MITSUBISHI CHEMICAL ADVANCED MATERIALS

KyronMAX™ S-2230

PRODUCT TECHNICAL DATA SHEET

Product Benefits
- High physical strength
- Ductility
- Heat resistance
- High wear resistance
- Chemical resistance of hydrocarbons
- Low coefficient of friction

Industries/Application Examples
- Automotive – bushings, washers, pistons, brackets, handles
- Aerospace – latches, rings, hinges, spacers, seals, adapters
- Electrical – pins, fasteners, end effectors, connectors, panels
- Medical – clamps, vanes, housings, bushings, gears, valves
- Energy – seals, bearings, plugs, umbilicals, back-up rings
- Industrial – valve plates, column packing, gears, valve seats

		English		Metric	
Mechanical	**Test Method**	**Typical Value**	**Unit**	**Typical Value**	**Unit**
Specific Density	ASTM D792	1.29	g/cm^3	1.29	g/cm^3
Tensile Strength	ASTM D638	47,000	psi	324	MPa
Tensile Modulus of Elasticity	ASTM D638	4,100	ksi	28	GPa
Tensile Elongation	ASTM D638	2.20	%	2.20	%
Flexural Strength	ASTM D790	74,000	psi	510	MPa
Flexural Modulus of Elasticity	ASTM D790	3,400	ksi	23	GPa
Shear Strength	ASTM D732	19,354	psi	133	MPa
Compressive Strength	ASTM D695	41,000	psi	283	MPa
Compressive Modulus of Elasticity	ASTM D695	1,040	ksi	7	GPa
Hardness, Shore D	ASTM D2240	90		90	
Notched Izod Impact	ASTM D256	3.1	ft-lb/in	164.3	J/m
Unnotched Izod Impact	ASTM D4812	22.0	ft-lb/in	1166.0	J/m
Thermal	**Test Method**	**Typical Value**	**Unit**	**Typical Value**	**Unit**
Glass Transition (Tg)	ASTM D3418	122	°F	50	°C
Melting Point	ASTM D3418	505	°F	263	°C
Deflection Temperature at 1.8 MPa (264 psi)	ASTM D648	531.3	°F	277.4	°C
Electrical	**Test Method**	**Typical Value**	**Unit**	**Typical Value**	**Unit**
Surface Resistivity	ASTM D257	$<10^5$	ohm/sq	$<10^5$	ohm/sq
Flammability	UL 94[1]	HB		HB	
Chemical	**Test Method**	**Typical Value**	**Unit**	**Typical Value**	**Unit**
Moisture, 24 hours	ASTM D570	0.601	% by wt	0.601	% by wt

