



AEROSPACE MATERIAL SPECIFICATION

AMS7724™**REV. D**

Issued	1968-05
Revised	1987-01
Noncurrent	2001-10
Reaf. Nonc.	2012-04
Stabilized	2017-04

Superseding AMS7724C

Alloy Sheet and Strip, Sintered Wire Mesh, Corrosion and Heat Resistant
30Fe - 1.5Mn - 21Cr - 20Ni - 20Co - 3.0Mo - 2.5W - 1.0(Cb + Ta) - 0.15N

Porous

(Composition similar to UNS R30100)

RATIONALE

AMS7724D stabilizes this document because it contains mature technology that is not expected to change and thus no further revisions are anticipated.

STABILIZED NOTICE

AMS7724D has been declared "STABILIZED" by the SAE AMS F Corrosion Heat Resistant Alloys Committee. This document was stabilized because this document contains mature technology that is not expected to change and thus no further revisions are anticipated. Previously this document was non-current. The last technical update of this document occurred in January, 1987. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to this specification; including exceptions listed on the certification.

NOTE: In many cases, the purchaser may represent a sub tier supplier and not the cognizant engineering organization.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2017 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
<http://www.sae.org>

SAE WEB ADDRESS:

Full document details: SAE AMS7724D

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/AMS7724D>

1. SCOPE:

1.1 Form:

This specification covers a corrosion and heat resistant iron alloy sintered wire mesh in the form of sheet and strip.

1.2 Application:

Primarily for parts, such as filters and transpiration cooling devices, requiring controlled flow of liquids and gases.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications 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 2248 Chemical Check Analysis Limits, Wrought Corrosion and Heat Resistant Steels and Alloys, Maraging and Other Highly-Alloyed Steels, and Iron Alloys
- AMS 2350 Standards and Test Methods
- AMS 2371 Quality Assurance Sampling of Corrosion and Heat Resistant Steels and Alloys, Wrought Products Except Forgings and Forging Stock

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 E112 Determining Average Grain Size
- ASTM E290 Semi-Guided Bend Test for Ductility of Metallic Materials
- ASTM E354 Chemical Analysis of High-Temperature, Electrical, Magnetic, and Other Similar Iron, Nickel, and Cobalt Alloys

2.3 U.S. Government Publications:

Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Military Standards:

MIL-STD-163 Steel Mil Products, Preparation for Shipment and Storage

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the following percentages by weight, determined by wet chemical methods in accordance with ASTM E354 or by spectrographic or other analytical methods approved by purchaser:

	min	max
Carbon	--	0.10
Manganese	1.00	2.00
Silicon	--	1.00
Phosphorus	--	0.040
Sulfur	--	0.030
Chromium	20.00	22.50
Nickel	19.00	21.00
Cobalt	18.50	21.00
Molybdenum	2.50	3.50
Tungsten	2.00	3.00
Columbium + Tantalum	0.75	1.25
Nitrogen	0.10	0.20
Iron	remainder	

3.1.1 Check Analysis: Composition variations shall meet the requirements of AMS 2248.

3.2 Fabrication:

The product shall be made from one or more layers of wire mesh fabricated into an integral structure by multiple rolling and sintering operations. Wire mesh shall have a smaller number of wires per inch (25 mm) in the warp direction than in the filler direction and shall have weave and wire count selected to yield a product having the required flow rate. Sintering shall be performed in a dry, inert or reducing atmosphere at a temperature which will ensure uniform bonding of the layers without incipient melting.

3.2.1 Requirements for construction will be specified by a series of numbers separated by dashes showing the number of plies, nominal thickness, and the air-flow rate (See 3.4.4); e.g., 2-33-120 will indicate a two-ply product having a nominal thickness of 0.033 in. and an air-flow rate of 120 SCFM per sq ft in inch/pound units and 2-84-366 will indicate a two-ply product having a nominal thickness of 0.84 mm and an air-flow rate of 3.66 m³/min. per m² in SI units.

3.3 Condition:

The product shall be supplied in the as-sintered condition unless the product is cold rolled after the final sintering operation, in which case the product shall be stress relieved by heating in a dry, inert or reducing atmosphere to 2100°F ± 25 (1150°C ± 15), holding at heat for not more than 30 min., and cooling at a rate equivalent to air cool or faster.