

## Latrobe Lescalloy® HY-180 VIM-VAR ; 4.01 - 8.00 thickness High Strength Alloy Steel

Category : Metal , Ferrous Metal , Alloy Steel , Carbon Steel , Medium Carbon Steel

### Material Notes:

LESCALLOY HY-180 VIM-VAR steel is a high strength alloy steel with superior toughness. It is double vacuum melted (VIM-VAR vacuum induction melted followed by vacuum arc remelting) to provide superior cleanliness and ingot homogeneity, and to enhance mechanical properties. Mechanical Properties from FMS-1111 Specification Information Provided by Timken Latrobe Steel. Timken sold Latrobe in December 2006. They are now Latrobe Specialty Steels Co.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Latrobe-Lescalloy-HY-180-VIM-VAR-401-800-thickness-High-Strength-Alloy-Steel.php](http://www.lookpolymers.com/polymer_Latrobe-Lescalloy-HY-180-VIM-VAR-401-800-thickness-High-Strength-Alloy-Steel.php)

| Physical Properties | Metric    | English                  | Comments |
|---------------------|-----------|--------------------------|----------|
| Density             | 7.75 g/cc | 0.280 lb/in <sup>3</sup> |          |

| Mechanical Properties      | Metric                          | English                             | Comments |
|----------------------------|---------------------------------|-------------------------------------|----------|
| Tensile Strength, Ultimate | 1310 MPa                        | 190000 psi                          |          |
| Tensile Strength, Yield    | 1172 MPa                        | 170000 psi                          |          |
| Elongation at Break        | 10 %                            | 10 %                                |          |
| Reduction of Area          | 50 %                            | 50 %                                |          |
| Modulus of Elasticity      | 190 GPa                         | 27600 ksi                           |          |
| Charpy Impact              | 54.0 J<br>@Temperature -17.8 °C | 39.8 ft-lb<br>@Temperature 0.000 °F | V-notch  |

| Component Elements Properties | Metric  | English | Comments |
|-------------------------------|---------|---------|----------|
| Carbon, C                     | 0.13 %  | 0.13 %  |          |
| Chromium, Cr                  | 2.0 %   | 2.0 %   |          |
| Cobalt, Co                    | 8.0 %   | 8.0 %   |          |
| Iron, Fe                      | 78.72 % | 78.72 % |          |
| Manganese, Mn                 | 0.10 %  | 0.10 %  |          |
| Molybdenum, Mo                | 1.0 %   | 1.0 %   |          |
| Nickel, Ni                    | 10 %    | 10 %    |          |
| Silicon, Si                   | 0.050 % | 0.050 % |          |

| Chemical Properties  | Metric | English | Comments |
|----------------------|--------|---------|----------|
| Critical Temperature | 166 °C | 331 °F  | Mf       |
|                      | 327 °C | 621 °F  | Ms       |
|                      | 624 °C | 1160 °F | Ac1      |
|                      | 793 °C | 1460 °F | Ac3      |

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