PIPE™
SNUG
No point pointing

PipeSnug & FlueSnug Technical Data Sheets

Jan 2021

Snug Solutions Ltd.

Contents

Air Tightness and Heat Loss

Following tests performed by Enertek International using average UK weather conditions (wind speed and temperature). Tests carried out using FlueSnug on 152mm core-drilled hole, with wall components – external brickwork (100mm), 100mm of insulation in the cavity, 100mm internal concrete blockwork (coated iwith 15mm of plaster).

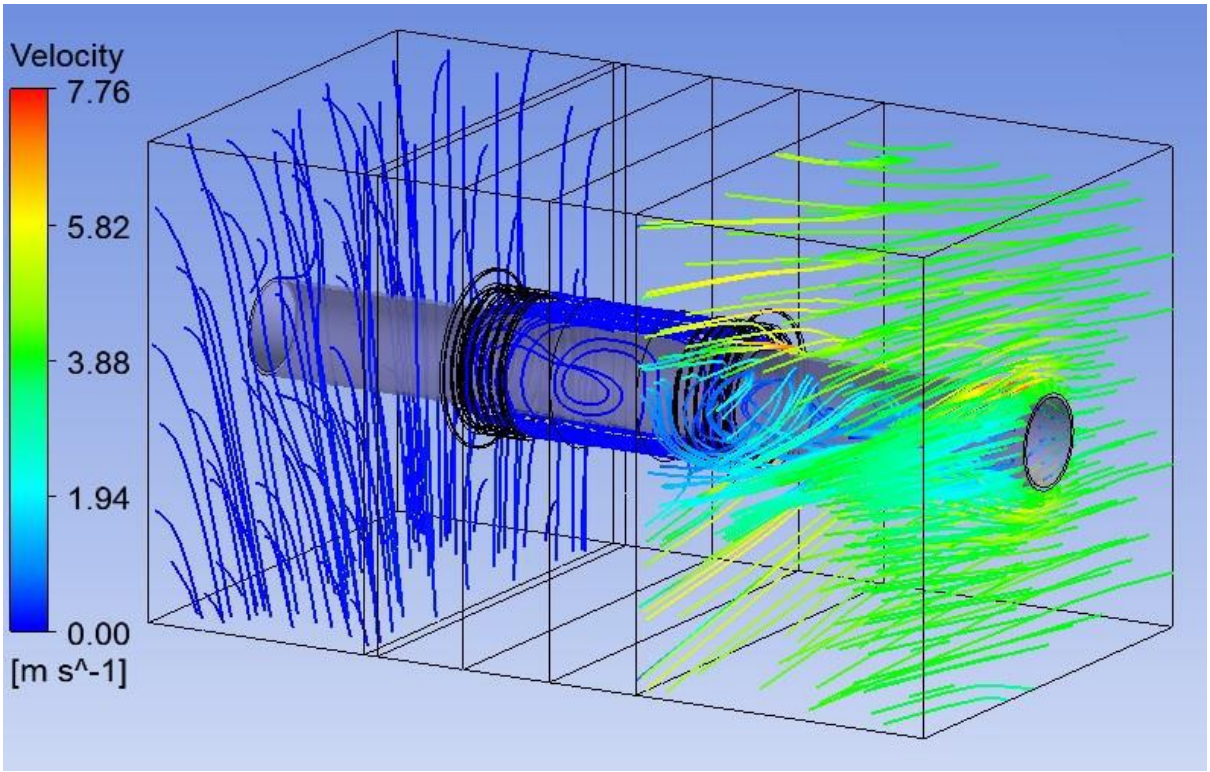


Figure 1 Predicted path lines of the air coloured by the velocity magnitude, cross-sectional view

