



TECHNOLOGY MAKES LIFE BETTER

安徽省蚌埠市高新区兴中路 985 号

日月科技园

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安徽艾约塔硅油有限公司

IOTA CORPORATION LTD.

Sunmoon industry park, 985 Xingzhong Road,
Bengbu, China 233000

Tel: 86-552-3827158

Fax: 86-552-3822922

Extra Firm Cellular Silicone IOTA-HT-840

IOTA-HT-820 is an extra-firm grade silicone foam that offers improved durability and sealing. It is used to seal and protect various outdoor communication, lighting, and electronic enclosures from small dust particles, wind driven rain, and fire. It offers a higher tear and tensile strength than our lighter grade foams. IOTA Silicones are available in various

thicknesses and manufactured in roll form to allow fabricators to easily convert the material to the proper dimensions.

Features and Benefits

Excellent memory and low stress relaxation reduces maintenance costs associated with gasket failures due to compression set and softening.

Resistance to ultraviolet light, ozone, extreme temperatures, and flame enables consistent performance in all environments.

Compact cell structure provides improved sealing performance.

Available through distribution sites throughout North America, Europe, and Asia.

Applications

Environmental seals to protect against penetration of dust, moisture, air, or light within outdoor enclosures such as lighting fixtures, HVAC units, and electronic cabinets.

Enclosures requiring a more durable, high closure force gasket.

Press pads requiring greater conformability and even pressure distribution at high temperatures.

Installation

Available with a pressure-sensitive adhesive on one or two sides to allow easy application to a variety of surfaces.

IOTA-HT-840

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Property	Test Method	Typical Value
PHYSICAL		
Color		Gray
Thickness, mm (inches)		0.80 – 3.18 (0.031 – 0.25)
Standard Width, mm (inches)		449 (28)
Density, kg/m ³ (lb./ft ³)	ASTM D 1056	432 (27)
Compression Force Deflection, kPa (psi)	Force measured @ 25% Deflection ASTM D 1056	151.7 (22)
Compression Set, % max.	ASTM D 1056 Test D @ 70°C (158°F)	< 1
	ASTM D 1056 Test D @ 100°C (212°F)	< 5
Tensile Strength, kPa (psi)	ASTM D 412	414 (60)
Elongation, %	ASTM D 412	55
FLAMMABILITY & OUTGASSING		
Flame Resistance	UL 94	Listed V-0 and HF-1
Flame Spread Index (Ls)	ASTM E 162	< 25
Smoke Density (Ds)	ASTM E 662	

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	Tested @ 4.0 minutes	< 50
	Tested @ 1.5 minutes	< 20
Toxic Gas Emissions Rating	SMP-800C	Pass
Environmental Properties		
Water Absorption	Internal: 24 hrs @ room temp.	0.20 %
UV Resistance	SAE J - 1960	No Degradation
Ozone Effect Rating	ASTM D 1171	0 (No Cracks)
Corrosion Resistance	AMS - 3568	Pass
Electrical & Thermal Properties		
Dielectric Constant	ASTM D 150	1.58
Dielectric Strength	ASTM D 149, Volts/mil	95
Dry Arc Resistance	ASTM D 495, Seconds	98
Volume Resistivity, Ohm – cm	ASTM D 257	10 ¹⁴
Thermal Conductivity, w/m °K (BTU in/hr/ft ² /°F)	ASTM C 518	0.12 (0.84)
Temperature Resistance		
Low Temperature Flex at -55°C (-67°F)	ASTM D 1056	Pass
Recommended Use Temperature, °C (°F)	Internal	-55° to 200° (-67° to 392°)

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The information contained in this data Sheet is intended to assist you in designing with IOTA Silicone. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of IOTA Silicone for each application.

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