

## Crucible Steel Aquamet® 18 Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

### Material Notes:

AQUAMET 18 is an austenitic stainless steel with corrosion resistance comparable to that of Type 304. Its good strength and toughness make it an ideal shafting material for workboats. It provides a stainless alternative to ABS Grade 2 carbon steel shafting, but requires no sleeves nor fiberglass. In certain large diameters, it does offer a strength advantage over AQUAMET 19. (See properties below.) It is frequently used on pusher tugs, tow boats, supply boats and fishing trawlers. NOTE: AQUAMET 18 is currently available by special order on a heat lot basis only. Information provided by Crucible Specialty Metals.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Crucible-Steel-Aquamet-18-Stainless-Steel.php](http://www.lookpolymers.com/polymer_Crucible-Steel-Aquamet-18-Stainless-Steel.php)

| Mechanical Properties      | Metric                                  | English                                   | Comments         |
|----------------------------|---|---|------------------|
| Tensile Strength, Ultimate | 621 MPa                                 | 90000 psi                                 |                  |
|                            | @Thickness 203 - 305 mm                 | @Thickness 8.00 - 12.0 in                 |                  |
|                            | 827 MPa                                 | 120000 psi                                |                  |
|                            | @Thickness <=44.5 mm                    | @Thickness <=1.75 in                      |                  |
| Tensile Strength, Yield    | 345 MPa                                 | 50000 psi                                 | Tension          |
|                            | @Strain 0.200 %, Thickness 203 - 305 mm | @Strain 0.200 %, Thickness 8.00 - 12.0 in |                  |
|                            | 621 MPa                                 | 90000 psi                                 | Tension          |
|                            | @Strain 0.200 %, Thickness <=44.5 mm    | @Strain 0.200 %, Thickness <=1.75 in      |                  |
| Elongation at Break        | 35 %                                    | 35 %                                      | in 2"; 8" to 12" |
|                            | 20 %                                    | 20 %                                      | in 2"            |
|                            | @Thickness <=44.5 mm                    | @Thickness <=1.75 in                      |                  |
| Reduction of Area          | 45 %                                    | 45 %                                      |                  |
|                            | @Thickness 203 - 305 mm                 | @Thickness 8.00 - 12.0 in                 |                  |
|                            | 50 %                                    | 50 %                                      |                  |
|                            | @Thickness <=44.5 mm                    | @Thickness <=1.75 in                      |                  |
| Shear Strength             | 228 MPa                                 | 33000 psi                                 |                  |
|                            | @Strain 0.200 %, Thickness 203 - 305 mm | @Strain 0.200 %, Thickness 8.00 - 12.0 in |                  |
|                            | 414 MPa                                 | 60000 psi                                 |                  |

| Mechanical Properties | Metric                                | English                                | Comments |
|-----------------------|---------------------------------------|--|----------|
|                       | @ Strain 0.200 %, Thickness <=44.5 mm | @ Strain 0.200 %, Thickness <= 1.75 in |          |

| Component Elements Properties | Metric        | English       | Comments     |
|-------------------------------|---------------|---------------|--------------|
| Carbon, C                     | <= 0.15 %     | <= 0.15 %     |              |
| Chromium, Cr                  | 16.5 - 19 %   | 16.5 - 19 %   |              |
| Iron, Fe                      | >= 62.81 %    | >= 62.81 %    | As Remainder |
| Manganese, Mn                 | 11 - 14 %     | 11 - 14 %     |              |
| Nickel, Ni                    | 0.50 - 2.5 %  | 0.50 - 2.5 %  |              |
| Nitrogen, N                   | 0.20 - 0.45 % | 0.20 - 0.45 % |              |
| Phosphorous, P                | <= 0.060 %    | <= 0.060 %    |              |
| Silicon, Si                   | <= 1.0 %      | <= 1.0 %      |              |
| Sulfur, S                     | <= 0.030 %    | <= 0.030 %    |              |

## Contact Songhan Plastic Technology Co.,Ltd.

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