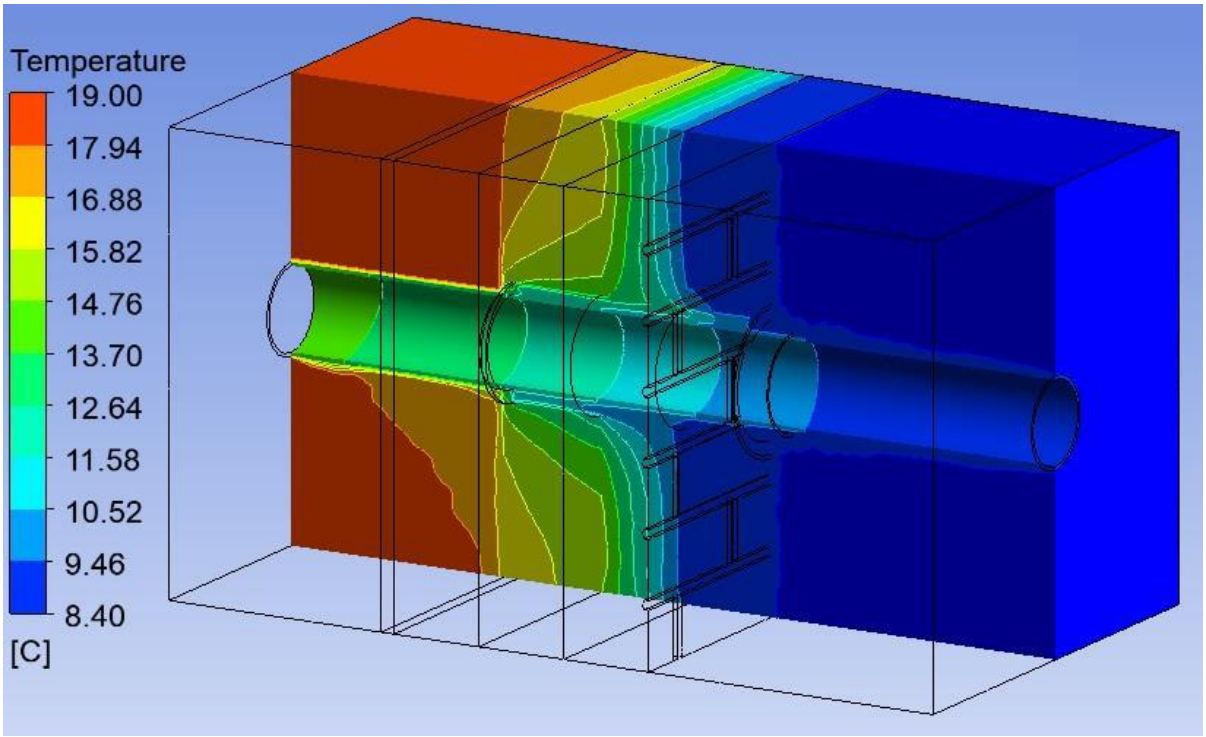
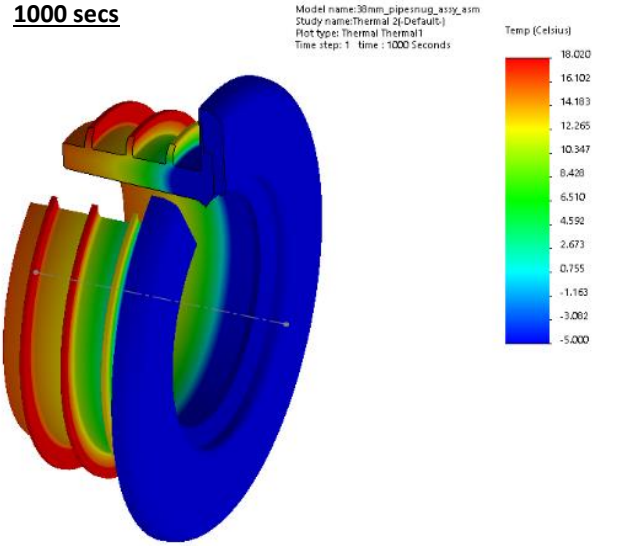


Figure 2 Predicted temperature field inside the wall as well as in the air, cross-sectional view

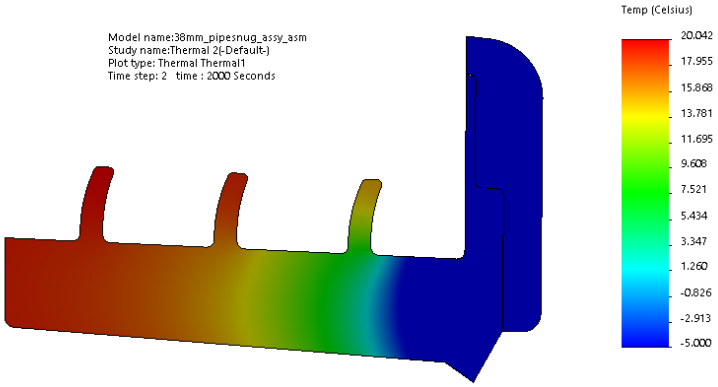
Following analysis performed by Heat Engineer Software Ltd with their heat loss calculation software, using methods from the Chartered Institution of Building Services Engineers (CIBSE) - The Domestic Heating Design Guide 2014 and EN 12831. Tests were carried out with an internal room temperature of 21C and external temperature of -5C.

