

TECHNICAL DATA SHEET

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1003

SEMI-HARD NATURAL RUBBER

October 1, 2010

Polycorp 1003 Black general purpose 90A durometer semi hard lining with or without tie gum. Excellent chemical and temperature resistance. Superior performance in water treatment equipment. A-I-E Cure. FDA compliant as per 21CFR177.2600

Application Notes:

- **Skive** – use closed skive construction
- **Repair** – Same or 1038
- **Cured Durometer** – Shore A Durometer on top surface: 90 ± 10. Shore D Durometer on top surface: 45 ± 10.
- **Spark Test** – Refer to section 13 pf the Application Manual

Adhesive Notes:

See Section 9 of the Polycorp Rubber Lining Application Manual for specific cementing / adhesion notes.

For proper adhesion, temperatures must be over 60°F (15°C) and must not exceed 120°F (49°C). Use adhesives in well ventilated area and always consult the material safety data sheet for specific precautions.

<u>Coat</u>	<u>Polycorp Adhesive</u>	<u>Approved Equivalent</u>
1 st Coat on Metal	C-90 Primer	Chemlok 289
2 nd Coat on Metal	C-91 Intermediate	Chemlok 290
3 rd Coat on Metal	C-202S Tack	Chemlok 286
4 th Coat on lining	C-202S Tack	Chemlok 286

For distributors of Chemlok adhesives, see Section 9 of the Application Manual

Curing:

Cure time adjustments may be required to compensate for specific conditions. See Section 11 of the Application Manual for detailed instructions. All recommendations below are for lining thicknesses up to ¼”.

Autoclave Method – 3/16” and 1/4” thickness:

Slow rise to 250°F/121°C (15 psi). Hold 2 ½ hours @ 250°F/121°C (15 psi). Cool down under pressure.

Internal Steam Method – 3/16” and 1/4” thickness:

Slow rise to 250°F/121°C (15 psi). Hold 5 hours @ 250°F/121°C (15 psi). Cool down under pressure

Atmospheric Steam Method – Up to 1/4” thickness:

Minimum of 24 hours @ 212°F/100°C. Lower durometer readings may result with this type cure.

Storage:

Store in a cool, dry area.

Shelf Life:

Stored below 50°F (10°C)	180 days
Stored between 51 and 70°F	60 days
Stored between 71 and 90°F	30 days
Do not store above 90°F (32°C)	

Storage, handling and application methods must conform to the Polycorp Rubber Lining Application Manual

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Typical Properties:

<u>Property</u>	<u>Value</u>	<u>ASTM Test Method</u>
Hardness (Face)	90 A \pm 10 45 D \pm 10	D2240 D2240
Tensile Strength (Min. psi)	1500 psi	D412
Elongation at Break (Min. %)	60	D412
Specific Gravity	1.252	D927
Adhesion to Metal (Min. lbs)	25	D429
Maximum Operating Temperature for Optimum Service Life	85°C/ 185°F	N/A

All physical property values developed and measured using a press-cured sample sheet prepared in accordance with ASTM D3182.

PRECAUTIONS:

- This is a hard rubber compound. Overcure will cause brittleness.
- Do not use in transport equipment or tanks to be installed outside.
- This lining may not be suitable for equipment that may be exposed to extremely low temperatures. If temperatures will be below 32 °F/0 °C, contact Polycorp with all the service conditions for a specific recommendation.
- Cool down to 120 °F/49 °C before releasing pressure during pressure cure.
- Do not ship lined tank below 20 °F