PRODUCT INFORMATION

TECHNICAL DATA SHEET

HYPERLAST™ 500WP

HYPERLAST™ 500WP is a two component 100% solids fast reacting elastomeric waterproofing membrane. Designed for use in applications where potable water is retained or as a protective barrier against aggressive ground water containing chemicals is required, such as reservoirs, storage tanks and water basins. It is specified to protect structures against the damaging effect of corrosion, erosion, impact and fungal attack to concrete, steel and many other substrates: HYPERLAST™ 500WP meets the requirements for Water Regulations Advisory Scheme approval to BS 6920-1:2000 for use with hot and cold water.
Typical uses: Ponds, Pools, Tank coatings/linings, Bridge Deck waterproofing, Roof coatings, Walkways and Balconies, Flooring and Car parking decks, Industrial and manufacturing facilities, Landscaping and water containment, Power plants, Desalination, Sewage and Wastewater Treatment plants.

Component Properties

Polyol Component	
Product Reference	HYPERLAST™ 500WP Polyol
Appearance	Grey liquid at 25°C
Viscosity	350 - 650 cps at 25°C
Specific Gravity	1.01 - 1.03 at 25°C
Isocyanate Component	
Product Reference	HYPERLAST™ 500WP Prepolymer
Appearance	yellow liquid at 25°C
Viscosity	1500 - 2500 cps at 25°C
Specific Gravity	1.08 - 1.12 at 25°C
Mixed System	
Mixing Ratio	0.91:1 by weight (Polyol : Isocyanate)
Gel Time	0’ 35” - 0’ 45” (100 gms at 25°C)

Cured System – Typical Properties

Property	Test Method	Value	Unit
Shore Hardness	BS EN ISO 868	80 - 85	°A
Tensile Strength	BS 903 Pt A2	17	MPa
Elongation at Break	BS 903 Pt A2	450	%
Angle Tear Strength	BS 903 Pt A3	40	N/mm
100% Modulus	BS 903 Pt A2	4.0	MPa
Cold Flex Temperature	BS 2782 Meth 150B	-50	°C
Density	BS 903 Pt A1	950	Kg/m^3

Processing Details

The following information is given as a guide to processing this product. High pressure and low pressure 1:1 by volume dispensing equipment is required and different settings are recommended to provide optimum properties. Our Technical Service Department can offer more detailed advice.

Recommended Processing Temperatures for High Pressure Impingement Spray Equipment

Polyol Component	60 - 65°C
Isocyanate Component	65 - 70°C
Heated Hoses	70°C

Recommended Cure Cycle

24 – 48 hours at room temperature to reach full cure.

Additional Processing Details

This product is designed for use through 1:1 volumetric spray equipment. Polyol must be fully homogenised during material processing. Balanced pressures and correct material temperatures must be maintained. For advice on suitable equipment and optimum procedures for use, please refer to the Dow Technical Service Department.

Resistance to Chemicals, Oils and Solvents – ASTM D543-95

Samples were immersed for 7 days at 23°C and volume swell measured and rated as follows:-

Chemical Rating			
5% Acetic Acid	B	Methylated Spirits	E
Acetone	E	Mineral Oil	A
10% Ammonium Hydroxide	A	10% Nitric Acid	B
10% Citric Acid	B	Olive Oil	A
Deionised Water	A	5% Phenol	E
Diesel	C	1% Soap	A
Dichloromethane	E	20% Sodium Carbonate	A
DMF	E	10% Sodium Chloride	A
Heptane	C	10% Sodium Hydroxide	B
10% Hydrochloric Acid	A	3% Sulphuric Acid	A

A = Excellent (0-3%)
B = Good (3-10%)
C = Fair (11-25%)
D = Poor (26-50%)
E = Very Bad (>50%)

NB: These ratings should only be used as a guideline to performance of these products in these fluids. In the case of acids and alkalis, attack of the polyurethane may occur but not necessarily show in a large volume change. It is therefore recommended that comprehensive immersion tests be carried out for critical applications.

Storage and Handling

		Shelf life
Polyol Component	Store in tightly sealed containers at a temperature of 0-30°C. Raise to processing temperature and mix well before use.	12 months
Isocyanate Component	Store in tightly sealed containers at a temperature of 15-30°C. Avoid contact with moisture. Storage below the recommended minimum temperature may result in freezing of the Isocyanate. If the Isocyanate does not fully melt out when raised to the processing temperature it may be necessary to re-melt at a temperature of 60 - 70 °C following the procedures laid down in the information sheet 'ISOCYANATES - HAZARDS AND SAFE HANDLING PROCEDURES'.	12 months

More detailed information on the Storage and handling of Polyurethane Components can be obtained by contacting Dow Hyperlast Technical Service Department.

Packaging

Polyol Component	25 kgs, 200 kgs
Isocyanate Component	25 kgs, 220 kgs

Product Stewardship

The Dow Chemical Company and its subsidiaries ("Dow") has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products — from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Safety Considerations

Safety Data Sheets (SDS) are available from The Dow Chemical Company (Dow). SDS are provided to help customers satisfy their own handling, safety and disposal needs, and those that may be required by locally applicable health and safety regulations. SDS sheets are updated regularly. Therefore, please request and review the most current SDS before handling or using any product. Copies of the SDS are available on request through the nearest Dow Sales office.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to help ensure that Dow products are not used in ways for which they were not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products.

Contact information:
For more information about this product please call The Dow Chemical Company.

North America: 1-800-447-4369
Latin America: (+55) 11-5184-8722
Europe: (+31) 11-567-2626
Asia/Pacific: (+60) 3-7965-5392
http://www.dowhyperlast.com