

1. Introduction

SMARTBoard™ is a rigid polyurethane foam tooling material, supplied with a range of densities and in panels or sheets of different thickness.

SMARTBoard™ ML 300 is a medium density variant with a nominal density of 300 kg/m³.

The main features of SMARTBoard™ ML 300 are:-

- Easily workable
- Low dust generation when machining/milling – creates shavings
- Fine surface structure
- Good dimensional stability

2. Applications

SMARTBoard™ ML300 can be used in applications where users require a stable and consistent rigid board product. It is most suited to styling applications, although it can also be used for less demanding modelling and tooling applications.

- Rapid Prototyping and Mould-Making
- Marine/Boat-building
- Foundry Pattern Making
- Design and Model-Making

3. Typical Properties

Property	Units	Test Method	Results
Density	ISO 845	g/cm ³	0.35
Hardness Shore D	ISO 868		30 - 35
Compressive strength	ISO 604	MPa	6 - 8
Flexural strength	ISO 178	MPa	8 - 10

4. Working safely with SMARTBoards

All polyurethane materials present certain hazards, and due care must be taken to ensure safe working practises are followed when using the materials. Failure to follow safe working practise when dealing with polyurethane materials can result in harm.

Some sensible guidelines for working safely with SMARTBoard materials include, but are not limited to the following.

- i) You must read and understand the MSDS for the materials, ensuring that you follow the guidelines as indicated for your process. You must carry out an appropriate COSHH/risk assessment for the process you are carrying out. Useful guidance can be found at www.hse.gov.uk/risk/index.
- ii) Although the material is stable and inert, measures can still be taken to minimise risk:-
 - Store in a location free from ignition hazards such as open flames, cutting and welding torches, high surface temperature heaters or other forms of direct radiant heat.
 - Ensure stability of stack and provide adequate aisle space for access between stacks.

Description

Rigid, Medium density
Polyurethane Styling
Foam

Form

Rectangular board of
varying thickness

Density

~300 kg/m³

Colour

Red

Available Thicknesses*

50mm
100mm
150mm
200mm

*Other sizes available
on request

- iii) The primary issue when working with polyurethane tooling board will be the dust generated when machining. Your COSHH/risk assessments should take this and the associated hazards into account.
- iv) Because of the potential for a dust hazard when working with SMARTBoard, we advise the use of PPE:-
 - **Safety Goggles** to prevent eye irritation
 - **Dust Mask (P3 type)** to prevent dust inhalation
 - **Gloves**
- v) If the amount of dust generated is significant or if the material is to be worked on in a confined space, then it is advisable to use ventilation or local extraction.

If in doubt, contact your Mouldlife representative who
can put you in touch with experts who can assist.

5. Handling and Storage

The material must be stored flat in dry conditions. Before use it should be conditioned for 1-2 days at 20-25°C.

For detailed information and advice please refer to the current Material Safety Data Sheet.

6. Cautionary Notes and Disclaimer

The data contained herein are furnished for informational purposes only and are believed to be reliable.

However, Mouldlife Ltd does not assume responsibility for any results obtained by persons over whose methods Mouldlife Ltd has no control.

It is the user's responsibility to determine the suitability of Mouldlife Ltd products, or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Mouldlife Ltd's products.

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