MASS-CASTING POLYURETHANE RESIN

MUST BE FILLED – VERY LOW SHRINCKAGE

DESCRIPTION

Negatives, moulds masters and mock-ups using the unfilled product or filled with RZ 30150 mineral filler in order to limit exotherm and to get low shrinkage
Stamping tools using the product filled with RZ 209/6 aluminum powder in order to improve the surface gliding

PROPERTIES

- *Very low shrinkage*
- *Low exothermic reaction*
- *Casting in high thickness (400 mm)*
- *Adhesion between successive layers*

PHYSICAL PROPERTIES					
Composition		**ISOCYANATE F 50**	**POLYOL F 50**	**MIXED UNFILLED**	**MIXING FILLED WITH RZ 30150**
Mix ratio by weight Mix ratio by volume at 25°C		50	100	-	180 - 240
Aspect		liquid	liquid	liquid	Thick liquid
Colour		dark amber	light beige	beige	beige
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	25	3,500	350	180 phr* : 7,500 240 phr : 20,000
Specific gravity at 25°C (g/cm^3) Specific gravity of cured product at 23°C	ISO 1675 : 1985 ISO 2781 : 1996	1.22 -	1.26 -	- 1.24	180 phr : 1.75 240 phr : 1.80
Pot life at 25°C on 500 g (min)	Gel Timer TECAM			35 - 50	-

** : phr = Per Hundred of Resin, i.e. weight expressed for 100 g of polyol.*

PROCESSING CONDITIONS

Before use Polyol must be stirred until both color and aspect become homogeneous. Polyol and Isocyanate must be mixed together at a temperature above 18°C according to the indicated mix ratio.
Disperse homogeneously RZ 30150 filler in the F 50 mixing according to the ratio mentioned on this document.
Prior to cast, please check that parts or moulds are free of any traces of moisture.

MECHANICAL PROPERTIES at 23°C (1)					
Filler rate in F 50 polyol		phr	**0**	**180**	**240**
Hardness	ISO 868 : 2003	Shore D1	83	85	86
Flexural strength	ISO 178 : 2001	MPa	80	55	60
Flexural modulus	ISO 178 : 2001	MPa	2,700	5,200	9,700
Compressive strength at yield	ISO 604 : 2002	MPa	85	90	95

AXSON TECHNOLOGIES
Head Office France
+33 1 34 40 34 60
axson@axson.com
axson.fr

GERMANY
+49 60 74 40 71 10
verkauf@axson.com
axson.de

SPAIN & PORTUGAL
+34 93 225 16 20
spain@axson.com
axson.es

SLOVAKIA
+421 37 642 25 26
axson.sk@axson.com
axson-ce.sk

USA
+1 248 588 2270
axsonmh@axson.com
axson-na.com

JAPAN
+81 564 26 25 91
sales.japan@axson.com
axson.jp

INDIA
+91 20 25560710
info.india@axson.com
axson.com

ITALY
+39 02 96 70 23 36
axson@axson.it
axson.it

U.K.
+44 1 638 66 00 62
sales.uk@axson.com
axson.com

MEXICO
+52 55 52 64 49 22
marketing@axson.com.mx
axson.com.mx

CHINA
+86 21 58 68 30 37
marketing.china@axson.com
axson.cn

MIDDLE EAST
+971 7 2432227
axsonmideast@axson.com
axson.com

THERMAL AND SPECIFIC PROPERTIES (1)					
Filler rate in F 50 polyol		phr	**0**	**180**	**240**
Glass transition temperature	ISO 11359 : 2002	°C	65	-	-
CTE (+ 20°C to + 55°C)	ISO 11359 : 2002	$10^{-6}K^{-1}$	75	53	50
Linear shrinkage (*1000x140x140*)	-	mm/m		0.5	0.5
Demoulding time at 25°C *(vs thickness of casting)*		hours		6 - 12	6 -12
Exothermy of reaction at heart *(thickness 280 mm – 15 litres)*		°C		60	50

(1) : Average values obtained on standard specimens / Hardening 14 hours at 60°.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products:

- *Ensure good ventilation*
- *Wear gloves, safety glasses and waterproof clothes*

For further information, please consult the product safety data sheet.

STORAGE CONDITIONS

Shelf life of both parts is 6 months in a dry place and in their original unopened containers at a temperature between 15 and 25°C
Any open can must be tightly closed under dry nitrogen.

PACKAGING

ISOCYANATE F 50	***POLYOL F 50***
1 x 5.00 kg	*1 x 10.00 kg*
1 x 10.00 kg	*1 x 20.00 kg*

GUARANTEE

The information contained in this technical data sheet result from research and tests conducted in our Laboratories under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON guarantee the conformity of their products with their specifications but cannot guarantee the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications.

AXSON TECHNOLOGIES
Head Office France
+33 1 34 40 34 60
axson@axson.com
axson.fr

GERMANY
+49 60 74 40 71 10
verkauf@axson.com
axson.de

SPAIN & PORTUGAL
+34 93 225 16 20
spain@axson.com
axson.es

SLOVAKIA
+421 37 642 25 26
axson.sk@axson.com
axson-ce.sk

USA
+1 248 588 2270
axsonmh@axson.com
axson-na.com

JAPAN
+81 564 26 25 91
sales.japan@axson.com
axson.jp

INDIA
+91 20 25560710
info.india@axson.com
axson.com

ITALY
+39 02 96 70 23 36
axson@axson.it
axson.it

U.K.
+44 1 638 66 00 62
sales.uk@axson.com
axson.com

MEXICO
+52 55 52 64 49 22
marketing@axson.com.mx
axson.com.mx

CHINA
+86 21 58 68 30 37
marketing.china@axson.com
axson.cn

MIDDLE EAST
+971 7 2432227
axsonmideast@axson.com
axson.com