Tested through periods of 1000 seconds each and up to 9000 seconds (2.5 hours) the maximum temperature of the components did not exceed 19C. The cold air from outside does not penetrate the cavity around the service penetration.

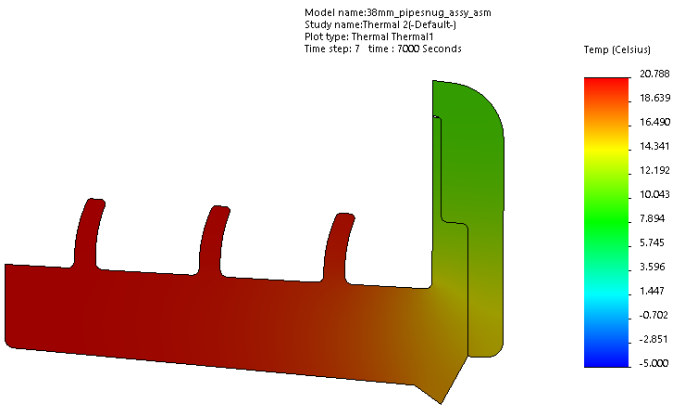
1000 secs



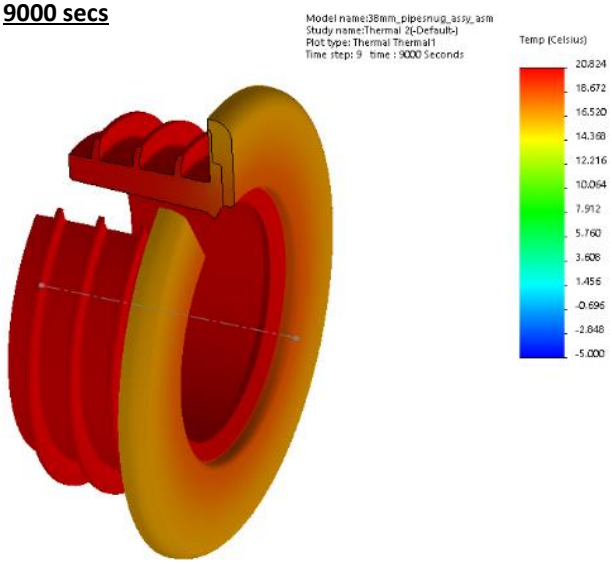
2000 secs



7000 secs



9000 secs



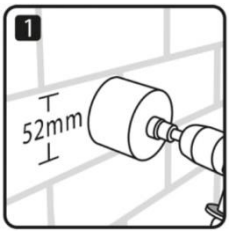
PipeSnug 32mm

- Designed to fit 32mm 90 degree or swept solvent weld elbow bends (all UK manufacturer brands)
- Can be used both internally and externally
- For use with solvent weld waste pipe systems and boiler condensate pipes when fed into larger diameter 32mm waste to go externally.

Core Drill Size	L (mm)	W (mm)	H (mm)	Wgt (kg)	Material (Part 1)	Material (Part 2)	Colours Available
52mm	75	75	28	0.024	Polypropylene with UV 91872 hindered amine light stabiliser (HALS) additive	TPE (thermoplastic elastomer) with heat and UV stabiliser	Black, white, grey, olive grey

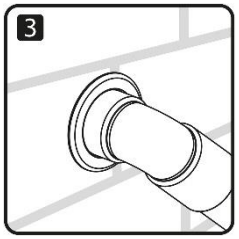


Installation Instructions

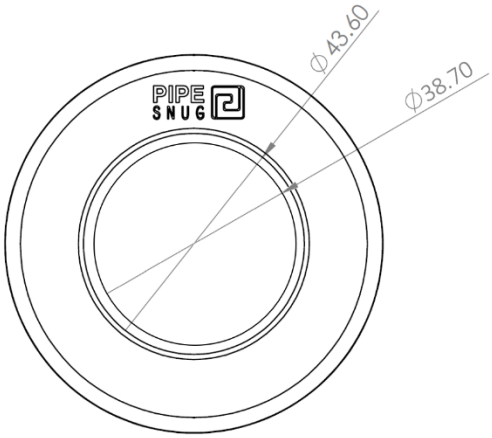


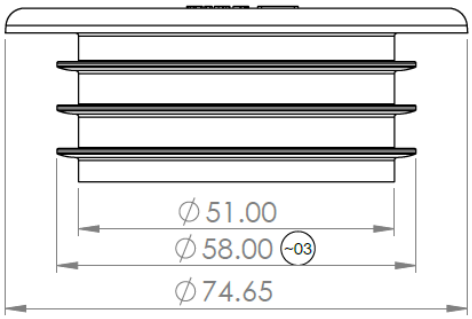
Core drill hole using standard 52mm core

