of Aluminum
High impact resistance	Shock explosion resistance with controlled crack propagation

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – SEAT BELT PRE-TENSIONER HOUSING

LNP VERTON™ RV00CESS compound
PA66 - 60%LGF

Cost out through longer life time of tools (10 times) in comparison to Aluminum and less secondary operations (no painting, no machining)

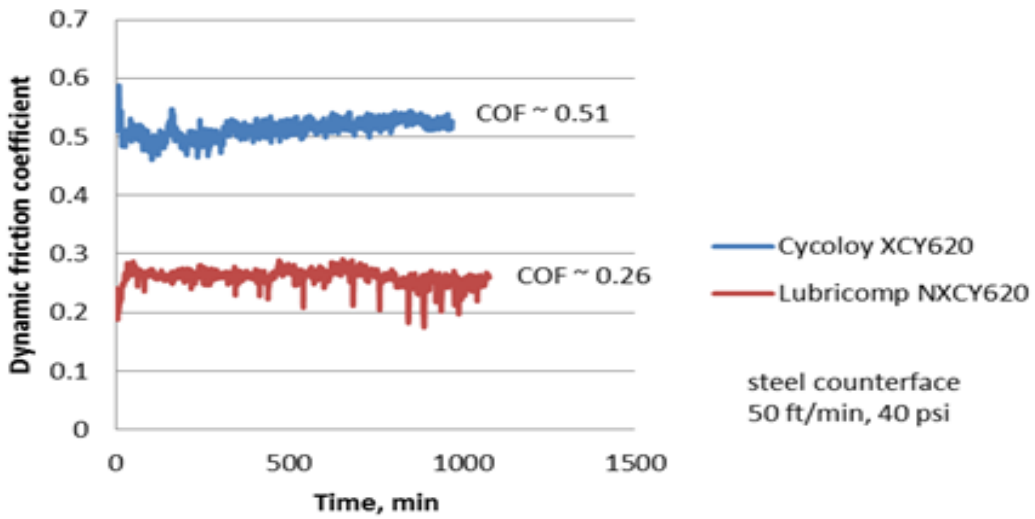
FEATURE	BENEFIT
Good flowability / Metal replacement	Molding complex design
Density vs Aluminum (1,7g/ccm vs 2,7g/ccm)	Weight reduction after redesign in plastic
Corrosion resistant	Elimination of protective coating
High structural performance	Matching bending stiffness of Aluminum
High impact resistance	Shock explosion resistance with controlled crack propagation

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – RADIO FRAME

CUSTOMER REQUIREMENTS

- Shrinkage similar unfilled PC/ABS (tool already cut)
- Reduced friction between frame and buttons (PC)
- Elimination of grease

COF with and without silicone



GRADE	DESCRIPTION	FEATURES
LNP LUBRICOMP™ NXCY620 compound	Silicone lubricated PC/ABS	FM: 21.1GPa, HDT:263C, Good chemical resistance, low wear and COF

Lubricated grades allow for elimination of squeak without external lubricant

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HIGH IMPACT AND HIGH FLOW SOLUTION – OBD HOUSING

OBD (On-Board Diagnostic system) housings

COPOLYMER EXL9330 resin
Opaque PC-Siloxane copolymer with excellent procesability

Increased product reliability through ductility over broad temperature range, UV stabilization and weathering according f1 (UL746C) for outdoor usage..

FEATURE	BENEFIT
Balanced High flow and FR performance	UL V-0 @ 1mm Passed Thermal shock +85˚C~ -40˚C , 454 hours
Low temp. ductility – increase product reliability	EXL9330 high impact under low temp is the most key point to win this project.
Balanced mechanical performance	Excellent processing and surface performance
Low halogen FR	Sustainable solution for easier recycling

LNP™ COMPOUNDS & COPOLYMERS POSSIBLE SOLUTIONS FOR ELECTRIC VEHICLES AND E-MOBILITY

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR ELECTRIC VEHICLES (EV)

EV Solutions

IMPACT AND FLOW

APPLICATION	GRADE	DESCRIPTION	FEATURES
Smart Chargers & Couplers	COPOLYMER EXL9330 resin	Opaque PC-Siloxane copolymer with excellent procesability	Non-chlorinated, non-brominated flame retardant product in most colors. UV-stabilized. UL rated f1/V-0/5VA

FLAME RETARDANCY

APPLICATIONS	GRADE	DESCRIPTION	FEATURES
Sockets	ENH 3500 resin iQ ENH3500 resin	PBT, Eco-FR, unfilled	RTI 150°C; CTI PLC 0 V0 at 0.8 mm; 5VA at 3 mm (BK); GWFI 960°C at 0.8 mm Good balance impact/stiffness
	ENH 4560 resin iQ ENH4560 resin	PBT, Eco-FR, glass filled	RTI 140°C; CTI PLC 0 V0 at 0.8 mm; GWFI 960°C at 0.8 mm High stiffness
	THERMOCOMP™ RF0057E compound	PA 66, Eco-FR, glass filled	RTI 140°C; CTI PLC 0 V0 at 1.5 mm; 5VA at 1 mm (BK); GWFI 960°C at 0.4 mm F1 Good chemical resistance High stiffness

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HIGH IMPACT AND HIGH FLOW SOLUTION – EV SMART CHARGER

COPOLYMER EXL9330 resin
Opaque PC-Siloxane copolymer with excellent procesability

Outdoor usage through ductility over broad temperature range, UV stabilization and weathering according f1 (UL746C)

FEATURE	BENEFIT
Balanced High flow and FR performance	UL V-0 @ 1mm, GLW 850C, UL f1
Low temp. ductility – increase product reliability	-30C low temp. drop test
Balanced impact & flow	• excellent procesability with very good impact
Double injection for black & white layer	
Low halogen FR	• Sustainable solution for easier recycling

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HIGH IMPACT AND HIGH FLOW SOLUTION – EV COUPLER

COPOLYMER EXL9330 resin
Opaque PC-Siloxane copolymer with excellent procesability

Outdoor usage through ductility over broad temperature range, UV stabilization and weathering according f1 (UL746C).

