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| <b>AEROSPACE<br/>MATERIAL SPECIFICATION</b>                           | <b>AMS4982™</b>   | <b>REV. G</b> |
|   | Issued 1974-12<br>Reaffirmed 2019-10<br>Revised 2020-07 |               |
| Titanium Alloy Wire<br>44.5 Cb<br>(Composition similar to UNS R58450) |   |               |

## RATIONALE

AMS4982G results from a Five-Year Review and update of this specification that adds analytical methods ASTM E539 and ASTM E2994 (3.1) and revises exceptions (3.9, 4.4.2, and 5.1).

### 1. SCOPE

#### 1.1 Form

The specification covers a titanium alloy in the form of wire.

#### 1.2 Application

This wire has been used typically for parts, such as fasteners, where cold formability is desirable or necessary and which requires a high strength-to-weight ratio up to 800 °F (427 °C), but usage is not restricted to such applications.

#### 1.3 Classification

This specification covers two types of wire based upon condition supplied, as follows:

Type 1: Annealed

Type 2: As drawn

1.3.1 Type 1 shall be supplied unless Type 2 is specified.

### 2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

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<https://www.sae.org/standards/content/AMS4982G>

## 2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

|         |  |
|---------|--|
| AMS2241 | Tolerances, Corrosion and Heat-Resistant Steel, Iron Alloy, Titanium, and Titanium Alloy Bars and Wire |
| AMS2249 | Chemical Check Analysis Limits, Titanium and Titanium Alloys   |
| AMS2809 | Identification, Titanium and Titanium Alloy Wrought Products   |
| AS6279  | Standard Practice for Production, Distribution, and Procurement of Metal Stock                         |

## 2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, [www.astm.org](http://www.astm.org).

|             |  |
|-------------|--|
| ASTM E8/E8M | Tension Testing of Metallic Materials  |
| ASTM E112   | Determining Average Grain Size   |
| ASTM E539   | Analysis of Titanium Alloys by X-Ray Fluorescence Spectrometry   |
| ASTM E1409  | Determination of Oxygen and Nitrogen in Titanium and Titanium Alloys by Inert Gas Fusion   |
| ASTM E1447  | Determination of Hydrogen in Titanium and Titanium Alloys by the Inert Gas Fusion Thermal Conductivity/Infrared Detection Method |
| ASTM E1941  | Determination of Carbon in Refractory and Reactive Metals and Their Alloys by Combustion Analysis                                |
| ASTM E2371  | Analysis of Titanium and Titanium Alloys by Direct Current Plasma and Inductively Coupled Plasma Atomic Emission Spectrometry    |
| ASTM E2994  | Analysis of Titanium and Titanium Alloys by Spark Atomic Emission Spectrometry and Glow Discharge Atomic Emission Spectrometry   |

## 3. TECHNICAL REQUIREMENTS

### 3.1 Composition

Shall conform to the percentages by weight shown in Table 1; carbon shall be determined in accordance with ASTM E1941, hydrogen in accordance with ASTM E1447, oxygen and nitrogen in accordance with ASTM E1409, and other elements in accordance with ASTM E539, ASTM E2371, or ASTM E2994. Other analytical methods may be used if acceptable to the purchaser.