Insert PipeSnug into core-drilled hole



Connect up pipework in usual way





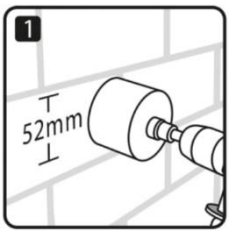
PipeSnug 40mm

- Designed to fit 40mm 90 degree or swept solvent weld elbow bends (all UK manufacturer brands)
- Can be used both internally and externally
- For use with solvent weld waste pipe systems and boiler condensate pipes when fed into larger diameter 32mm waste to go externally.

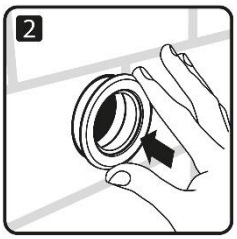
Core Drill Size	L (mm)	W (mm)	H (mm)	Wgt (kg)	Material (Part 1)	Material (Part 2)	Colours Available
52mm	75	75	28	0.018	Polypropylene with UV 91872 hindered amine light stabiliser (HALS) additive	TPE (thermoplastic elastomer) with heat and UV stabiliser	Black, white, grey, olive grey



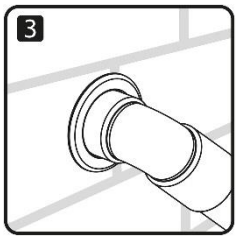
Installation Instructions



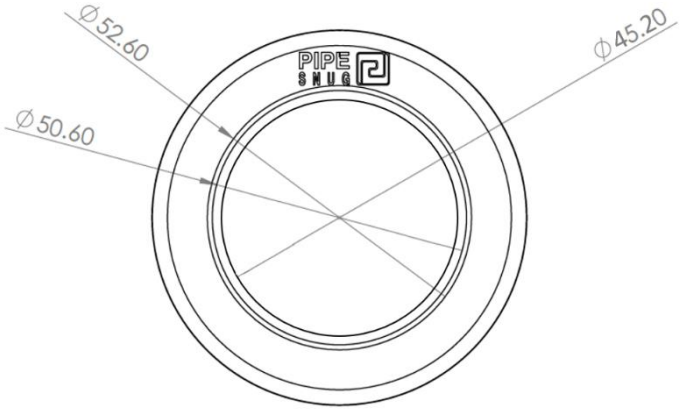
Core drill hole using standard 52mm core

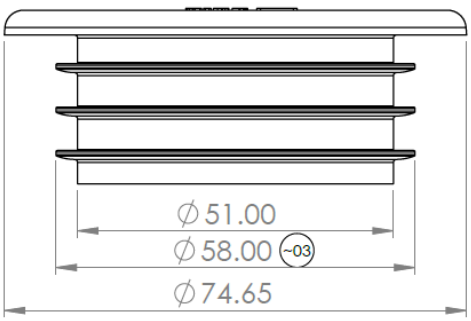


Insert PipeSnug into core-drilled hole



Connect up pipework in usual way





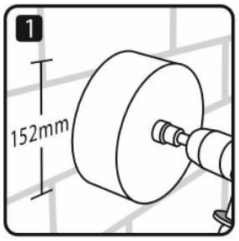
PipeSnug 110mm

- Designed to fit 110mm solvent weld and push-fit fittings - branches, bends, etc (all UK manufacturer brands)
- Can be used both internally and externally
- For use with solvent weld and push fit soil waste pipe systems.

