TECHNYL STAR® S 52G1 MX25 GREY 2408

TECHNICAL DATA SHEET

Revised: February, 2019

TECHNYL STAR® S 52G1 MX25 Grey 2408 is a grade based on a non-phosphorous and non-halogenated flame retardant system and on a patented high flow polyamide 6 resin (TechnylStar), reinforced of 25% of mineral filler, for injection moulding. This grade offers a high fluidity as well as a robust glow wire resistance.

GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East	• Europe
Filler / Reinforcement	• Mineral, 35% Filler by Weight	
Additive	• Heat Stabilizer	
Key Benefits	• Arc Resistance • High Flow • Glow Wire Resistance	• Good Mold Release • Superior Surface Finish • UL 94 V0 at 0.8 mm
Applications	• Circuit Breaker • Electrical protection devices	• Electrical/Electronic Applications
Certification/Compliance	• EC 1907/2006 (REACH)	
Colors Available	• Black • Grey	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6-MD25 FR(30)	

PROPERTIES

Typical values of properties are for Grey grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	0.70		%	
Flow	0.60		%	
Water Absorption (24 hr, 23°C)	1.1		%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6800	4500	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	70	55	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.0	4.0	%	ISO 527-2
Charpy Notched Impact Strength (23°C)	3.0	6.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	30	50	kJ/m²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	3.5		kJ/m²	ISO 180
Unnotched Izod Impact Strength (23°C)	28		kJ/m²	ISO 180/1U

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Thermal	Dry	Conditioned	Unit	Test Method
Melting Temperature	220		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (Solution A)	600		V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.8 mm • •	V-2 V-0			
1.6 mm	V-2			
3.2 mm	V-2			
Glow Wire Flammability Index				IEC 60695-2-12
1.6 mm	960		°C	
3.2 mm	960		°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.8 mm	725		°C	
1.6 mm	960		°C	
Oxygen Index	29		%	ISO 4589-2

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
Rear Temperature	230 to 235	°C
Middle Temperature	235 to 240	°C
Front Temperature	240 to 245	°C
Mold Temperature	60 to 90	°C

Injection Notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point mini -20°C. Recommended time 2-4h

Injection Advice:

- All reinforced, flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment. These issues may be magnified by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Solvay recommends you adhere to the processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retardant compounds, Solvay advises you to use a steel with high chromium and high carbon content (having a minimum concentration of 16% Chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds' processing, please refer to your equipment manufacturers. In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.
- The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

DISCLAIMER

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.

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

CUSTOMER SERVICES

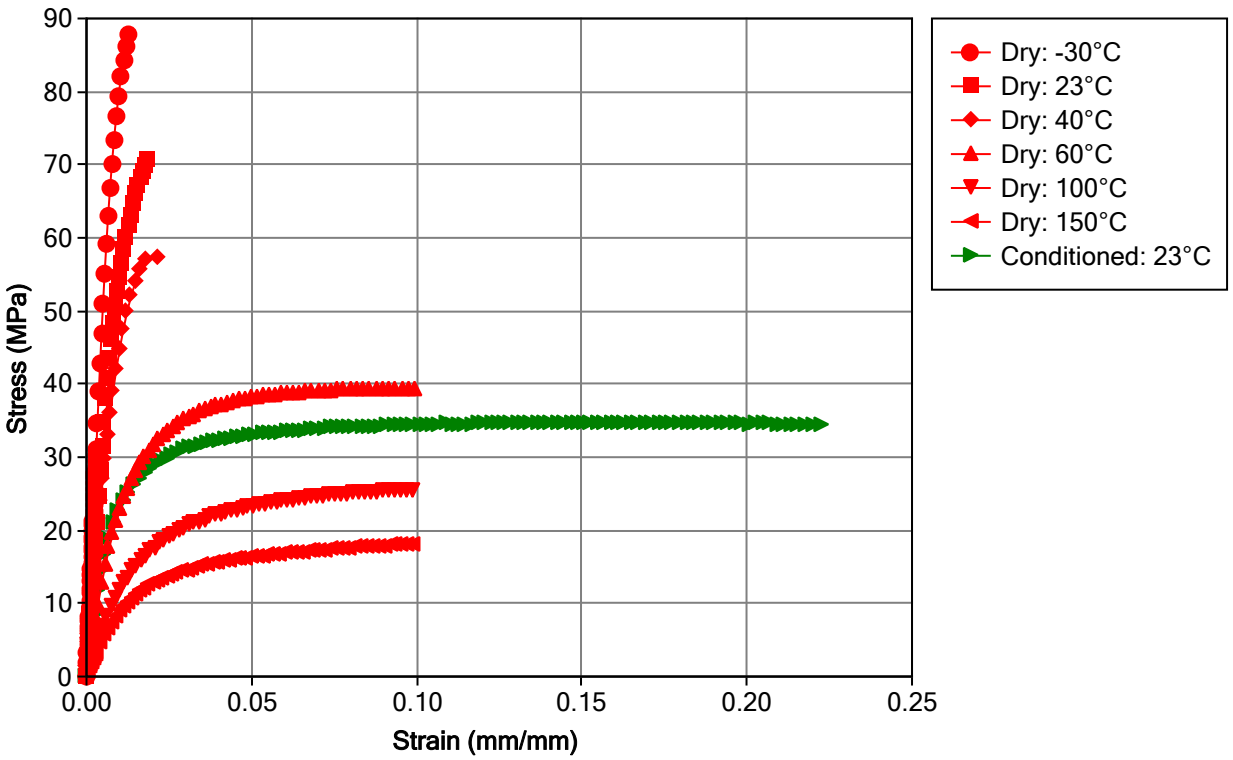
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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.