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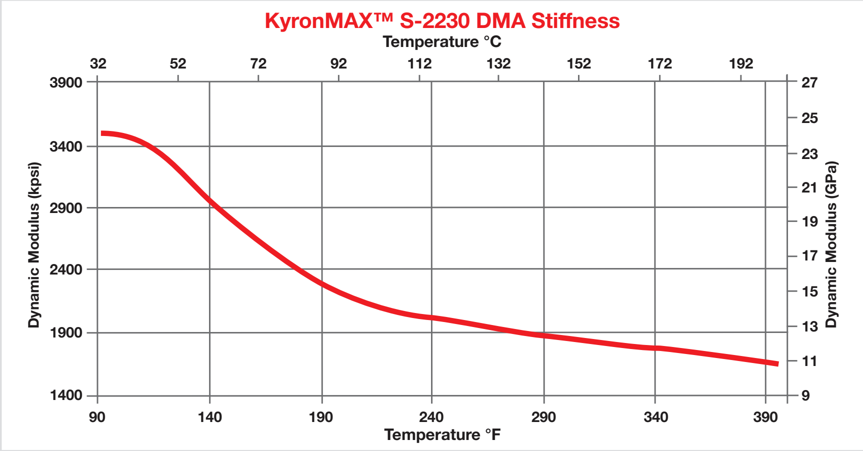
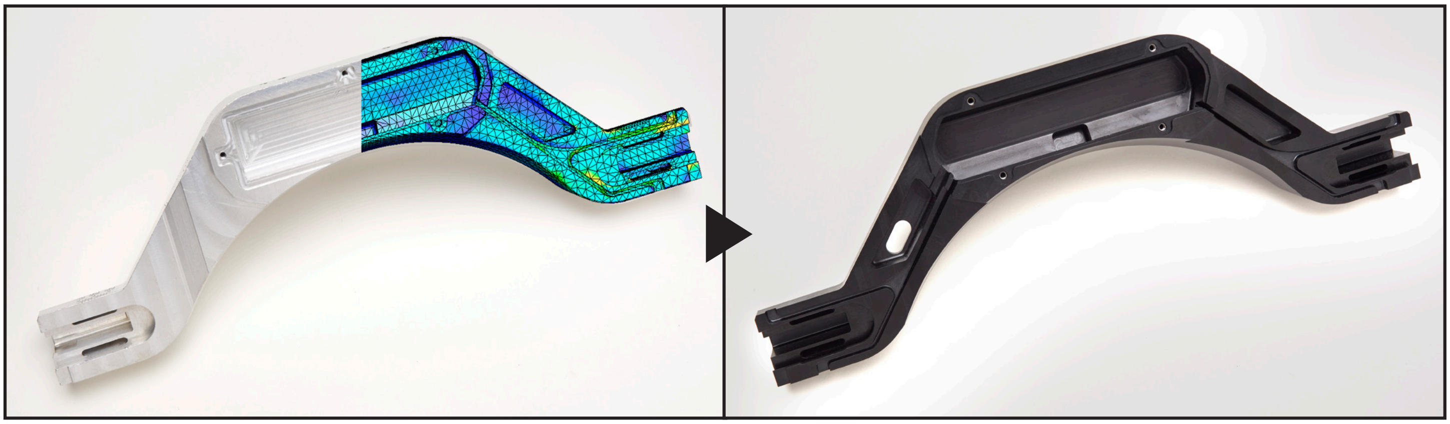
KyronMAX™ materials are lightweight and, when molded, parts are 75% lighter than steel and almost 40% lighter than aluminum. By utilizing the lower density of KyronMAX materials, customers can simultaneously realize lower costs and lighter parts, while also taking advantage of unmatched tensile and toughness properties.

The better "practical toughness" values are achieved with lower filler loading, which increases the material's elongation at yield. KyronMAX molded parts are more likely to yield, rather than fracture under high-stress loads. KyronMAX stronger fibers and lower filler loadings further elevate molded product performance with significantly better knit line strength compared to other filled polymers.





Aluminum bracket with half FEA analysis (left) and KyronMAX final molded part (right). The FEA analysis is used to translate a metal part into a lightweight plastic molded part, while matching or exceeding the strength and stiffness of the original metal part.

Mitsubishi Chemical Advanced Materials (MCAM) can take your metal parts and use our proprietary Finite-Element Analysis (FEA) to engineer a high-performance product with KyronMAX materials. MCAM's unique FEA data offers a solution to accurately predict the mechanical performance of a part in real world applications with key features including mechanical stress, plastic injection molding flow, fatigue, and motion.

USA – Arizona
257 East Alamo Drive
Chandler, AZ 85225 USA
Tel: 480.926.8100
Fax: 480.497.1530
KyronMAX@mcam.com

USA – Illinois
1840 Enterprise Court
Libertyville, IL 60048 USA
Tel: 847.367.0110
Fax: 847.367.0566

Asia – Thailand/Singapore
Eastern Seaboard Industrial Estate
Rayong 64/103, Moo 4, T. Pluakdaeng
A. Pluakdaeng, Rayong 21140 Thailand
Tel: +66 33 659 141
Fax: +66 33 659 143

https://mcam.com

[1]Estimated rating based on available data. The UL 94 Test is a laboratory test and does not relate to actual fire hazard.