

## Standard Alloy Steels

### Chemical Composition Ranges and Limits

| SAE No. | C       | Mn        | Cr       | Ni        | Mo      | Si | Other |
|---------|---------|-----------|----------|-----------|---------|----|-------|
| 1330    | .28/.33 | 1.60/1.90 | —        | —         | —       | —  | —     |
| 1335    | .33/.38 | 1.60/1.90 | —        | —         | —       | —  | —     |
| 1340    | .38/.43 | 1.60/1.90 | —        | —         | —       | —  | —     |
| 4023    | .20/.25 | .70/.90   | —        | —         | .20/.30 | —  | —     |
| 4027    | .25/.30 | .70/.90   | —        | —         | .20/.30 | —  | —     |
| 4028*   | .25/.30 | .70/.90   | —        | —         | .20/.30 | —  | —     |
| 4037    | .35/.40 | .70/.90   | —        | —         | .20/.30 | —  | —     |
| 4047    | .45/.50 | .70/.90   | —        | —         | .20/.30 | —  | —     |
| 4118    | .18/.23 | .70/.90   | .40/.60  | —         | .08/.15 | —  | —     |
| 4120a   | .18/.23 | .90/1.20  | .40/.60  | —         | .13/.20 | —  | —     |
| 4121b   | .18/.23 | .75/1.00  | .45/.65  | —         | .20/.30 | —  | —     |
| 4130    | .28/.33 | .40/.60   | .80/1.10 | —         | .15/.25 | —  | —     |
| 4131    | .28/.33 | .50/.70   | .90/1.20 | —         | .15/.25 | —  | —     |
| 4137    | .35/.40 | .70/.90   | .80/1.10 | —         | .15/.25 | —  | —     |
| 4140    | .38/.43 | .75/1.00  | .80/1.10 | —         | .15/.25 | —  | —     |
| 4142    | .40/.45 | .75/1.00  | .80/1.10 | —         | .15/.25 | —  | —     |
| 4145    | .43/.48 | .75/1.00  | .80/1.10 | —         | .15/.25 | —  | —     |
| 4147    | .45/.50 | .75/1.00  | .80/1.10 | —         | .15/.25 | —  | —     |
| 4150    | .48/.53 | .75/1.00  | .80/1.10 | —         | .15/.25 | —  | —     |
| 4320    | .17/.22 | .45/.65   | .40/.60  | 1.65/2.00 | .20/.30 | —  | —     |
| 4340    | .38/.43 | .60/.80   | .70/.90  | 1.65/2.00 | .20/.30 | —  | —     |
| E4340   | .38/.43 | .65/.85   | .70/.90  | 1.65/2.00 | .20/.30 | —  | —     |
| 4620    | .17/.22 | .45/.65   | —        | 1.65/2.00 | .20/.30 | —  | —     |
| 4715c   | .13/.18 | .70/.90   | .45/.65  | .70/1.00  | .45/.65 | —  | —     |
| 4720    | .17/.22 | .50/.70   | .35/.55  | .90/1.20  | .15/.25 | —  | —     |
| 4815    | .13/.18 | .40/.60   | —        | 3.25/3.75 | .20/.30 | —  | —     |
| 4820    | .18/.23 | .50/.70   | —        | 3.25/3.75 | .20/.30 | —  | —     |
| 5120    | .17/.22 | .70/.90   | .70/.90  | —         | —       | —  | —     |
| 5130    | .28/.33 | .70/.90   | .80/1.10 | —         | —       | —  | —     |

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|---------|----------|----------|-----------|---------|---------|-----------|---------|
| 5132    | .30/.35  | .60/.80  | .75/1.00  | —       | —       | —         | —       |
| 5140    | .38/.43  | .70/.90  | .70/.90   | —       | —       | —         | —       |
| 5150    | .48/.53  | .70/.90  | .70/.90   | —       | —       | —         | —       |
| 5160    | .56/.64  | .75/1.00 | .70/.90   | —       | —       | —         | —       |
| 51100   | .98/1.10 | .25/.45  | .90/1.15  | —       | —       | —         | —       |
| 52100   | .98/1.10 | .25/.45  | 1.30/1.60 | —       | —       | —         | —       |
| 6150    | .48/.53  | .70/.90  | .80/1.10  | —       | —       | —         | .15 min |
| 8615    | .13/.18  | .70/.90  | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8617    | .15/.20  | .70/.90  | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8620    | .18/.23  | .70/.90  | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8622    | .20/.25  | .70/.90  | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8630    | .28/.33  | .70/.90  | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8637    | .35/.40  | .75/1.00 | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8640    | .38/.43  | .75/1.00 | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8645    | .43/.48  | .75/1.00 | .40/.60   | .40/.70 | .15/.25 | —         | —       |
| 8720    | .18/.23  | .70/.90  | .40/.60   | .40/.70 | .20/.30 | —         | —       |
| 8822    | .20/.25  | .75/1.00 | .40/.60   | .40/.70 | .30/.40 | —         | —       |
| 9259    | .56/.64  | .75/1.00 | .45/.65   | —       | —       | .70/1.10  | —       |
| 9260    | .56/.64  | .75/1.00 | —         | —       | —       | 1.80/2.20 | —       |

**NOTE:** Unless specified: Si = .15/.35, P = .025 max, S = .025 max, Ni = .25 max, Cr = .20 max, Mo = .06 max.

These standard grades can have modifications in chemistry when agreed upon by user and supplier.

\* Sulfur content is .035/.050.