

**HOLDEN**

Holden Limited
Engineering Department

MATERIAL SPECIFICATION

NUMBER : HN 2407
SHEET : 1 of 6
RELEASE : November, 2002
REVISION : June, 2003

NAME: ADHESIVE-URETHANE-TWO PART

1. MATERIAL

This specification covers the performance requirements for two part urethane suitable for bonding moulded ABS to modified PPO.

This material replaces HN 2186.

2. REFERENCES

ASTM D3163	HN 0241	HN 1000	HN 2186
ASTM D2196	ASTM D1475	ASTM D2240	GM3629M

3. MATERIAL AND EQUIPMENT REQUIRED

3.1 ABS and PPO coupons approximately 25 x 100 x 2.5 mm.

3.2 Suitable bonding fixture.

3.3 Water soak chamber capable of maintaining 54 ± 2 °C.

3.4 Universal Tensile Testing Machine capable of measuring loads at an accuracy of 1%.

4. REQUIREMENTS

4.1 Physical Properties (uncured Adhesive System)

4.1.1 The adhesive and bonding method must be compatible with all production systems. Properties such as viscosity and open time must be satisfactory to the production system that operates at 35 °C.

4.1.2 Slump Resistance

Material mixed according to the manufactures recommended ratio and extruded to a 10 mm x 5 mm section 100 mm long on to a steel panel shall not slump more than 1 mm. The panel shall be in the vertical plane with the long edge horizontal.

*THIS DOCUMENT MUST NOT BE REPRODUCED. IF USED IN RELATION TO
THE COMPANY'S PRODUCTS THE RECIPIENT IS RESPONSIBLE TO
CONFIRM THE DOCUMENT ISSUE DATE IS STILL VALID*

FORM : I:\CentralLaboratory\StandardForms\MaterialSpecification\Matspec.doc

Documents
AVA Document Sharing Hub

**HOLDEN**

Holden Limited
Engineering Department

MATERIAL SPECIFICATION

NUMBER : HN 2407
SHEET : 2 of 6
RELEASE : November, 2002
REVISION : June, 2003

NAME: ADHESIVE-URETHANE-TWO PART

4. REQUIREMENTS (continued)

4.1 Physical Properties (uncured Adhesive System) (continued)

4.1.3 Slump Resistance

Working Life. Material mixed according to the manufactures recommended ratio shall have a working life of a minimum of 20 minutes at 35 °C

Properties	Requirement	Test Method
Appearance	Tan	Visual
Brookfield Viscosity, cps @25°C	7000-14000	ASTM D2196
Density (kg/m ³)	1.23-1.27	ASTM D1475
% solids	> 98	-
Mix ratio by volume	1:1	-
Working time @24°C	20-30 min	Visual
Handling Strength @24°C	3 hours	Visual
Full Strength @24°C	24 hours	Visual
Shore A Hardness	< 90	ASTM D2240

*THIS DOCUMENT MUST NOT BE REPRODUCED. IF USED IN RELATION TO
THE COMPANY'S PRODUCTS THE RECIPIENT IS RESPONSIBLE TO
CONFIRM THE DOCUMENT ISSUE DATE IS STILL VALID.*

FORM : I:\CentralLaboratory\StandardForms\MaterialSpecification\Matspec.doc