FEATURE	BENEFIT
Balanced High flow and FR performance	UL V-0 @ 1mm GLW 850C UL f1
Low temp. ductility – increase product reliability	The superior ductility performance at -60C help customer to reduce risk and step in the EV market with high quality product in DC and AC models.
Balanced mechanical performance	Excellent processing and surface performance

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HIGH IMPACT AND HIGH FLOW SOLUTION – WALL CHARGING STATION

COPOLYMER EXL9330 resin
PC Copolymer, halogen-free FR System

Outdoor usage through ductility over broad temperature range, UV stabilization and weathering according f1 (UL746C).

FEATURE	BENEFIT
UL94 V0 @ 1.5 mm and 5VA @ 3 mm	Compliant with IEC 62196 und IEC 61851.1-2
UL746C f1 Rating	Can be used for Outdoor applications
IIN -30°C 55 kJ/m²	Good low temperature impact in comparison to standard PC
Chlorine / bromine free FR System	Sustainable solution

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL AND FLAME RETARDANT SOLUTION – EV CONNECTOR/SOCKET

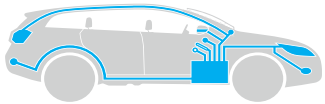
LNP THERMOCOMP™ RF0057E compound
PA 66, glass fiber reinforced, halogen-free FR System

Suitable for outdoor high speed charging

FEATURE	BENEFIT
• UL94 V0 at 1.5 mm; • 5VA at 1 mm (BK)	• Compliant with IEC 62196 und IEC 61851.1-2
• UL746C f1 Rating	• Can be used for Outdoor application
• RTI 140°C • CTI PLC 0	• Good electrical performance for high voltage application
• Chlorine / bromine free FR System	• Sustainable solutions
• Ball pressure test 240°C	• Good thermal performance for high ambient temperature

LNP™ COMPOUNDS & COPOLYMERS POSSIBLE SOLUTIONS FOR VEHICLE LIGHTING APPLICATIONS

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR VEHICLE LIGHTING

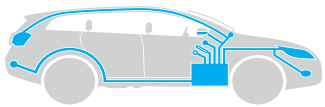


Lighting

HEAT RESISTANCE

APPLICATION	GRADE	DESCRIPTION	FEATURES
Bezels	COPOLYMER XHT1141 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **145°C** , MVR*70. Available in a range of opaque and limited transparent colors.
Bezels	COPOLYMER XHT1171 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **150°C** , MVR**85. Available in a range of opaque colors.
Bezels, Reflectors & Fog lamps	COPOLYMER XHT2141 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **155°C** , MVR**43. Available in a range of opaque and limited transparent colors.
Bezels, Reflectors	COPOLYMER XHT2171 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **160°C** , MVR**55. Available in a range of opaque colors.
Bezels, Reflectors	COPOLYMER XHT3141 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **160°C** , MVR**30. Available in a range of opaque and limited transparent colors.
Bezels, Reflectors	COPOLYMER XHT3171 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **165°C** , MVR**38. Available in a range of opaque colors.
Bezels, Reflectors	COPOLYMER XHT4141 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **170°C** , MVR**24. Available in a range of opaque and limited transparent colors.
High heat Reflectors	COPOLYMER XHT5141 resin	high flow, high heat polycarbonate copolymer	Use temperature up to **180°C** , MVR**15. Available in a range of opaque colors.

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR VEHICLE LIGHTING



Lighting

WEAR AND FRICTION

APPLICATIONS	GRADE	DESCRIPTION	FEATURES
Forward lighting adjustment gears	LNP LUBRICOMP™ OCL36 compound	15% PTFE lubricated, 30% carbon fiber, PPS	Low moisture uptake for dimensional stability, Good wear, low COF

CONDUCTIVE

APPLICATION	GRADE	DESCRIPTION	FEATURES
Head and tail lighting heat sinks	LNP KONDUIT™ PX10323 compound	PA 6, Thermal conductive modified	Heat dissipation, high modulus, good flow

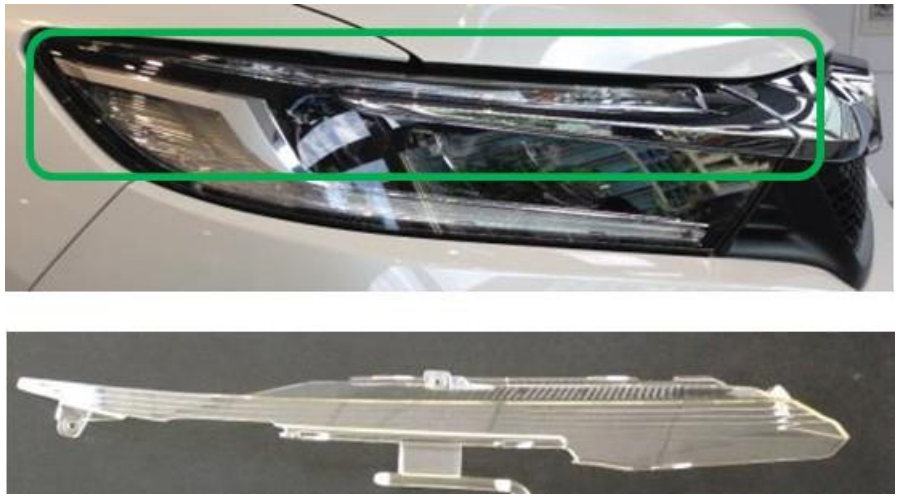
LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HEAT RESISTANCE SOLUTION – HEAD LAMP BEZEL

