



# ELECTROVEK-STEEL

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## NI-CR AND NI-CR-FE ALLOY GENERAL PROPERTIES

|   |    | Ni80Cr20    | Ni60Cr15    | Ni35Cr20      | Ni30Cr20      |
|---|----|-------------|-------------|---------------|---------------|
| Chemical composition                                    | Ni | Rest        | 55.0-61.0   | 34.0-37.0     | 30.0-34.0     |
|   | Cr | 20.0-23.0   | 15.0-18.0   | 18.0-21.0     | 18.0-21.0     |
|   | Fe | ≤1.0        | Rest        | Rest          | Rest          |
|   | C  | ≤0.060      | ≤0.060      | ≤0.060        | ≤0.060        |
|   | Si | 1.0-1.5     | 1.0-1.5     | 1.0-1.5       | 1.0-1.5       |
|   | Mn | ≤0.60       | ≤0.60       | ≤0.60         | ≤0.60         |
|   | S  | ≤0.015      | ≤0.015      | ≤0.015        | ≤0.015        |
|   | P  | ≤0.020      | ≤0.020      | ≤0.020        | ≤0.020        |
|   | Ti | ≤0.20       | ≤0.20       | ≤0.20         | ≤0.20         |
| Max. continuous service temp. of element (°C)           |    | 1200        | 1150        | 1100          | 1100          |
| Resistivity at 20°C (Ω.mm <sup>2</sup> /m)              |    | 1.09        | 1.12        | 1.0           | 1.04          |
| Density (g/cm <sup>3</sup> )                            |    | 8.40        | 8.20        | 7.90          | 7.90          |
| Thermal conductivity (KJ/m*hour* °C)                    |    | 60.3        | 45.2        | 43.8          | 43.8          |
| Coefficient of lines expansion (α×10 <sup>-6</sup> /°C) |    | 18.0        | 17.0        | 19.0          | 19.0          |
| Melting point °C  |    | 1400        | 1390        | 1390          | 1390          |
| Elongation at rupture, %                                |    | >20         | >20         | >20           | >20           |
| Micrographic structure                                  |    | austenite   | austenite   | austenite     | austenite     |
| Magnetic properties                                     |    | nonmagnetic | nonmagnetic | Weak magnetic | Weak magnetic |