



smartLite® 681



INTRODUCTION

The smartLite® technology offers an unrivalled combination of performance, aesthetics and lightweight.

smartLite® 681 has been developed for extrusion applications, achieving densities between 0.40 – 0.60 g/cc, but is also suitable for injection moulding processes achieving densities between 0.50 – 0.60 g/cc depending on processing conditions.

CHARACTERISTICS

- Unique combination of **lightweight, performance and aesthetics**
- **Tactile feel** through its ability to reproduce detailed and fine surface textures, resulting in excellent grip characteristics
- **Long lasting performance** and high levels of durability, normally only associated with much heavier materials
- **Resistance** to microbial attack through fundamental system design
- **Robust and reliable** processing

TYPICAL PROPERTIES

Property	Method	Unit	Value
Density	DIN 53479	g/cm ³	0.6
Hardness	DIN 53505	Shore A	80
Abrasion	DIN 53516	mg	< 100
Abrasion after hydrolysis	7 days/70°C	% retention	> 90
Mold shrinkage		%	0.3-0.5
Tear Resistance	DIN 53515	N/mm	25
Elongation@break	DIN 53504	%	450
Tensile strength	DIN 53504	mPa	10

PRODUCT SELECTION

Before selecting this product it is necessary that the user ensures its performance will meet all operational and end use requirements. Should changes be contemplated in method of application, materials, service conditions or any other then further checks are strongly recommended.

The type and quantity of any colourant or additive used may have an effect on processing and/or properties.

COMPONENT ASSEMBLY

smartLite® products can be easily combined with other products such as thermoplastic polyurethane through a variety of assembly methods and does not normally require the use of primers, glues or post-treateners.

Using standard adhesives, high bond strengths to upper materials can be obtained with minimal surface preparation of the unit sole.

RECYCLABILITY

smartLite® products can be recycled. It is recommended to dry regrind prior to use. The maximum recommended level of regrind in smartLite® 681 is 30%. Contact the smartLite® Design and Technology Centre for advice if considering use at higher levels.

SUPPLY AND STORAGE

smartLite® products are supplied in the form of pellets coated with additives, in 25 kg moisture guarded boxes and shrinkage-wrapped. smartLite® may be stored for 24 months from the date of manufacture sealed in manufacturer's original packaging.

HEALTH AND SAFETY ADVICE

Before undertaking any trials with this technology it is essential that all personnel are aware of the necessary precautions that must be taken. These are detailed in the relevant Safety Data Sheets that will be provided by Huntsman.



smartLite® 681



ESSENTIAL MOULDING MACHINE REQUIREMENTS

- Accurate machine temperature control
- Machine hydraulic pressure > 160 Bar
- Non-return valve on hydraulics
- Shut-off nozzle
- Ability to set back pressure
- Mould temperature control

For more detailed information please contact your smartLite® Design and Technology Centre.

MOULD DESIGN

Correct mould design will ensure optimum performance and processing of smartLite® technology.

For recommendations and advice on mould design please consult your smartLite® Design and Technology Centre.

TYPICAL INJECTION PARAMETERS

TEMPERATURE PROFILE (°C)	
Feed zone	165-175
Compression zone	170-190
Metering zone	170-190
screw ?	170-190

TYPICAL EXTRUSION PARAMETERS

TEMPERATURE PROFILE (°C)	
Feed zone	25-40
Barrel	160-180
Adapter	160-180
Die head	160-180
Nozzle	160-180

The smartLite® Design and Technology Centre is located at:

Huntsman (Europe) BVBA
Everslaan 45
B-3078 Everberg
Belgium
Tel: (32) 2 758 9874
Fax: (32) 2 758 9018
info@smartlite.biz

www.smartlite.biz

The manufacture of smartLite® and polymer foams is the subject of granted patents and patent applications; freedom to operate patented processes is not implied by this publication. The information and recommendations in this publication are to the best of our knowledge information and belief accurate at the time of publication. Nothing herein is to be construed as a warranty, express or otherwise. In all cases, it is the responsibility of users to determine the applicability of such information of the suitability of any product for their own particular purpose.

All sales of this product shall be subject to Huntsman LLC and/or its subsidiaries' standard conditions of sale. Huntsman Polyurethane's is a business group of Huntsman Chemicals LLC.

smartLite® is a registered trademark of Huntsman International LLC.