COPOLYMER XHT resins
Based upon high heat copolymer technology.
XHT1xxx - series up to 145˚C
XHT5xxx - series up to 180˚C

Lower cost due to primerless metallization option

FEATURE	BENEFIT
Elevated RTI, HDT up to 183˚C VS standard PC HDT 135˚C	Better resistance to blistering when painted and micro-cracking
Good flow	Thin wall for complex designs
Metallizable at elevated temperatures up to xxx°C	Improved aesthetics vs competitive high heat PC resins due to less micro cracking and blistering
Lower color shift under high heat	Color stability

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HEAT RESISTANCE SOLUTION – FRONT INNER LENS



Shuttle front inner lens

COPOLYMER XHT3143T Series
high flow, UV stabilized, high heat polycarbonate copolymer

Cost out through less scrap and improved aesthetics during metallization.

FEATURE	BENEFIT
Elevated RTI, HDT up to 165˚C vs standard PC HDT 135˚C	Keep good practical performance
Good flow	Thin wall for complex designs
HDT165°C	Possibility for direct metallization
Lower color shift under high heat, UV stabilized	Keep good optical performance practically

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HEAT RESISTANCE SOLUTION – REAR LAMP BEZEL

COPOLYMER XHT resins

Higher productivity due to cycle time reduction vs competitive alternatives due to shear thinning capability of XHT Copolymers

FEATURE	BENEFIT
Higher flow VS NBA	Lower processing temp VS NBA with shorter cycle time
Lower color shift under high heat	Keep good optical performance
Better resistance to haze & blistering	Direct metallization with good metallization performance
Elevated RTI, HDT up to 183˚C vs standard PC HDT 135˚C	Keep good PP performance practically

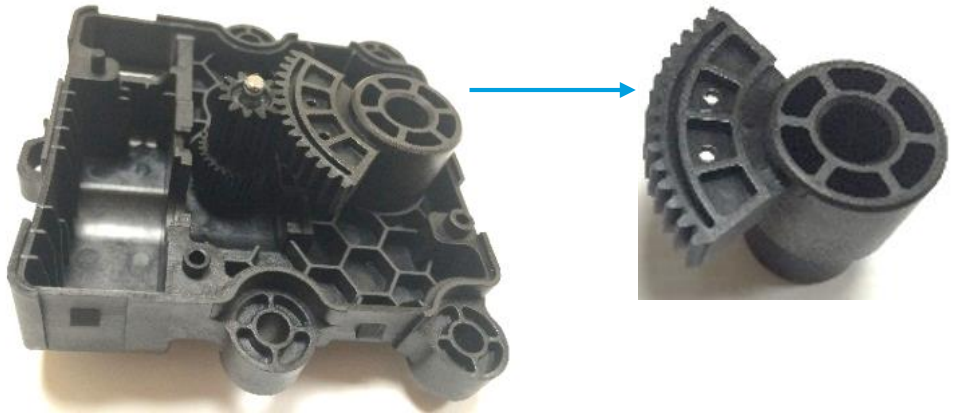
LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
HEAT RESISTANCE SOLUTION – FOG LAMP BEZEL

COPOLYMER XHT resins

Elevated RTI, HDT up to 183˚C VS standard PC HDT 135˚C

FEATURE	BENEFIT
Higher flow VS NBA	Lower processing temp VS NBA with shorter cycle time
Lower color shift under high heat	Keep good optical and PP performance practically
Better resistance to haze & blistering	Direct metallization with good metallization performance
Elevated RTI, HDT up to 183˚C vs standard PC HDT 135˚C	Keep good PP performance practically

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – ADAPTIVE FRONT LIGHT

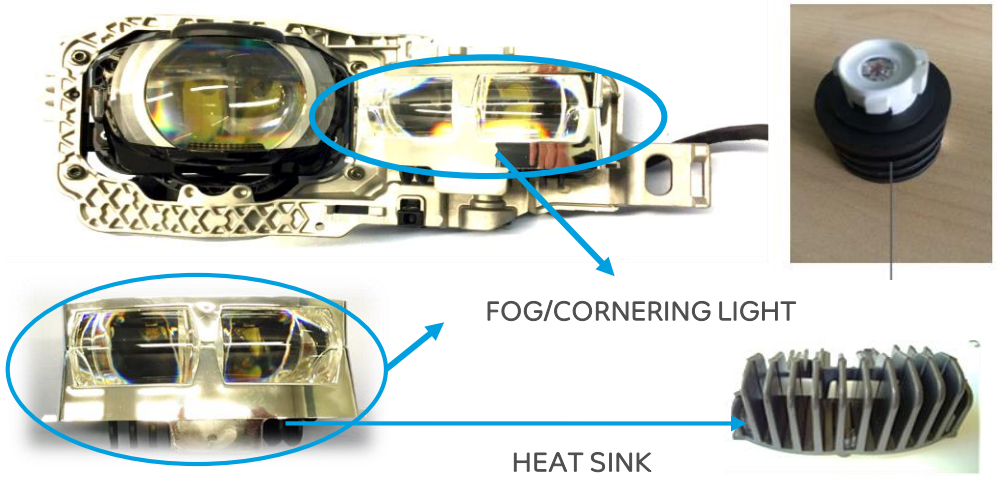


LNP LUBRICOMP™ OCL36 compound
PPS, 30%CF, 15%PTFE

LUBRICOMP OCL36 provided better procesabilty than PEEK/GF and better accuracy than PPA/GF

FEATURE	BENEFIT
Low Coefficient of Linear Thermal Expansion (CLTE)	Beam pattern accuracy, better vs PPA/GF
Wear resistance @ elevated temperature	Good wear performance @ 115°C
Good plastic-plastic performance	Low noise
	Single material solution

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – HEAT SINKS



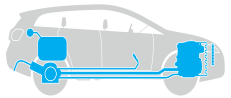
LNP KONDUIT™ PX10323 compound
PA 6 – Thermally conductive modified

Risk reduction because of increased life time through improved heat management in demanding applications such as fog light heat sinks.

