# TECHNYL eXten® D 219CR V33 NATURAL

TECHNICAL DATA SHEET

Revised: August, 2018

TECHNYL eXten® D 219CR V33 Natural (XD 2131) is a grade based on polyamide blend of polyamide 6.10 and polyamide 66, reinforced with 33% of glass fiber, heat stabilized with organic stabilizers, for injection moulding.

## GENERAL

| | | |
|---|---|---|
| Material Status | • Commercial: Active | |
| Availability | • Africa & Middle East<br>• Asia Pacific<br>• Europe | • Latin America<br>• North America |
| Filler / Reinforcement | • Glass Fiber, 33% Filler by Weight | |
| Additive | • Heat Stabilizer | • Hydrolysis Resistant |
| Key Benefits | • High Chemical Resistance<br>• Good Dimensional Stability<br>• Good Flow<br>• Very High Glycol Resistance<br>• Heat Stabilized (Organic) | • Hydrolysis Resistant<br>• Low Moisture Absorption<br>• High Road Salt Resistance<br>• Good Surface Finish<br>• Weldable |
| Applications | • Automotive applications<br>• Cooling circuit component<br>• Expansion tanks | • Radiator end tanks<br>• Thermostat housings |
| Certification/Compliance | • EC 1907/2006 (REACH) | |
| RoHS Compliance | • RoHS Compliant | |
| Colors Available | • Natural Color | |
| Forms | • Pellets | |
| Processing Method | • Injection Molding | |
| Resin ID (ISO 1043) | • PA610+PA66-GF33 | |

## PROPERTIES

Typical values of properties are for Natural grades

| Physical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow | 1.0 | | % | |
| Flow | 0.40 | | % | |
| Water Absorption | | | | ISO 62 |
| 24 hr, 23°C | 0.30 | | % | |
| Saturation, 23°C | 3.6 | | % | |
| Equilibrium, 23°C, 50% RH | 1.3 | | % | |
| Density | 1.35 | | g/cm³ | ISO 1183/A |

| Mechanical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Tensile Modulus (23°C) | 11000 | 8150 | MPa | ISO 527-2/1A |

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| Mechanical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Tensile Strength | | | | |
| Break, 23°C | | 135 | MPa | ASTM D638 |
| Break, 23°C | 190 | 135 | MPa | ISO 527-2/1A |
| Tensile Elongation | | | | |
| Break, 23°C | 3.1 | 5.4 | % | ASTM D638 |
| Break, 23°C | 3.0 | 5.3 | % | ISO 527-2 |
| Flexural Modulus (23°C) | 9900 | 7500 | MPa | ISO 178 |
| Flexural Stress (23°C) | 285 | 225 | MPa | ISO 178 |
| Charpy Notched Impact Strength (23°C) | 10 | 13 | kJ/m² | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C) | 85 | 90 | kJ/m² | ISO 179/1eU |
| Notched Izod Impact Strength (23°C) | 10 | 15 | kJ/m² | ISO 180 |
| Unnotched Izod Impact (Area) (23°C) | 100 | 100 | kJ/m² | ASTM D256 |

| Thermal | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Heat Deflection Temperature | | | | |
| 0.45 MPa, Unannealed | 223 | | °C | ISO 75-2/Bf |
| 1.8 MPa, Unannealed | 215 | | °C | ISO 75-2/Af |
| Melting Temperature | 220 to 260 | | °C | ISO 11357-3 |

## DISCLAIMER

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and it is in no way binding. This information must on no account be used as a substitutive for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANDABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document, and Solvay is at their disposal to supply any additional information.

## SAFETY INFORMATION

Detailed information regarding safety are available on the safety data sheet (SDS). SDS is sent with the first material order or available by contacting our customer services

## REGULATIONS COMPLIANCE

This product is not intended to be used for the following regulated market: food contact, drinking water, toys, cosmetics or medical devices.

This grade complies with ROHS Directive 2011/65/EU and 2015/863 as amended.

Grades produced or imported in Europe comply with REACH directive 1907/2006/EC as amended.

## CUSTOMER SERVICES

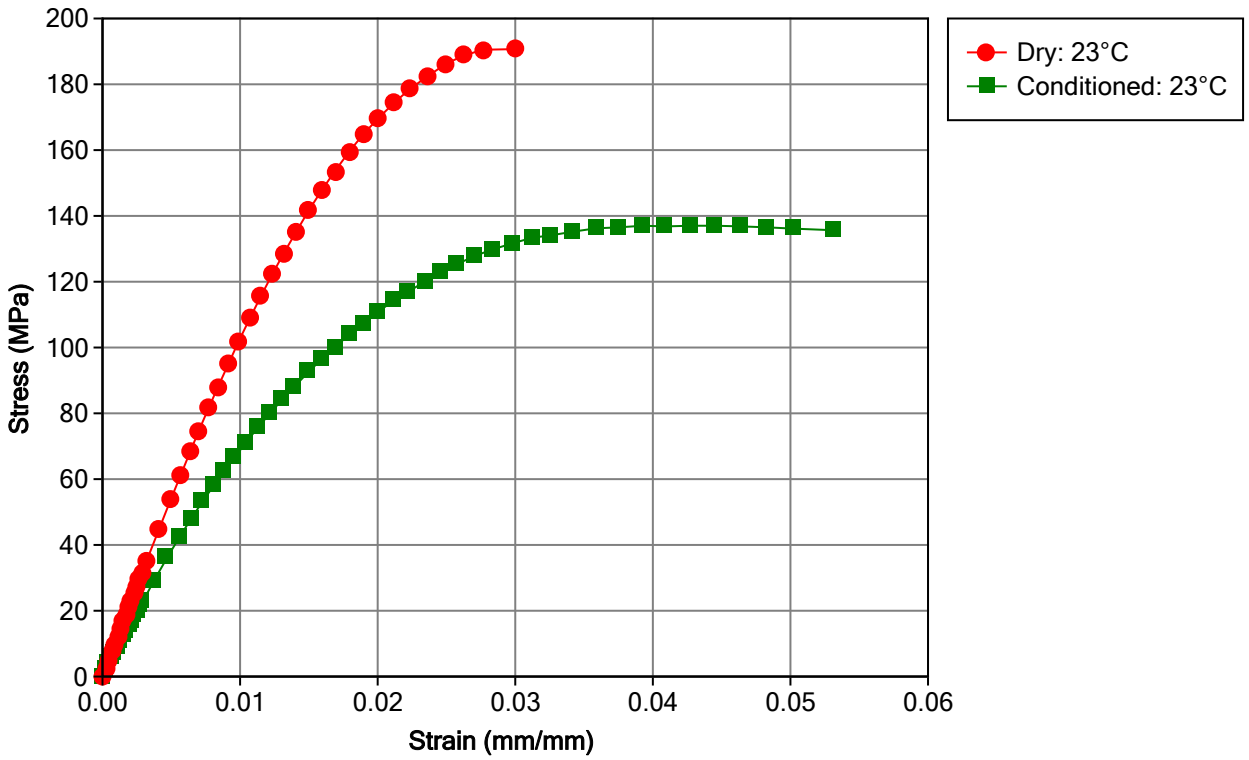
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

You can find more information on Solvay Product range on our internet product finder at the following address: http://www.technyl.com

## MULTIPOINT DATA

Isothermal Stress vs. Strain (ISO 11403-1)



**Notes**

Typical properties: these are not to be construed as specifications.

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