Core Drill Size	L (mm)	W (mm)	H (mm)	Wgt (kg)	Material (Part 1)	Material (Part 2)	Colours Available
152mm	182	182	63	0.144	Polypropylene with UV 91872 hindered amine light stabiliser (HALS) additive	TPE (thermoplastic elastomer) with heat and UV stabiliser	Black, white, grey, olive grey

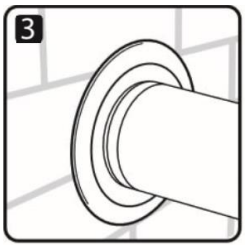


Installation Instructions

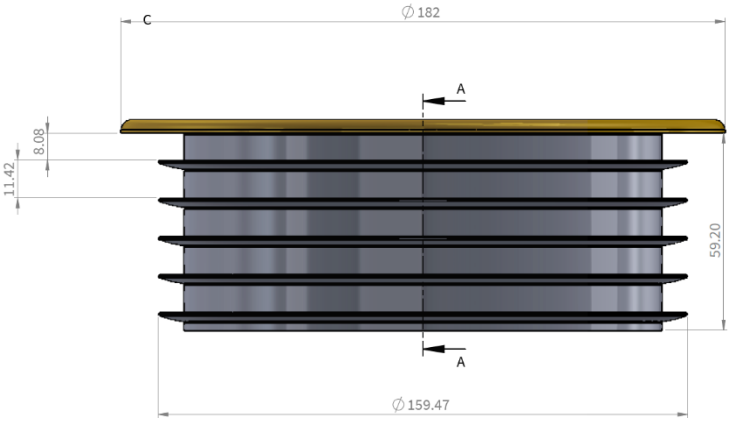


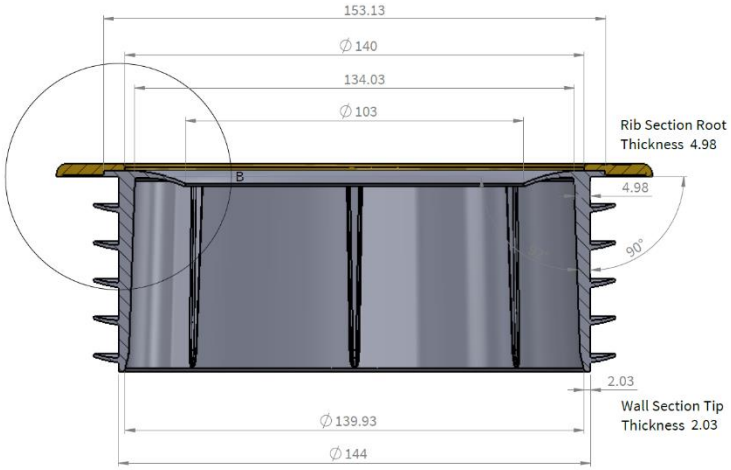
Core drill hole using standard 152mm

Insert PipeSnug into core-drilled hole



Connect up pipework in usual way



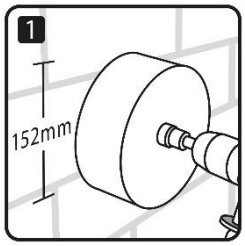


FlueSnug 100mm

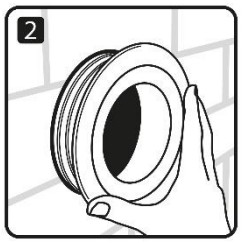
- Designed to fit 100mm boiler flues
- Can be used both internally and externally
- Endorsed by Worcester Bosch, Ideal Heating and other leading boiler manufacturers.

Core Drill Size	L (mm)	W (mm)	H (mm)	Wgt (kg)	Material (Part 1)	Material (Part 2)	Colours Available
152mm	182	182	63	0.144	Polypropylene with UV 91872 hindered amine light stabiliser (HALS) additive	TPE (thermoplastic elastomer) with heat and UV stabiliser	Black, white, grey, olive grey

