

TECHNICAL DATA SHEET

2A0 Crushed EPDM Foam with 3M™ 93020LE High Strength Adhesive Tape

Document Date: September 2026 | Foam data: Carolina Custom Products / Secon Rubber & Plastics formulation | Tape data: 3M Technical Data Sheet 93020LE, Rev. June 2024



3M™ 93020LE tape, shown as supplied by 3M

Product Description

This laminated product combines Carolina Custom Products’ 2A0 crushed cellular EPDM sponge rubber with 3M™ High Strength Acrylic Adhesive 300LSE, factory-applied as 3M™ 93020LE double coated tape. The result is a super-soft, semi-closed-cell EPDM gasketing foam that is pressure-sensitive and ready to bond directly to a wide range of substrates — including many low surface energy plastics such as polypropylene, and powder-coated or oil-contaminated metal parts — without a separate adhesive application step.

Carolina Custom Products die-cuts, slits, and laminates this construction to custom sizes and tolerances for gasketing, sealing, cushioning, and vibration-damping applications.

Product Construction

- 1. **Facing layer:** 3M™ High Strength Acrylic Adhesive 300LSE (exposed face, liner-protected until use)
- 2. **Core layer:** Carolina Custom Products 2A0 Crushed EPDM Foam (black, semi-closed cell)
- 3. **Carrier / adhesive system:** 3M™ 93020LE double coated tape (clear polyester film carrier, acrylic adhesive both faces, 58# polycoated kraft paper liner)

EPDM Foam — Physical Properties

Carolina Custom Products engineered foam. Values are targets; test to confirm suitability for your application.

Property	Target	Units	Test Method
Description	Super soft, semi-closed cellular rubber		
Polymer	EPDM		
Standard Color	Black		
ASTM D1056 Classification	2A0		
Density	3.5 – 9.0	lbs/ft³	ASTM D1056
Compression Deflection, 25%	1 max	psi	ASTM D1056-07
Compression Set, 50% RT	10	%	ASTM D1056
Tensile	22	psi	ASTM D1056
Elongation	200	%	ASTM D1056
Water Absorption	10 max	%	ASTM D1056
Flammability, burn rate	4 max	in./min.	FMVSS 302
Temperature Use — Hot¹	300	°F	—
Temperature Use — Cold	-65	°F	ASTM D1056

¹ For intermittent exposure only. Also meets/references: TSK6505G Class 2A | SAE J18 1A0 Z1-7kPa max | WSB-M3G212-A with deviations.



3M™ High Strength Double Coated Tape 93020LE — technical data on the following pages is reproduced from 3M’s published Technical Data Sheet (Rev. June 2024) for the adhesive tape component of this construction. 3M product names and marks remain the property of 3M Company.

Adhesive Tape — Product Description

3M™ Double Coated Tapes with 3M™ High Strength Acrylic Adhesive 300LSE provide high bond strength to most surfaces, including many low surface energy plastics such as polypropylene and powder coated paints. The acrylic adhesive also provides excellent adhesion to surfaces contaminated with oil typically used with machine parts.

- Film carrier adds dimensional stability to the foam and eases handling during slitting and die-cutting.
- Bond strength of 3M™ Acrylic Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Tape — Typical Physical Properties

Attribute	Test Method	Test Condition	Value
Adhesive Type	—	—	300LSE Acrylic
Adhesive Carrier	—	—	Clear Polyester
Adhesive Thickness	—	Faceside	0.095 mm (3.7 mil) ¹
Carrier Thickness	—	—	0.012 mm (0.5 mil)
Adhesive Thickness	—	Backside	0.095 mm (3.7 mil) ²
Total Tape Thickness	ASTM D3652	—	0.2 mm (7.9 mil)
Liner	—	—	58# Polycoated Kraft Paper (PCK)
Liner Print	—	—	300LSE
Liner Thickness	—	—	0.11 mm (4.2 mil)
Primary Liner Color	—	—	Tan

¹ Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed. ² Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Tape — 180° Peel Adhesion

Temperature: 22°C (72°F) | Backing: 2 mil Aluminum Foil | Test Method: ASTM D3330

Dwell Time	Substrate	Value
15 min	ABS	15.9 N/cm (145 oz/in) ¹
15 min	Polycarbonate (PC)	18.1 N/cm (165 oz/in) ¹
15 min	Polypropylene (PP)	17 N/cm (155 oz/in) ¹
15 min	Stainless Steel	17 N/cm (155 oz/in) ¹
72 h	ABS	17 N/cm (155 oz/in) ¹
72 h	Polycarbonate (PC)	19.7 N/cm (180 oz/in) ¹
72 h	Polypropylene (PP)	19.2 N/cm (175 oz/in) ¹
72 h	Stainless Steel	18.6 N/cm (170 oz/in) ¹

¹ 12 in/min (300 mm/min)

Tape — Static Shear

Test Method: ASTM D3654

Temperature	Condition	Value
22°C (72°F)	1000g	>10,000 min ¹
70°C (158°F)	500g	>10,000 min ¹

¹ 1 in x 1 in sample area, test terminated after 10,000 minutes

Tape — Temperature Resistance

Attribute	Value
Short Term ¹	149°C (300°F)
Long Term ²	93°C (200°F)

¹ Minutes, hours ² Days, weeks

Tape — Environmental Characteristics

Property	Result
Humidity Resistance	High humidity has minimal effect on adhesive performance. No significant reduction in bond strength after 7 days at 90°F (32°C) and 90% relative humidity.
UV Resistance	When properly applied, nameplates and decorative trim parts are not adversely affected by exposure.
Water Resistance	Immersion in water has no appreciable effect on bond strength. High bond strength is maintained after 100 hours at room temperature.
Temperature Cycling	High bond strength is maintained after 4 cycles of: 4 hr at 158°F (70°C) / 4 hr at -20°F (-29°C) / 4 hr at 73°F (22°C).
Chemical Resistance	When properly applied, parts will hold securely after exposure to numerous chemicals including oil, mild acids, and alkalis.
Breakdown Voltage	7,500 V

Tape — Handling & Application

Bond strength depends on the amount of adhesive-to-surface contact developed. Firm application pressure improves adhesive contact and bond strength. For optimum adhesion, bonding surfaces must be clean, dry, and well unified; typical surface cleaning solvents are isopropyl alcohol or heptane (follow the solvent manufacturer’s precautions and directions for use).

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial application to surfaces below 50°F (10°C) is not recommended, as the adhesive becomes too firm to adhere readily; once properly applied, low-temperature holding is generally satisfactory.

Storage & Shelf Life (tape component): Store at 16°–27°C (60°–80°F) and 40–60% relative humidity, in original packaging, out of direct sunlight. For best performance, use within 24 months of manufacture.

Custom Sizing & Availability

Carolina Custom Products slits, die-cuts, and laminates this EPDM/93020LE construction to custom widths, lengths, gauges, and part geometries. Contact us with your application details — substrate, environment, and required bond strength — for a recommendation and quote.

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