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|  <b>AEROSPACE<br/>MATERIAL<br/>SPECIFICATION</b>               | <b>AMS 5378F</b>                                                                                                                        |  |
|                                                                                                                                                | Issued SEP 1947<br>Revised OCT 1982<br>Noncurrent NOV 1995<br>Reaf. Noncur. JAN 2002<br>Cancelled APR 2007<br><br>Superseding AMS 5378E |  |
| Alloy Castings, Investment, Corrosion and Heat Resistant<br>65.5Co - 25Cr - 1.8Ni - 5.0W<br>As Cast<br><br>(Composition similar to UNS R30023) |                                                                                                                                         |  |

### RATIONALE

AMS 5378F has been designated cancelled because survey of aerospace users indicated that this product is not being procured to this specification.

### CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of April, 2007. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications, indicating that it has been "CANCELLED".

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# AEROSPACE MATERIAL SPECIFICATION



AMS 5378E

Issued SEP 1947  
Revised OCT 1982  
Noncurrent NOV 1995  
Reaf. Noncur. JAN 2002

Superseding AMS 5378D

Alloy Castings, Investment, Corrosion and Heat Resistant  
35Co - 24.5Cr - 32.5Ni - 5.5Mo  
As Cast

UNS R30027

## NONCURRENT NOTICE

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of November 1995. It is recommended, therefore, that this specification not be specified for new designs.

"NONCURRENT" refers to those materials which have previously been widely used and which may be required on some existing designs in the future. The Aerospace Materials Division, however, does not recommend these as standard materials for future use in new designs. Each of these "NONCURRENT" specifications is available from SAE.

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## 1. SCOPE:

### 1.1 Form:

This specification covers a corrosion and heat resistant cobalt alloy in the form of investment castings.

### 1.2 Application:

Primarily for small parts, such as turbine blades and vanes, requiring high strength up to 1500°F (815°C) and oxidation resistance up to 2000°F (1095°C). Although difficult to machine, this alloy is more machinable than other similar cobalt-chromium-nickel alloys. Exposure to elevated temperatures may cause hardening of this alloy; e.g., exposure to approximately 1475°F (800°C) for 50 hr may result in hardness as high as 32 HRC.

## 2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications (AMS) shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

### 2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

#### 2.1.1 Aerospace Material Specifications:

|          |                                                     |
|----------|-----------------------------------------------------|
| AMS 2350 | Standards and Test Methods                          |
| AMS 2360 | Room Temperature Tensile Properties of Castings     |
| AMS 2361 | Elevated Temperature Tensile Properties of Castings |
| AMS 2635 | Radiographic Inspection                             |
| AMS 2645 | Fluorescent Penetrant Inspection                    |
| AMS 2694 | Repair Welding of Aerospace Castings                |
| AMS 2804 | Identification, Castings                            |

### 2.2 ASTM Publications:

Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia PA 19103.

|           |                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------|
| ASTM E8   | Tension Testing of Metallic Materials                                                                          |
| ASTM E18  | Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials                                      |
| ASTM E21  | Elevated Temperature Tension Tests of Metallic Materials                                                       |
| ASTM E192 | Reference Radiographs of Investment Steel Castings for Aerospace Applications                                  |
| ASTM E354 | Chemical Analysis of High-Temperature, Electrical, Magnetic, and Other Similar Iron, Nickel, and Cobalt Alloys |