FEATURE	BENEFIT
Good thermal conductivity	Improved life time through increased heat management
Practical impact for a highly filled compound	Lower sensitivity to cracking at thin wall sections & thermal cycle shock stability
Good melt flow	Thin wall molding capability
High modulus	Mechanical integrity

LNP™ COMPOUNDS & COPOLYMERS POSSIBLE SOLUTIONS FOR UNDER THE HOOD (UTH) APPLICATIONS

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR UNDER-THE-HOOD & FUEL SYSTEMS

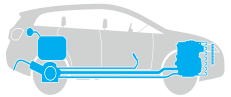


Under-the-Hood & Fuel Systems

WEAR AND FRICTION

APPLICATIONS	GRADE	DESCRIPTION	FEATURES
Seal rings and thrust washers	LNP LUBRICOMP™ LCL33E compound	PEEK, 15% carbon fiber, 15% PTFE	High heat, low wear and COF, chemical resistance
Bearings, bushings, thrust washers, gears	LNP LUBRICOMP OCP36 compound	PPS, 30% carbon fiber, 15% PTFE/Si	High heat, chemical resistance, excellent bearing grade
ETB gears and actuators	LNP LUBRICOMP UFL36S compound	PPA, 30% glass fiber, 15% PTFE	High heat, low wear and COF, balance cost/performance
Belt tensioner components	LNP LUBRILOY™ UX98388 compound	Alloy lubricated PPA	Good wear and low COF vs. steel and aluminum
E-gas sensor slider	LNP LUBRICOMP KAL22 compound	Aramid and PTFE lubricated POM	Low wear, low noise against Al and plastic parts

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR UNDER-THE-HOOD & FUEL SYSTEMS

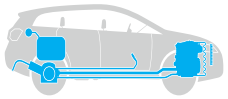


Under-the-Hood & Fuel Systems

STRUCTURAL

APPLICATION	GRADE	DESCRIPTION	FEATURES
Pulley	LNP Verton™ RV007ES compound	PA66, long glass fiber	Lower weight versus metal; Mechanical performance versus short fiber
Gear in Powertrain	LNP Verton RVL29ESS compound	PA66, long glass fiber, PTFE	Lower weight versus metal; Mechanical performance versus short fiber; Good wear performance
Engine starter gear	LNP Verton RX98047 compound	PA66, long glass fiber	Lower weight versus metal; Mechanical performance versus short fiber
Engine component	LNP Verton UV00ASXS compound	PPA, long glass fiber	High Heat/Stiffness/Impact; Lower weight vs. metal
Engine tensioner body	LNP Verton UV00ASXS compound	PPA, long glass fiber	High Strength and Stiffness at elevated Temperature; Superior Impact Resistance; Cost Reduction over die cast
Fuel Rail	LNP Verton RV007ES compound	PA66, long glass fiber	Surface finish; Fuel resistance / permeation resistance; Dimensional stability; Cost reduction vs. GF/PPS; Impact improvement vs. GF/PPS
Connector	LNP THERMOTUF™ W1000I compound	PBT based compound with high impact	Balance of flow-ductility-adhesion to metal, excellent elongation and adhesion to metal electric track during heat bending process
Sliders	LNP THERMOCOMP™ LF003 compound	PEEK, glass fiber	High heat; High strength and stiffness; good chemical resistance

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR UNDER-THE-HOOD & FUEL SYSTEMS



Under-the-Hood & Fuel Systems

CONDUCTIVE

APPLICATION	GRADE	DESCRIPTION	FEATURES
Fuel Inlet Check Valve Housings	LNP STATKON™ KX02764 compound	POM, electrically conductive modified	High chemical resistance, high modulus
Fuel Delivery and Pump Modules	LNP STATKON KX02764 compound	POM, electrically conductive modified	High chemical resistance, high modulus
Fuel Inlet Check Valve weld pads and filter holders	LNP STATKON FX98500C compound	PE, electrically conductive modified	Excellent chemical resistance, barrier properties and weldability to fuel tanks
Fuel filter brackets	LNP STATKON RFD03 compound	PA 6.6, carbon powder, 15 % GF	Good chemical resistance combined with modulus and toughness
Fuel filter housings	LNP STATKON SX90398 compound	PA 12, electrically conductive modified	Excellent chemical resistance with high elongation
Connectors for data transmission	LNP FARADEX™ EXFD9978 compound	PC/PBT, GF and Stainless Steel	Good chemical resistance with EMI Shielding
Fuel filler pockets	LNP STATKON MD000I compound	PP, carbon powder	ESD protection, good chemical resistance with ductility and cost productivity
Fuel filler necks	LNP STATKON KD000EI compound	POM, carbon powder, impact modified	ESD protection ,high chemical resistance, high modulus

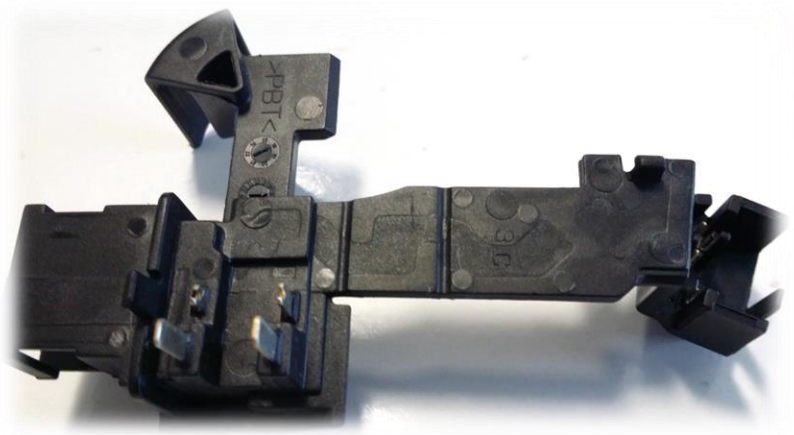
LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – FUEL RAIL

LNP VERTON™ RV007ESS compound
PA66- 35%LGF – Heat stabilized

Abuse resistance improves safety. Lower cost solution as compared to PPS/GF.