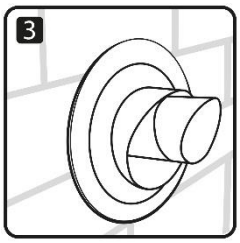
Installation Instructions



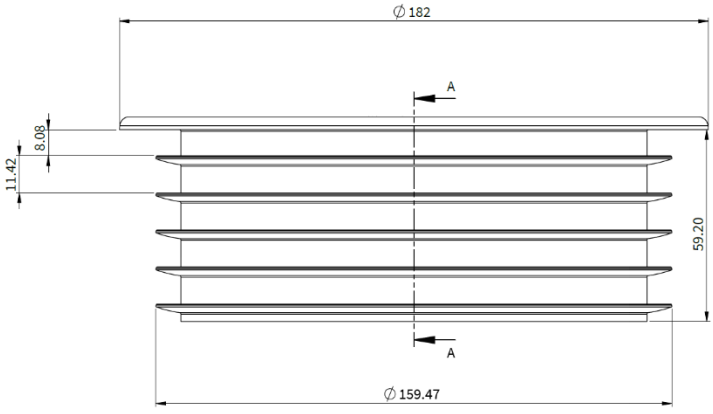
Core drill hole using standard 152mm

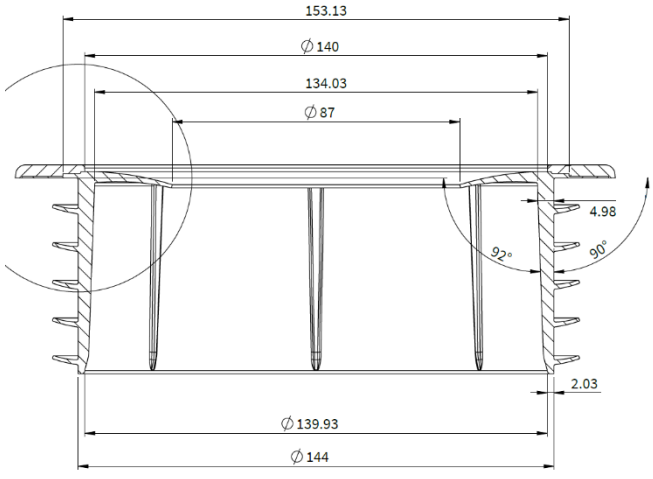


Insert PipeSnug into core-drilled hole



Connect up pipework in usual way





Materials Technical Data

Polypropylene BJ700

Contains additional heat and UV stabiliser

General			
Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet (English)		
UL Yellow Card [2]	• E140331-222896		
Search for UL Yellow Card	• Hanwha Total Petrochemical Co., Ltd.		
Availability	• Asia Pacific	• North America	
Features	• Food Contact Acceptable • Good Processability	• High Impact Resistance • High Stiffness	• Impact Copolymer
Uses	• Battery Cases • Containers	• Electrical Parts • Electrical/Electronic Applications	• Industrial Parts • Toys
Agency Ratings	• FDA 21 CFR 177.1520		
Processing Method	• Injection Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.910 g/cm³	0.910 g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	25 g/10 min	25 g/10 min	ASTM D1238
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Strength (Yield)	4120 psi	28.4 MPa	ASTM D638
Tensile Elongation (Break)	> 150 %	> 150 %	ASTM D638
Flexural Modulus	192000 psi	1320 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256
-4°F (-20°C)	0.73 ft·lb/in	39 J/m	
32°F (0°C)	0.92 ft·lb/in	49 J/m	
73°F (23°C)	1.5 ft·lb/in	78 J/m	
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness (R-Scale)	85	85	ASTM D785
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	221 °F	105 °C	

Thermoplastic Elastomer

Contains additional heat and UV stabiliser

General			
Material Status	• Commercial: Active		
Literature [1]	• Processing - Extrusion (English) • Processing - Injection Molding (English) • Technical Datasheet (English)		
Availability	• Europe	• North America	
Filler / Reinforcement	• Mineral		
Additive	• Heat Stabilizer	• UV Stabilizer	
Features	• Chemical Resistant • Good Colorability • Heat Stabilized	• High Elasticity • Ozone Resistant • Recyclable Material	• UV Resistant • UV Stabilized • Weather Resistant
Uses	• Appliances • Automotive Applications	• Consumer Applications • Industrial Applications	• Personal Care • Toys
Processing Method	• Injection Molding	• Multi Injection Molding	

Physical	Nominal Value Unit	Test Method
Density	1.18 g/cm³	ISO 1183/A
Elastomers	**Nominal Value Unit**	**Test Method**
Tensile Stress		ISO 37
100% Strain	2.40 MPa	
300% Strain	3.40 MPa	
Tensile Stress (Break)	8.40 MPa	ISO 37
Tensile Elongation (Break)	660 %	ISO 37
Tear Strength - Across Flow	43 kN/m	ISO 34-1
Compression Set		ASTM D395B
23°C, 72 hr	30 %	
70°C, 22 hr	55 %	
Hardness	**Nominal Value Unit**	**Test Method**
Shore Hardness (Shore A, 3 sec)	75	ISO 868
Thermal	**Nominal Value Unit**	
Brittleness Temperature	-55.0 °C	
Service Temperature		
Dynamic	90 °C	
Static	135 °C	