

STANDARD INFORMATION

Standard: UL 1030

Standard ID: Sheathed Heating Elements [UL 1030:2015 Ed.8+R:26Jun2024]

Previous Standard ID: Sheathed Heating Elements [UL 1030:2015 Ed.8+R:31Oct2019]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **June 26, 2026**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes: Addition of new sheathed heating element materials. Specific details of new/revise requirements are found in table below.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
14	Info	Temperature Test
14.1	Info	<p>At the completion of the thermal endurance test described in Section 13, Thermal Endurance Test, the supply voltage is to be adjusted to the input test voltage. After temperatures have stabilized, see 9.3, the temperature of the sheath shall not exceed the applicable limit specified in Table 14.1. See 6.1 and 6.2.</p> <p>Exception: Table 14.1 specifies the maximum acceptable sheath temperatures for heating elements used in air. Higher temperatures are capable of being used, based upon the particular end-use application of the heating element.</p>

Temperature limits for sheathed heating element materials

Table 14.1

Material	Maximum temperature	
	°F	°C
A. METALLIC MATERIALS		
1. Copper	350	177
2. Aluminum	500	260
3. Brass	750	399
4. Cold rolled steel	750	399
5. Nickel Silver	1000	538
6. Stainless steel ^a		
a. Types <u>301</u> , 302, 303, 304, <u>304L</u> , 305, 308, 316, <u>316L</u> , <u>316N</u> , <u>316Ti</u> , 317, <u>317L</u> , 321, <u>329</u> , <u>330</u> , 347, <u>347M</u> , <u>348</u>	1400	760
b. Type <u>309</u> , 309S	1500	816
c. Type 310, <u>310S</u> , <u>314</u>	1600	871
d. Types 403, 405, <u>409</u> , 410, <u>414</u> , 416, <u>420</u> , <u>422</u> , <u>429</u> , <u>431</u> , 501	1200	649
e. Type 430, <u>430F</u> , <u>439F</u>	1300	704
f. Type 442, <u>444</u>	1400	760
g. Type 446	1500	816
h. <u>Type 926^d</u>	<u>1400</u>	<u>760</u>
7. Nickel alloys ^b		
a. Alloy <u>200</u> , 400	900	482



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		<table border="1"> <tr> <td>b. Alloy 600, <u>601</u>, <u>625</u>, <u>7128</u>, <u>X-750</u>, <u>C-276</u></td> <td>1800</td> <td>982</td> </tr> <tr> <td>c. Alloy 800, <u>800H</u>, <u>A286</u></td> <td>1700</td> <td>927</td> </tr> <tr> <td>d. Alloy 825</td> <td>1100</td> <td>593</td> </tr> <tr> <td>e. Alloy 840, <u>841</u></td> <td>1700</td> <td>927</td> </tr> <tr> <td colspan="2" style="text-align: center;">Material</td> <td style="text-align: center;">Maximum temperature</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">°F °C</td> </tr> <tr> <td>8. Cast iron</td> <td>1200</td> <td>649</td> </tr> <tr> <td>9. Titanium</td> <td>750</td> <td>399</td> </tr> <tr> <td colspan="2">B. NONMETALLIC MATERIALS^c</td> <td>Recognized temperature rating</td> </tr> <tr> <td colspan="3"> <p>a American Iron and Steel Institute (AISI) type designations.</p> <p>b American Society of Mechanical Engineers (ASME) type designations.</p> <p>c Includes but is not limited to insulated wire, polymeric materials, bushings, washers, end seals, and other components.</p> <p><u>d Intended for use only submersed in water.</u></p> </td> </tr> </table>	b. Alloy 600, <u>601</u> , <u>625</u> , <u>7128</u> , <u>X-750</u> , <u>C-276</u>	1800	982	c. Alloy 800, <u>800H</u> , <u>A286</u>	1700	927	d. Alloy 825	1100	593	e. Alloy 840, <u>841</u>	1700	927	Material		Maximum temperature			°F °C	8. Cast iron	1200	649	9. Titanium	750	399	B. NONMETALLIC MATERIALS ^c		Recognized temperature rating	<p>a American Iron and Steel Institute (AISI) type designations.</p> <p>b American Society of Mechanical Engineers (ASME) type designations.</p> <p>c Includes but is not limited to insulated wire, polymeric materials, bushings, washers, end seals, and other components.</p> <p><u>d Intended for use only submersed in water.</u></p>		
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