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Astrolite® Titanium Technical Data Sheet – common AWS Ti grades

Product Description:

Astrolite® titanium-AWS grades are used to weld non-aerospace applications including chemical process equipment. The higher purity demanded by AWS grades help insure good weld ductility, strength and toughness.

Astrolite® UltraGrade™ surface finish on the spooled wire promotes smooth feeding through welding equipment which may result in reduced tip wear in contact tips.

Astrolite UltraGrade™ wire cleaning processes insure very clean wire surface for reliable welding performance.

Specifications:

AWS A5.16 ERTi-1, ERTi-2, ERTi-5, ERTi-7, ERTi-11, ERTi-12, & ERTi-23. (Other grades may also be supplied on demand).

Nominal Composition (% by weight) & Mechanical properties:

Ti welding wire grade>	Astrolite® ERTi-1	Astrolite® ERTi-2	Astrolite® ERTi-5	Astrolite® ERTi-7	Astrolite® ERTi-11	Astrolite® ERTi-12	Astrolite® ERTi-23
Also known as	Ti-1	Ti-2	6AL/4V	TiPd	TiPd ELI	Ti-12, TiCode12	6AL/4VELI
AWS Numerical	Ti 0100	Ti 0120	Ti 6402	Ti 2401	Ti 2251	Ti 3401	Ti 6408
UNS #	R50250	R50250	R56400	R52250	R52250	R53400	R56402
Chemical composition, % by weight							
Titanium	Balance	Balance	Balance	Balance	Balance	Balance	Balance
Carbon	0.03	0.03	0.05	0.03	0.03	0.03	0.03
Oxygen	0.03 - 0.10	0.08 - 0.16	0.012 - 0.20	0.08 - 0.16	0.03 - 0.10	0.08 - 0.16	0.03 - 0.11
Nitrogen	0.012	0.015	0.030	0.015	0.012	0.015	0.012
Hydrogen	0.005	0.008	0.015	0.008	0.005	0.008	0.005
Iron	0.08	0.12	0.22	0.12	0.08	0.12	0.20
Yttrium	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Palladium	-	-	-	0.12 - 0.25	0.12 - 0.25	-	-
Nickel	-	-	-	-	-	0.6 - 0.9	-
Molybdenum	-	-	-	-	-	0.2 - 0.4	-
Aluminum	-	-	5.50 - 6.75	-	-	-	5.5 - 6.5
Vanadium	-	-	3.50 - 4.50	-	-	-	3.5 - 4.5
Other elements, each	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Other elements, total	0.20	0.20	0.20	0.20	0.20	0.20	0.20

Available Product Forms and Sizes, Packaging & Identification:

Straight Lengths	Spooled
AMS-2813 – Standard packaging AMS-2814 – Premium packaging <i>available upon request</i> Vapor barrier packaging <i>available upon request</i> . <i>1 LB and 5 LB bags available.</i>	Precision layer wound, with controlled cast and helix AMS-2813 – standard packaging AMS-2814 – Premium, vapor barrier packaging <i>available upon request</i> .
36" (914 mm) – Standard length. Other lengths <i>available on request</i> . Flag tagged on one end per AMS-2816. <i>Tagging of both ends available upon request.</i> Color coding to AMS-2819 or customer-specific specification is <i>available upon request</i> .	12" – Standard spool diameter <i>Other spool diameters; 4" & 8" diameter spools available on request.</i>
Diameters: 0.020", 0.025", 0.030", 0.035", 0.040", 0.045", 0.062", 0.078", 0.093", 0.125"	<i>Upon request special diameters and shapes may be available.</i>

DFARS Compliant

** The data and information contained in this pamphlet have been taken from open literature and is believed to be reliable. The information contained is intended to be used as a guide. Tricor Industrial Inc. does not make any warranty or assume any legal liability for its accuracy, completeness or usefulness. **

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