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Ref. A6



Duramould®
**Systems For Mould Making,
Rapid Prototyping,
Pattern Making, and Tooling**



engineering polyurethane excellence

DURAMOULD® Systems For Mould Making (eg. liners for precast concrete)

Hyperlast have supplied Polyurethane products into the precast concrete industry for almost 30 years. Building on this vast experience Hyperlast have developed a number of products under the brand name - 'Duramould®' - to complement the existing ranges.

'Duramould' offers the following features

'Duramould' ET - Hand Mixable Grades

- Easy ratio
- Room temperature castable
- Moisture tolerance
- Finger print reproduction
- Minimal shrinkage

'Duramould' EMX & SMX - Machine Mixable Grades

- Quick gel and demould
- High production rates
- Excellent abrasion resistance
- Excellent resistance to release oils
- Finger print reproduction

'Duramould' EMS -Sprayable Grades

- Fast tack free to cure
- Excellent detailing
- 1:1 Volume ratio
- High build coating
- No solvent

These 'Duramould' features have been designed to help you ensure right-first-time manufacture of high quality long lasting moulds that give superb reproduction of fine detail.

DURAMOULD® Systems For Mould Making (eg. liners for precast concrete)

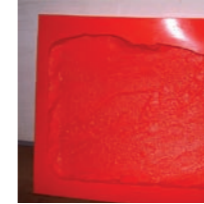
'DURAMOULD' ET - HAND MIXABLE GRADES

Grade	ET 30A	ET 45A	ET 60A	ET 70A
Colour	Yellow	Red	Orange	Clear
Polyol	7980316	7980295	7980311	7980367
Isocyanate	7855234	7855223	7855223	7855223
Mixing Ratio*	0.7:1	1:1	0.5:1	0.29:1
Gel Time (Mins)	15-25	15-25	10-20	10-15
Shore Hardness	30A	45A	60A	70A

*mix ratio by weight



'Duramould' ET30A



'Duramould' ET45A



'Duramould' ET60A



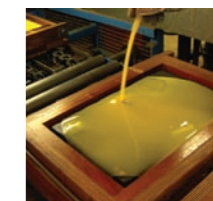
'Duramould' ET70A

With simple ratios and long gel times 'Duramould' ET grades allow easy processing by hand mix method to give high quality moulds with finger print detail of the master pattern.

'DURAMOULD' EMX & SMX - MACHINE MIXABLE GRADES

	Polyether	Polyester	Polyester	Polyester
Grade	EMX 65A	SMX 30A	SMX 40A	SMX 60A
Colour	Natural	Natural	Natural	Yellow
Polyol	7980118	7981048	7981101	7981113
Isocyanate	7855149	2875034	2875034	2875034
Mixing Ratio (by Wt)	0.83:1	5.2:1	4.5:1	1.82:1
Gel Time (Mins)	6-8	3-3.5	4-5	3.5-4.5
Shore Hardness	65A	30A	40A	60A

The 'Duramould®' EMX & SMX grades have been developed based on materials used in the industry for over 30 years. They allow rapid productivity via multi component dispensing machines and the ability to mass produce quality moulds economically.



DURAMOULD® Systems For Mould Making (eg. liners for precast concrete)

'DURAMOULD' EMS - SPRAYABLE GRADES

Grade	EMS 85A	EMS 95A	EMS 80D
Colour	Natural	Black	Natural
Polyol	7980417	7980418	7983196
Isocyanate	7855296	7855297	7855257
Mixing Ratio	1:1 (vol)	1:1 (vol)	1:1 (vol)
Gel Time (Secs)	5-10	5-10	5-10
Shore Hardness	85A	95A	80D



'Duramould' EMS85A

When selecting to process the 'Duramould'® EMS grades, you will have the opportunity to produce high quality moulds in minutes. The products are solvent free and therefore coating thickness and drying time is not an issue. Their materials allow for high build coatings to be applied which cure quickly and provide excellent reproduction of the fine detail from the master pattern.

DURAMOULD® For Rapid Prototyping, Pattern making and Tooling

- High impact systems
- High temperature resistant systems
- Range of gel times and hardness
- Flame retardant



'Duramould'® polyurethanes for the rapid prototyping and tooling industries have been designed to simulate a variety of different plastics and rubbers.

'Duramould' can be moulded and the materials are tailored to suit the customers processing methods and performance requirements. All Hyperlast materials are quality assured to ISO 9001:2000 and are backed by outstanding Technical Service.

DURAMOULD® For Rapid Prototyping, Pattern making and Tooling

New 'Duramould' Clearcast EH84D



New 'Duramould' Fastcast EM73D



FEATURES / BENEFITS

Clear Cast		Fast Cast	
1:1 by volume	No need for scales	1:1 by weight	Simple to use
Light stable	No unsightly discolouration	Low viscosity	Easy to cast intricate shapes
Minimal shrink	Excellent for large castings	Low shrink	Accurate castings
Cold castable	No need for ovens	Cold castable	No need for ovens
Very low viscosity	Easy to de-gas	Add fillers*	Control costs and shrinkage
		Excellent moisture tolerance	Easy to produce quality castings
		Thin/Thick section casting	Multipurpose / versatile
			*Choice of fillers available to optimise properties



DURAMOULD® For Rapid Prototyping, Pattern making and Tooling

Application	Properties	'Duramould' Reference
New Clearcast	84D hardness	'Duramould' EH 84D (7980399)
Multipurpose	Optically transparent 1:1 by vol / 15 min gel time	
New Fastcast	73D Hardness	'Duramould' EM73D (7983157)
Multipurpose	Low viscosity / cold castable Good moisture tolerance Filled or Unfilled Natural colour / Easy to pigment Machinable 1:1 weight ratio 3 min gel time / 10-15 min demould	
General Purpose	88D Hardness	'Duramould' EM88D (2874209)
Tooling	Black / Cold castable High modulus Simple 2:1 Mix Ratio 9 min gel time	
Fire Retardant	85D Hardness	'Duramould' EMF85D (7983138)
Prototyping	Passes UL94 V-0 @ 3mm White / Low Temp Casting 5 min gel time / 2.15:1 ratio	
Rigid Prototyping	75D hardness Natural colour / Low Temp Casting High HDT Good impact strength 9 min gel time / 0.27:1 ratio	'Duramould' EM75D (7983074)
Rigid Prototyping	70D Hardness Excellent Impact Strength Natural 7 min gel time / 1.3:1 ratio	'Duramould' EM70D (7853113)

DURAMOULD® For Rapid Prototyping, Pattern making and Tooling

Application	Properties	'Duramould' Reference
General Purpose	87A Hardness	'Duramould' EM87A (7980297)
Rigid tooling	Black / Cold Castable 45 min gel time / 4.4:1 ratio	
General Purpose	65A Hardness	'Duramould' EM65A (2851106)
Flexible Tooling	Filled White / Cold Castable 10 min gel time / 6:1 ratio	

Other systems suitable for the prototype, pattern making & tooling market include:

'Hyperlast'	35A - 82D Hardness Range with good mechanical properties
C200 Series	Unpigmented / hand or machine mixable 5-8 min gel times / quick demould