FEATURE	BENEFIT
Balance of stiffness and excellent impact strength	Improved impact performance as compared to PPS/GF
Excellent surface finish	Improves fuel flow also at seal surfaces
Isotropic shrinkage	Better dimensional stability than PPS/ GF
Chemical resistance	Fuel- resistance and low permeation

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – UNDER THE HOOD CONNECTOR



LNP THERMOTUF™ W1000I compound
PBT based compound with high impact

THERMOTUF compounds enhance material properties where mechanical shock, demanding high temperature, or chemicals pose a challenge

FEATURE	BENEFIT
High flow	Similarly performing material supplied by local compounders
Metal insert overmolding Balance of flow-ductility-adhesion to metal	Adhesion to metal at low thickness < 1 mm
Excellent strength at two step filling knitline Excellent elongation and adhesion to metal electric track during heat bending process.	Welding line strength and high elongation at break

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – EXTERIOR FUEL MANAGEMENT COMPONENTS

FUEL FILLER NECK

LNP STAT-KON™ MD000I compound
PP – Carbon powder, impact modified

Electrical conductivity prevents static- electricity build up to reduce risk of fuel explosion

FEATURE	BENEFIT
Impact modification	Cold temperature ductility
Chemical resistance	ESCR to gasoline, greases, oils
Electrical conductive	ESD protection

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – EXTERIOR FUEL MANAGEMENT COMPONENTS

LNP STAT-KON™ KD000EI compound
POM – Carbon powder, impact modified

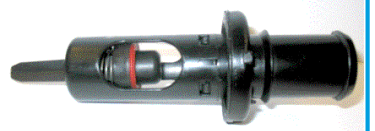
Electrical conductivity prevents static- electricity build up to reduce risk of fuel explosion

FEATURE	BENEFIT
Impact modification	Cold temperature ductility
Chemical resistance	Excellent Resistance against many Automotive Fluids
Dissipation of Tribo Electric Charge and minimal Static Charge Build Up	Prevention of Electrostatic Discharging & potential fire hazard

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – UNDER THE HOOD FUEL SYSTEM COMPONENTS

FUEL DELIVERY MODULE

FUEL PUMP MODULE



INLET CHECK VALVE HOUSINGS

LNP STAT-KON™ KX02764 compound
POM – electrically conductive modified

Electrical conductivity prevents static- electricity build up to reduce risk of fuel explosion

FEATURE	BENEFIT
Triboelectric charge dissipation	Free flowing fuel and fire risk mitigation
Chemical resistance	Longevity; Extended part life
High Modulus	Part Integrity

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – FUEL FILTER

LNP STAT-KON™ SX90398 compound
PA 12- electrically conductive modified

Electrical conductivity prevents static- electricity build up to reduce risk of fuel explosion

FEATURE	BENEFIT
High Elongation & Impact	Part (brackets) integration
Triboelectric charge dissipation	Free flowing fuel and fire risk mitigation
Ultrasonic assembly capability	Part Integration, System cost reduction
Environmental Stress Cracking Resistance to gasoline, greases and oils	Longevity; Extended part life

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
CONDUCTIVE SOLUTION – UNDER THE HOOD ELECTRONICS

LNP FARADEX™ EXFD9978 compound
PC/PBT- GF, Stainless Steel

EMI Shielding capability prevents data transmission and radar absorption interference from other electronics in close proximity

FEATURE	BENEFIT
High EMI Shielding Effectiveness (> 80 dB)	System safety and reliability
Excellent hydro aging performance @ 85 ° C and 85 % RH	Part longevity and extended component life
Metal (Al die cast) replacement	Weight reduction and Cost-Out
Chemical resistance against Auto fluids	Extended part life
High Modulus and practical impact	Part Integrity and ductility

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – COIL FRAME / BOBBIN FOR SOLENOID

LNP LUBRICOMP™ EFL36 compound
PEI, 30% GF, 15%PTFE

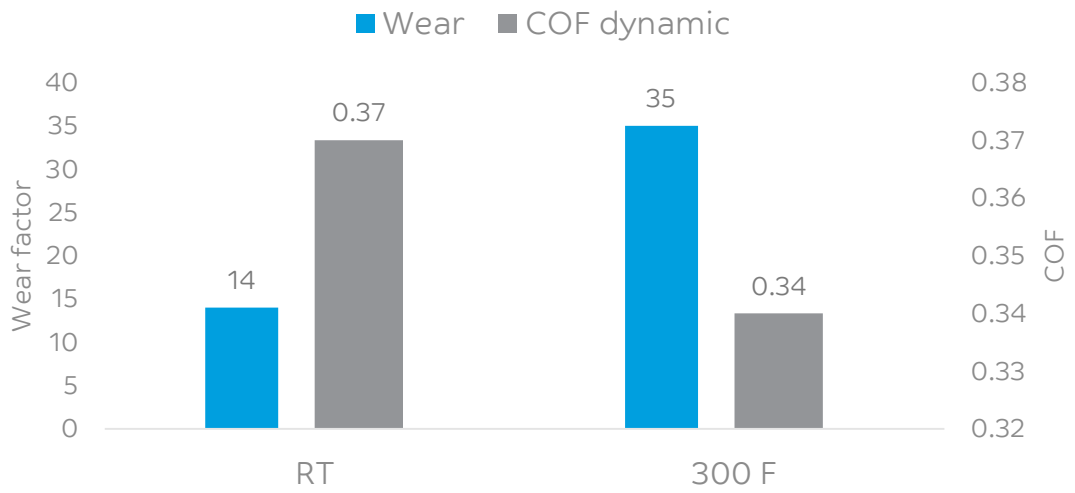
Balance of high temperature, tight dimensional tolerance, low wear and COF

