

1004

SEMI-HARD NATURAL RUBBER

March 2015

Polycorp 1004 is a black 60 D durometer “Superflexite A” semi-hard natural rubber lining with soft natural rubber tie gum. It provides excellent chemical and temperature resistance at elevated temperatures. It is FDA compliant as per 21CFR177.2600. Operating temperature range is from 41°F (5°C) to 185°F (85°C)

APPLICATION NOTES:

- **Skive** – use closed skive construction
- **Repair** – Same or 1038 chemical cure. Refer to section 11 of application manual.
- **Cured Durometer** – Shore D durometer of top surface: 60 ± 10. When using the atmospheric steam curing method, the 1004 will not obtain the pressure cured hardness.
- **Spark Test** – Refer to section 13 of the Application Manual

ADHESIVE NOTES:

See Section 6 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.

CURING:

Cure time adjustments may be required to compensate for specific conditions. See Section 10 of the Application Manual for detailed instructions. All recommendations below are for lining thicknesses up to ¼”.

Autoclave Method –

1/8” thickness: 2 hours @ 300°F/149°C

3/16” and 1/4” thickness: 1 hour @ 260°F/127°C, followed by 2 hours @ 300°F/149°C. Cool down under pressure.

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

10 hours @ 274°F/134°C (30 psi)

Atmospheric Steam Method – Minimum 40 hours

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

| Coat | Polycorp Adhesive | Approved Equivalent |
|--------------------------------|-------------------|---------------------|
| 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 |

STORAGE:

Store in a cool, dry area.

| Shelf Life | |
|--------------------------------|----------|
| Stored below 50°F (10°C) | 180 days |
| Stored between 51 and 70°F | 90 days |
| Stored between 71 and 90°F | 45 days |
| Do not store above 90°F (32°C) | |

Depending on storage conditions it may be possible to use rubber linings beyond the recommended shelf life however additional testing must be completed. Please contact Polycorp for recommended test procedures. A sample of the rubber lining can also be sent back to Polycorp for verification.

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

TYPICAL PROPERTIES:

| Property | Value | ASTM Test Method |
|--|----------------------------|------------------|
| Hardness (Face) (points) | 60D ± 10 | D2240 |
| Tensile Strength (min, psi) | 1500 psi | D412 |
| Elongation at Break (min, %) | 60 | D412 |
| Specific Gravity | 1.27 | D297 |
| Adhesion to Metal (min, lbf/in) | 25 | D429 |
| Operating Temperature Range for Optimum Service Life | 41°F (5°C) to 185°F (85°C) | 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. Over curing will cause brittleness.
- Do not use in transport equipment. 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.