

Product Information/Technical Data Sheet

Product Name: VENLON 6GB (Cast Nylon)

Trade name:	Venlon 6GB
Designation:	Cast Nylon
Colour:	Black

Product Description

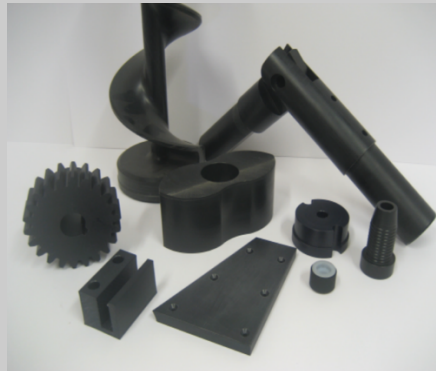
This black cast grade, produced by an anionic polymerization casting process and carbon fillers, demonstrates similar characteristics to PA 66. Cast materials contain significantly lower stress levels combined with high strength, good creep and wear resistance resulting in great dimensional stability when machining. It offers the possibility of manufacturing large-sized stock shapes as well as custom castings which require only minimal machining. With material being more dimensionally stable comparing to the one of widely used polyolefin, it can be used for a much closer tolerance.

Applications

Nylon is used for a wide range of industrial components both for Original Equipment Manufacture and maintenance. Some examples: wear pads, support and guide wheels, conveyor rollers, tension rollers, pulleys and pulley linings, cams, hammer heads, scrapers, gear wheels, sprockets, feed screws, star wheels, chopping boards, insulators, bearing slides, roller sleeves, impact blocks, full & segmented gears, outrigger pads, pump seats, gate rollers & support wheels, etc.

Other Material Properties

It combines high strength, stiffness and hardness with good creep and wear resistance, heat ageing properties, very good impact properties and machinability. As well as high tensile strength and high modulus of elasticity.



Key Features and Benefits

- High impact resistance
- Good load bearing properties
- Excellent vibration resistance
- Resistance to brittleness & deterioration
- Good dimensional stability
- Very good wear & abrasion resistance

Sheets – Thickness

Sheets – Size

6mm to 60mm—2440mm x 1220mm
 6mm to 100mm—1220mm x 610mm
 Note: Specialty sheet size and blocks are available on request ex o/seas

Venlon 6GB Rod

Outside Diameter: 25mm to 500mm

Venlon 6GB Tube

(Non-stock items available on request)

Physical Properties

	Method of verification	Unit	
Specific Gravity	D792	g/cm ³	1.15—1.17
Tensile Strength	D638	psi	10,000 – 13,500
Tensile Elongation	D638	%	20 - 55
Tensile Modulus	D638	psi	400,000 – 550,000
Compressive Strength	D695	psi	13.500 – 16.000

Compressive Modulus	D695	psi	325,000 – 400,000
Flexural Strength	D790	psi	15,000 – 17,500
Flexural Modulus	D790	psi	420,000 – 500,000
Shear Strength	D732	psi	10,000 – 11,000
Notched Izod impact	D256	ft.lbs/in.	0.7–0.9
Hardness Rockwell	D785	R	115 - 125
Hardness Shore	D2240	D	78 - 83
Melting Point	D789	°F	450 +/- 10
Coefficient of linear Thermal Expansion	D696	in./in./°F	5.0 x 10 ⁻⁵
Deformation under load	D621	%	0.5 – 2.5
Deflection Temperature 264 psi	D648	°F	200—400
66 psi	D648	°F	400—430
Continuous Service Temperature		°F	230
Intermittent Service Temperature		°F	330
Coefficient of Friction: Dynamic	D1894	%	0.22
Water Absorption 24 Hours	D570	%	0.5 – 0.6
Saturation	D570	%	5.0 – 6.0
Dielectric Strength	D149	v/mil.	500 - 600
Dielectric Constant 60 Cycles	D150		3.7
1,000 Cycles	D150		3.7
100,000 Cycles	D150		3.7
Compliance	FDA USDA 3A UL 94 HB		Not Compliant Not Compliant Not Compliant

Please note:
1g/cm³=1000kg/m³
1MPa=1N/mm²
1KV/mm=1MV/m

Precautions for safe handling and use

If material is released or spilled: Not applicable to bulk casting.

Waste disposal method: Dispose of in landfill in compliance with all federal, state, and local regulations.

Handling and storage: Handle heavier castings either with lifting equipment or sufficient manpower. Store in dry place away from water.

Other instructions: Any other appropriate and necessary precautions as determined by specific manufacturing use or uses.

Health information

Route of entry

Inhalation (Breathing): Bulk casting-no. Dusts, particles, and chips can be generated during machining operations on cast shapes.

Inhalation of dust is possible; large particles could conceivably block air passages.

Ingestion (Swallowing): Bulk castings-no. Generated dust, particles, and chips could be swallowed.

Acute Effects of exposure

Inhalation: Mechanical obstruction

Skin and eyes: Mechanical irritation or scratching

Chronic effects of exposure: None Known

Emergency and first aid procedures

Inhalation: Use emergency first aid techniques to remove obstruction or to resume breathing and/or call for medical help immediately.

Ingestion: Use first aid techniques, including coughing, to remove obstruction and/or call for medical help.

Skin contact: Wash with soap and water, treat by first aid techniques.

Eye contact: Wash eyes at the eye-wash station and/or get medical help.

Control Measures:

Ventilation: General exhaust or local exhaust at machining area to keep dust below 15mg./cu.m. (OSHA TWA limit for nuisance dust).

Respiratory protection: If dust generated in use (such as machining) exceeds the TWA of 15 mg.cu.m. Wear a NIOSH approved dust mask.

Eye protection: Wear safety glasses or a face shield in workplace.

Protective gloves: Wear gloves for gripping and to prevent scratches.

Other protective equipment: As appropriate for the specific use.

Hygienic practices: Wash hands prior to eating, drinking, or smoking.

Work practices: When handling heavy castings, use proper lifting techniques, e.g., lift slowly with legs in squat position.

Regulatory and HMIS information

SARA 313 NOTIFICATION: This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR parts 372.

HMIS HAZARD CODES: HO F1 RO

THIS MSDS HAD BEEN MADE IN ACCORDANCE WITH THE EXACT INFORMATION AND VALUES FROM OUR PRINCIPLE SUPPLIER OF THIS PRODUCT— CAST NYLONS LIMITED.

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