MATERIAL DATA SHEET MDS P23 Rev. 2

TYPE OF MATERIAL: PEEK (Poly-ether-ether-ketone) with PTFE added

PRODUCT	Seat inserts	***TEMPERATURE RANGE***	-100°C to +250°C

1. SCOPE	This MDS specifies the technical requirements for the PEEK/ PTFE material.
2. PURCHASE INFORMATION	The purchase order shall contain the following information: Product form, dimensions, tolerances and / or referenced drawing(s) and grade designation.
3. CHEMICAL COMPOSITION	Poly-ether-ether-ketone polymer with necessary stabilisers and processing aids and 10 to 20 % PTFE (Poly-tetra-fluoro-ethylene) added.
4. QUALIFICATION TEST REQUIREMENTS	The material shall satisfy the following minimum requirements. The qualification shall be repeated if there are changes in the production route, manufacturing procedures, specified composition or properties of the product which exceeds the limits defined from qualification testing:

Mechanical properties	**Test standard**	**Virgin**
• Tensile strength	ASTM D 638	> 80 MPa
• Hardness	ASTM D 785	82 - 88 Shore D
• Tensile modulus	ASTM D 638	> 3000MPa
• Compressive strength	ASTM D 695	> 100 MPa
• HDT @ 1.81 MPa	ASTM D 648	150°C
• Impact strength, (notched)	ASTM D 256	> 50 J/m
• Ultimate elongation	ASTM D 638	> 20 %
Physical properties		
• Specific gravity	ASTM D 792	1.4 - 1.5 g/cm^3
• Melting point	ASTM D 3418	340 °C
• Water absorption (24 hrs.)	ASTM D 570	0.10 %

5. DIMENSIONS	According to BS 4518.
6. PRODUCTION TEST REQUIREMENTS	The below properties shall be documented by testing for each production batch and satisfy the requirements listed above. • Hardness ASTM D 785 • Specific gravity ASTM D 792 • Tensile strength ASTM D 638 • Ultimate elongation ASTM D 638
7. MARKING & PACKAGING	Components shall be supplied in suitable packaging as to protect the items from physical damage prior to installation. Markings on the packaging shall clearly indicate material batch number, and such markings shall ensure traceability through the producers QC system to raw materials, formulation and manufacturing details.
8. CERTIFICATION	Inspection certificate to EN 10204 Type 3.1B shall contain ID No. and all test results.