FEATURE	BENEFIT
Wear resistance	No external grease, cost out , lower maintenance
Good chemical resistance	Longer application lifetime
Low Coefficient of Linear Thermal Expansion (CLTE)	Dimensional stability
Excellent dimensional stability at high temperature	Performance at elevated temperature
Low moisture absorption	Reliable part performance

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – AUTOMATIC TRANSMISSION SEAL RING

CUSTOMER REQUIREMENTS

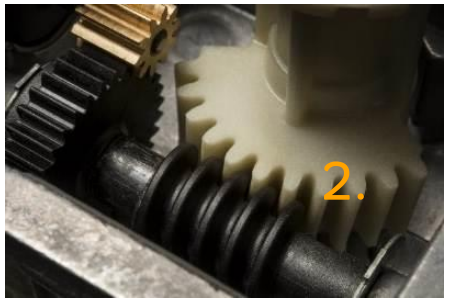
- Elevated temperature environment (150C)
- Exposure to automatic transmission fluid
- Low friction, good wear over life of part vs aluminium housing
- Good elongation for assembly



GRADE	DESCRIPTION	FEATURES
LNP LUBRICOMP LCL33E compound	15% carbon fiber, 15% PTFE	FM: 14.7 GPa, HDT: >240C, low wear and COF, UL94-V0@1.5mm

Despite high cost of carbon fiber reinforced PEEK, this was still a cost reduction vs original thermoset grade

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – TURBOCHARGER ACTUATOR



1.

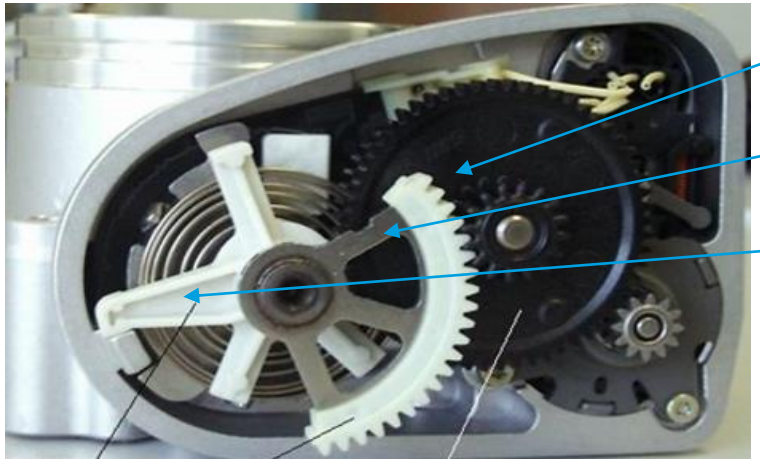
1. Worm: LNP LUBRICOMP™ UCL36ASP compound
PPA - 30%CF - 15%PTFE

2. Segment gear: LNP LUBRICOMP UFL36AS compound
PPA - 30%GF - 15%PTFE

Improved engine efficiency through more reliable wear performance compared to metal resulting in less power drop

FEATURE	BENEFIT
Fatigue strength and wear resistance at broad temperature range	Long life time expectation & performance @ -40°C to 140°C
Low plastic-plastic friction	Noise reduction
Low CLTE	Transmission efficiency
Chemical resistance	UTH chemical resistance

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL AND WEAR & FRICTION SOLUTION – TROTTLE VALVE ACTUATOR



1. Spur gear: LNP LUBRICOMP™ UFL36S compound
PPA - 30%GF - 15%PTFE

2. Segment gear: LNP THERMOCOMP™ UF007AS compound
PPA - 35%GF

3. Lever: LNP VERTON™ RVL29XXP* compound
PA66 – 45%LGF – 10%PTFE

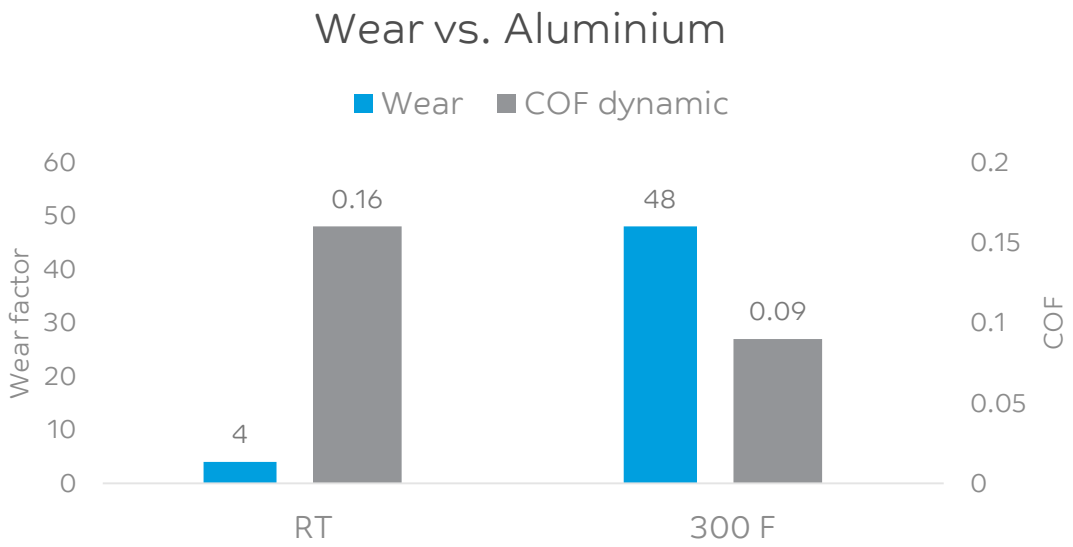
Improved engine efficiency through more reliable wear performance compared to metal resulting in lower fuel consumption

