

AK Steel ASTM A 424 Type 1, UNIVIT® DS Enameling Carbon Steel

Category : Metal , Ferrous Metal , Carbon Steel , Low Carbon Steel

Material Notes:

UNVIT is a specialty enameling steel developed for applications where direct-on cover coat enameling is employed. This product is free of porcelain enamel fishscale regardless of the enameling system employed. Information provided by AK Steel

Order this product through the following link:

http://www.lookpolymers.com/polymer_AK-Steel-ASTM-A-424-Type-1-UNIVIT-DS-Enameling-Carbon-Steel.php

| Physical Properties | Metric | English | Comments |
|---------------------|-----------|--------------------------|----------|
| Density | 7.87 g/cc | 0.284 lb/in ³ | |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|---------|-----------|---|
| Tensile Strength, Ultimate | 300 MPa | 43500 psi | .0275 - .035 inches sheet thickness; ASTM A 370 |
| Tensile Strength, Yield | 178 MPa | 25800 psi | .0275 - .035 inches sheet thickness; ASTM A 370 |
| Elongation at Break | 46 % | 46 % | in 2 inches; ASTM A 370 |
| Modulus of Elasticity | 200 GPa | 29000 ksi | |

| Thermal Properties | Metric | English | Comments |
|------------------------|----------------------------|-----------------------------------|----------|
| CTE, linear | 11.9 µm/m-°C | 6.61 µin/in-°F | |
| | @Temperature 20.0 - 100 °C | @Temperature 68.0 - 212 °F | |
| Specific Heat Capacity | 0.481 J/g-°C | 0.115 BTU/lb-°F | |
| | @Temperature 50.0 - 100 °C | @Temperature 122 - 212 °F | |
| Thermal Conductivity | 90.0 W/m-K | 625 BTU-in/hr-ft ² -°F | |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|----------|----------|--------------|
| Aluminum, Al | 0.050 % | 0.050 % | |
| Carbon, C | 0.0030 % | 0.0030 % | |
| Copper, Cu | 0.020 % | 0.020 % | |
| Iron, Fe | 99.687 % | 99.687 % | As Remainder |
| Manganese, Mn | 0.21 % | 0.21 % | |
| Phosphorous, P | 0.010 % | 0.010 % | |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|---------|---------|----------|
| Sulfur, S | 0.010 % | 0.010 % | |

| Electrical Properties | Metric | English | Comments |
|------------------------|------------------|------------------|----------|
| Electrical Resistivity | 0.0000142 ohm-cm | 0.0000142 ohm-cm | |

| Descriptive Properties | Value | Comments |
|-------------------------------|-------|-------------------------------------|
| Deep-Drawing Capability r_m | 1.2 | .0275 - .035 inches sheet thickness |
| Strain Hardening Exponent n | 0.23 | .0275 - .035 inches sheet thickness |

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