



# A276/A276M – 24a

TABLE 1 Continued

| UNS Designation <sup>B</sup> | Type               | Composition, %     |           |            |        |         |           |           |            |                    |  |
|------------------------------|--------------------|--------------------|-----------|------------|--------|---------|-----------|-----------|------------|--------------------|--|
|                              |                    | Carbon             | Manganese | Phosphorus | Sulfur | Silicon | Chromium  | Nickel    | Molybdenum | Nitrogen           | Other Elements <sup>L</sup>  |
| S40976                       | ...                | 0.030              | 1.00      | 0.040      | 0.030  | 1.00    | 10.5–11.7 | 0.75–1.00 | ...        | 0.040              | Cb<br>10x(C+N)-0.80  |
| S42900                       | 429                | 0.12               | 1.00      | 0.040      | 0.030  | 1.00    | 14.0–16.0 | ...       | ...        | ...                | ...  |
| S43000                       | 430                | 0.12               | 1.00      | 0.040      | 0.030  | 1.00    | 16.0–18.0 | ...       | ...        | ...                | ...  |
| S44400                       | 444                | 0.025              | 1.00      | 0.040      | 0.030  | 1.00    | 17.5–19.5 | 1.00      | 1.75–2.50  | 0.035              | Ti+Cb<br>0.20+4 x (C+N)-0.80   |
| S44600                       | 446                | 0.20               | 1.50      | 0.040      | 0.030  | 1.00    | 23.0–27.0 | 0.75      | ...        | 0.25               | ...  |
| S44627                       | XM-27 <sup>G</sup> | 0.010 <sup>H</sup> | 0.40      | 0.020      | 0.020  | 0.40    | 25.0–27.5 | 0.50      | 0.75–1.50  | 0.015 <sup>H</sup> | Cu 0.20<br>Cb<br>0.05–0.20<br>C+N 0.025<br>Cu 0.15<br>C+N 0.025<br>Cu 0.15 |
| S44700                       | ...                | 0.010              | 0.30      | 0.025      | 0.020  | 0.20    | 28.0–30.0 | 0.15      | 3.5–4.2    | 0.020              | ...  |
| S44800                       | ...                | 0.010              | 0.30      | 0.025      | 0.020  | 0.20    | 28.0–30.0 | 2.00–2.50 | 3.5–4.2    | 0.020              | ...  |
| Martensitic Grades           |                    |                    |           |            |        |         |           |           |            |                    |  |
| S40300                       | 403                | 0.15               | 1.00      | 0.040      | 0.030  | 0.50    | 11.5–13.0 | ...       | ...        | ...                | ...  |
| S41000                       | 410                | 0.08–0.15          | 1.00      | 0.040      | 0.030  | 1.00    | 11.5–13.5 | ...       | ...        | ...                | ...  |
| S41040                       | XM-30              | 0.18               | 1.00      | 0.040      | 0.030  | 1.00    | 11.0–13.0 | ...       | ...        | ...                | Cb<br>0.05–0.30  |
| S41400                       | 414                | 0.15               | 1.00      | 0.040      | 0.030  | 1.00    | 11.5–13.5 | 1.25–2.50 | ...        | ...                | ...  |
| S41425                       | ...                | 0.05               | 0.50–1.00 | 0.020      | 0.005  | 0.50    | 12.0–15.0 | 4.0–7.0   | 1.50–2.00  | 0.06–0.12          | Cu 0.30  |
| S41500                       | I                  | 0.05               | 0.50–1.00 | 0.030      | 0.030  | 0.60    | 11.5–14.0 | 3.5–5.5   | 0.50–1.00  | ...                | ...  |
| S42000                       | 420                | 0.15 min           | 1.00      | 0.040      | 0.030  | 1.00    | 12.0–14.0 | ...       | ...        | ...                | ...  |
| S42010                       | ...                | 0.15–0.30          | 1.00      | 0.040      | 0.030  | 1.00    | 13.5–15.0 | 0.35–0.85 | 0.40–0.85  | ...                | ...  |
| S43100                       | 431                | 0.20               | 1.00      | 0.040      | 0.030  | 1.00    | 15.0–17.0 | 1.25–2.50 | ...        | ...                | ...  |
| S44002                       | 440A               | 0.60–0.75          | 1.00      | 0.040      | 0.030  | 1.00    | 16.0–18.0 | ...       | 0.75       | ...                | ...  |
| S44003                       | 440B               | 0.75–0.95          | 1.00      | 0.040      | 0.030  | 1.00    | 16.0–18.0 | ...       | 0.75       | ...                | ...  |
| S44004                       | 440C               | 0.95–1.20          | 1.00      | 0.040      | 0.030  | 1.00    | 16.0–18.0 | ...       | 0.75       | ...                | ...  |
| S44026                       | ...                | 0.45–0.55          | 1.00      | 0.040      | 0.030  | 1.00    | 14.0–16.0 | ...       | 0.50–0.80  | 0.15               | V<br>0.10–0.20   |

<sup>A</sup> Maximum, unless range or minimum is indicated. Where ellipses ( . . . ) appear in this table, there is no requirement and the element need not be determined or reported.

<sup>B</sup> Designations established in accordance with Practice E527 and SAE J 1086.

<sup>C</sup> For some applications, the substitution of Type 304L for Type 304, or Type 316L for Type 316 may be undesirable because of design, fabrication, or service requirements. In such cases, the purchaser should so indicate on the order.

<sup>D</sup> UNS S31010 is a highly alloyed austenitic stainless steel type 3b as defined in NACE MR0175/ISO 15156-3.

<sup>E</sup> Nitrogen content is to be reported for this grade.

<sup>F</sup> % Cr + 3.3 x % Mo + 16 x % N ≥ 40.

<sup>G</sup> Nickel plus copper shall be 0.50 % max.

<sup>H</sup> Product analysis tolerance over the maximum limit for carbon and nitrogen shall be 0.002 %.

<sup>I</sup> Wrought version of CA 6NM.

<sup>J</sup> Iron shall be determined arithmetically by difference of 100 minus the sum of specified elements.

<sup>K</sup> (Al + Ti) = 0.85 - 1.20.

<sup>L</sup> The terms Columbium (Cb) and Niobium (Nb) both relate to the same element.

<sup>M</sup> % Cr + 3.3 x % Mo + 16 x % N ≥ 41.

<sup>N</sup> % Cr + 3.3 x % Mo + 16 x % N ≥ 48.

3.1.13 Choice of testing track from the options listed in Test Methods A1058 when material is ordered to an M suffix (SI units) product standard. If the choice of test track is not specified in the order, then the default ASTM track shall be used as noted in Test Methods A1058.

3.1.14 Supplementary requirements, and

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