FEATURE	BENEFIT
High modulus , static- and fatigue- strength @ elevated temperature Good plastic- plastic wear performance at elevated temperature	Long life time expectation with performance up to @ 160°C (max 180°C)
Low CLTE/ dimensional stability and low plastic-plastic friction	Transmission efficiency and low noise**
Design freedom / part integration	Lower cost than equivalent metal gears
Creep resistance at elevated temperature (RVL29XXP)	No deformation of lever @ temperatures up to 160°C (max 180°C)
Sufficient chemical resistance	Operation under the hood (UTH)

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – AUTOMATIC BELT TENSIONER DAMPING BAND

CUSTOMER REQUIREMENTS

- Temp use : -40°C to 120°C
- Repeatable Friction & Wear
- Little noise & vibration
- Dimensional accuracy, low CTE
- Good chemical resistance against UTH fluids



GRADE	DESCRIPTION	FEATURES
LNP LUBRILOY™ UX98388 compound	Alloy lubricated PPA	Unreinforced grade for belt damping, good wear and low COF vs. steel and aluminum

Specialized grade of LNP LUBRILOY UA2000A compound for damping bands

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEAR & FRICTION SOLUTION – TURBO CHARGER ACTUATOR GEARS

Turbo charger actuator gears UTA GEN II

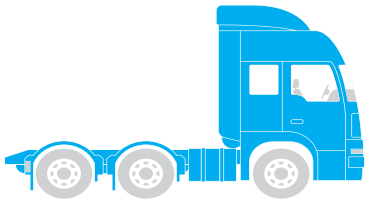
LNP LUBRICOMP™ UCL36ASP compound
PPA, 30%GF, 15%PTFE,

Extended lifetime due to internal lubrication, heat stabilization

FEATURE	BENEFIT
Long life time expectation @ up to 160 C and higher torque conditions than UTA GEN I	Improved wear performance enabling a more efficient gear box design to improve engine efficiency and life time.
Noise reduction	Low plastic-plastic Coefficient of Friction High plastic- plastic wear resistance at 150 C and relative high surface pressure- velocity conditions
Low CTE (Coefficient of linear Thermal Expansion)	Transmission efficiency

LNP™ COMPOUNDS & COPOLYMERS POSSIBLE SOLUTIONS FOR HEAVY TRUCKS

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS FOR HEAVY TRUCKS



Heavy Truck

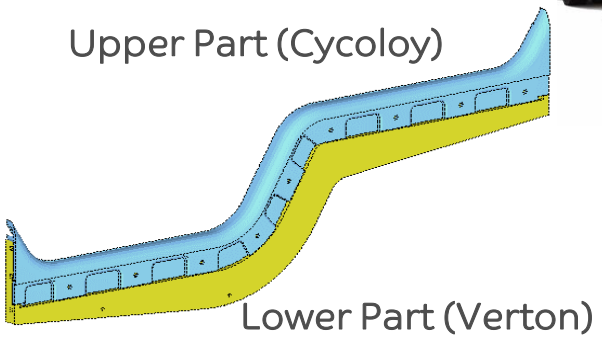
STRUCTURAL

APPLICATION	GRADE	DESCRIPTION	FEATURES
Pedal	LNP VERTON™ NV008E compound	PC/ABS, long glass fiber	PC/ABS is paint-able (no primer); Metal replacement; Cost reduction; High impact resistance

WEATHERABILITY

APPLICATION	GRADE	DESCRIPTION	FEATURES
Sun Visor	COPOLYMER SLX2271T resin	Low viscosity PC copolymer blend with enhanced UV stabilization and added release agent. V2 @1mm rated.	Transparent, uncoated, UV and scratch resistant. Available in transparent and tinted colors.

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
STRUCTURAL SOLUTION – TRUCK PEDAL



LNP VERTON™ NV008E compound
PC/ABS 40% Long Glass Fiber, easy molding

Offering a balance of stiffness and impact properties

FEATURE	BENEFIT
LGF needed for stiffness/strength for metal replacement	Metal replacement
1MM Flex modulus	High impact resistance
Dimensional stability	Part integrity

LNP™ COMPOUNDS & SABIC COPOLYMER POTENTIAL SOLUTIONS
WEATHERABILITY SOLUTION – SUNVISOR

COPOLYMER SLX2271T resin
PC Copolymer

Molded in color provides cost out vs painting. Potential to repair surface scratches via special polishing procedure.

FEATURE	BENEFIT
Unpainted application	PMMA (standard material originally specified from OEM) showed heat performance borderline and cracking at vibration test
Weatherability, Scratch, Chemical resistance according to OEM Specifications	COPOLYMER SLX2271T resin approved from OEM
Heat stability above 80° C	A fine tuning of the molds was requested: demolding improved, hot runner cooling improved
Impact and Vibration performance	Technical support for tool modification and molding was also a key success factor for setting the right processing condition and reduce the overall scrap rate

GENERAL INFORMATION

LNP™ COMPOUNDS - SUMMARY

Provider of engineering thermoplastic solutions

LNP™ compounds

Modifying and enhancing the properties of thermoplastics for the desired effects to expand the horizon of engineering applications

Structural

- Dimensional Accuracy
- High Modulus & Ductile (HMD)
- Super Structural
- Metal Replacement
- Nano molding (NMT)
- Recycle & renewable Solutions



Target Applications:
Structural parts found in Automotive, Business Machines, Appliances, Consumer Electronics, Building & Construction ...

