

PDM

Subsea products and services



Polyurethane Elastomers

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PDM offers a range of elastomers, the two main ones being EMC85T and EMC69T - the latter being more flexible and widely used. Typical properties of the EMC69T system are shown in the panel below.



Selection of products manufactured from PDM polyurethane elastomers

The PDM polyurethane elastomers were produced in response to customer demand. Many organisations were buying cable assemblies from PDM, but wishing to do the final on-site termination themselves.


The first products were developed some years ago. Particular attention was paid to a number of requirements. Traditionally considerable process plant was required to mix, evacuate and cure polyurethane materials if a quality product was to be achieved. Many of our potential customers wanted to carry out this work on-site or at sea, where facilities were very limited. Equally, for the applications in question, quality and reliability are essential. For this reason the twin pack sachet format has become the standard item.

The sachets are prepared under strict quality control. The materials are pre-evacuated and pre-weighed, then introduced into two halves of a vacuum sealed bag. The two components are separated by a strong clip that ensures complete isolation of the compounds. By removing the clip and thoroughly mixing the components a quality product can be produced.

Since their introduction the materials have been used successfully in a wide range of underwater applications such as complex cable assemblies, piezo-electric devices and electronics encapsulation.

To support the polyurethane elastomers PDM offers a number of primers to improve adhesion when bonding to most common substrates. A compatible release agent is also available.

All these products have been exhaustively tested in-house and in the underwater environment, including the most severe applications.

EMC69T  DATA	
The cured EMC69T polyurethane has the following typical properties:	
Hardness (Shore A)	70
Tensile strength (MN/m ²)	12
Tear strength (kN/m)	6
Elongation at break (%)	280
Density (kg/m ³)	1080
Volume resistivity (Tohm-m)	36
Surface resistivity (Tohm/sq)	10
Voltage breakdown (kV/mm)	11
Dielectric constant (at 1MHz)	4.5
Water absorption (%) (1000hrs @ NTP) (Sample just submerged in water)	3.2
Temperature range - usable (°C) ... Min.	- 60
... Max.	+110

Please contact us if you require advice on the selection of suitable polyurethane elastomers. Our applications engineering service is free.

Product brochures are available on

Epoxy/Rubber Moulded Connectors
Underwater Pluggable Connectors
Connectors/Cable Assemblies
Encapsulated Products
High Density Connectors
Wet Pluggable Connectors
Quickcure Moulding System
Transition Zone Connectors
Design & Development Projects

Titan Connectors
Penetrators
Bend Limiters
Polyethylene Products
Bend Restrictors
IE55 Connectors
Micro Connectors
Fibre Optic Penetrators
Polyethylene Moulding

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