Wear & Friction

- Noise abatement
- Lubrication
- Durability
- Low maintenance



Target Applications:
Wear / counter-wear parts in Automotive, Fluid Engineering, Business Machines, Healthcare, Consumer Electronics...

Elect. Conductive

- SR from $10E^3$ to $10E^{12}$
- Static Management
- Electronics Protection



Target Applications:
Electrostatic Discharge (ESD) safe parts in Automotive, Business Machines, E&E, Consumer Electronics, Healthcare and Industrial products...

EMI Shielding

- Wide frequency range
- Colorable
- Paintable
- No secondary process



Target Applications:
Enclosures requiring EMI / RFI shielding found in Telecom, Consumer Electronics , Safety & Security and Industrial products...

Thermal Management

- Thermal dissipation
- Dimensional stability
- Electrical conductive and electrical isolative


Target Applications:
Parts in various industries requiring heat dissipation for product performance reliability and product life-span extension.

Circuit Solutions

MID – LDS (Laser Direct Structuring)
- Selective metal plating
- High Dk, Low Df substrates

Dielectrics
- Low Df(Dielectric losses)
- High/Low Dk


Target Applications:
Base Station Phase Shifter, Antenna Housing, substrate, OIS camera...

Aesthetics & Colors

- Transparency
- Colorability
- Visual effects
- Chemical resistance


Target Applications:
All things in plastics requiring custom-colors and unique aesthetics.

LNP™ COPOLYMER RESINS - SUMMARY

Made with tough, virtually unbreakable **LEXAN™** polycarbonate

Adding new dimensions to the superior properties of LEXAN resin — a pioneering engineering thermoplastic known for its Clarity, Impact, Heat Resistance & Modulus

EXL




Low temp ductility
- Improved processing
- Chemical resistance
- Impact retention
- Heat & humidity aging
- Outdoor weathering
- Fillers & recycle

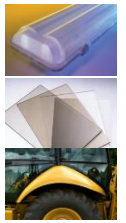
Target Applications:
Telecom, Handhelds, Mobile Phones, Motorcycle Helmets, Safety, Automotive, Outdoor electrical enclosures, Medical devices

HFD


Superior flow & ductility
- Optical clarity
- Low birefringence
- Low temperature processing
- Cycle time reduction
- High gloss filled surfaces
- Bio/green content

Target Applications:
Camera lenses, Medical housings, Safety eyewear, Consumer electronics, Appliances

SLX



UV weathering
- Clarity, color and gloss
- Toughness
- Chemical resistance
- Eliminates UV coating

Target Applications:
Lighting diffusers, OVAD fenders & hoods, Meter windows, Automotive trims, Marine helms & trims

CFR

Thin wall FR
- Clear V0 down to 1mm
- Clear 5VA down to 3 mm
- Excellent practical flow
- Br-, Cl-, P- and Teflon-free FR

Target Applications:
LED lighting, Outdoor lighting, Aerospace trims, PV converter display, fire alarms, electronics housing, medical housing

FST


Flame, smoke, toxicity compliance
- FAR 25.853a/d
- Chemical resistance
- Ductility and UV stability

Target Applications:
Aircraft interiors, Rail, Ship – Window reveals, Trims
Injection molding, extrusion, fibers

XHT /PPC


High heat resistance
- Clarity
- Metallization aesthetics & aging
- Color stability on heat aging
- Improved flow/impact compared to other high heat PC

Target Applications:
Auto bezels, Lens covers, Housings, Industrial lighting, Electrical components, Fuses, Face shields

CXT

High heat resistance
- Improved color-stability under extreme molding conditions compared to LEXAN XHT resins
- Retain other advantageous features of LEXAN XHT resins like heat, flow, impact and heat ageing

Target Applications:
Lenses (Flash, Camera, Sensors), Lighting Covers and Sensors, Films, Medical Devices

LNP™ MANUFACTURING SITES: A CONNECTED GLOBAL NETWORK





AMERICAS (8)

Tortuguita, Argentina
Campinas, Brazil
Cobourg, Canada
San Luis Potosi, Mexico
Selkirk, USA
Burkville, USA
Columbus, USA
Mt Vernon, USA

EUROPE (5)

Pontirolo, Italy
Bergen op Zoom, Netherlands
Raamsdonksveer, Netherlands
Cartagena, Spain
Thornaby, United Kingdom

ASIA (8)

Nansha, China
Chongqing, China
Shanghai, China
Chung-Ju, Korea
Baroda, India
Moka, Japan
Benoi, Singapore
Rayong, Thailand

ONE GLOBAL DELIVERY SYSTEM

Our supply chain program ensures products reach global markets effectively

APPLICATION DEVELOPMENT & SERVICE EXCELLENCE

APPLICATION DEVELOPMENT

- Part, Assembly, Tooling and Process designs
- Predictive engineering
- Chemical compatibility data/testing
- Adhesive selection and testing
- Product development, specialized needs
- Weathering testing/color technology support
- Physical property testing/temperature extremes
- Regrind analysis
- Thermo-cycle testing
- FEA support
- Product/process development lab

QUALITY & CONSISTENCY

SABIC is a quality & consistency leader in the industry:

Services available to deliver global quality & consistency including Molded Sample Xpress, Fast Formulation and Small Lots.

DELIVERY & REAL TIME UPDATES

SABIC is committed to providing our customers on-time delivery.

Cycle time reduced substantially through programs such as Lean Six Sigma.


THANK YOU

DISCLAIMER

THE MATERIALS, PRODUCTS AND SERVICES OF SABIC OR ITS SUBSIDIARIES OR AFFILIATES ("SELLER") ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (I) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (II) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER'S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller's materials, products, services or recommendations for the user's particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.