

FED. SUPPLY CLASS

5325

1. SCOPE

1.1 Scope. This specification covers helical coil screw-thread inserts made from formed wire, the inner surfaces of which, after assembly, provide threads as specified.

1.2 Classification. Inserts shall be of the following types and classes, as specified (see 6.2).

a. Type I - Coarse thread

(1) Class 1 - Free running.

(2) Class 2 - Screw locking (self-locking).

b. Type II - Fine thread

(1) Class 1 - Free running.

(2) Class 2 - Screw locking (self-locking).

c. Type III - Taper pipe thread

(1) Class 5 - NPT pipe thread

(2) Class 6 - ANPT pipe thread

d. Type IV - Metric - spark plug thread

(1) Class 3 - Staking (spark plug thread)

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

FEDERAL

FED-STD-H28/2 Screw Thread Standards for Federal Services, Section 2, Unified Inch

FED-STD-H28/7 Screw Thread Standards for Federal Services, Section 7, Pipe Threads, General Purpose

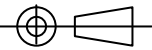
MILITARY

MS9018 Insert - 18-1.5MM Aviation Spark Plug Helical Coil

MS9071 Bosses, 18-1.50MM Spark Plug Thread Helical Insert, Standard Dimensions for (ASG)

① COMPLETELY REVISED

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MIL-I-8846, REVISION D AMENDMENT 1, SUPPLEMENT 1.

THIRD ANGLE PROJECTION 	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NONE	TITLE INSERT, SCREW-THREAD, HELICAL COIL	CLASSIFICATION SPECIFICATION NASM8846 SHEET 1 OF 10

USE OF OR REFERENCE UPON THIS DOCUMENT OR ANY NATIONAL AEROSPACE STANDARD IS ENTIRELY VOLUNTARY. AIA DOES NOT QUALIFY SUPPLIERS OR CERTIFY

Copyright Aerospace Industries Association of America Inc. AIA MAKES NO REPRESENTATION OR CLAIM RESPECTING (1) THE SUITABILITY OF
Provided by IHS under license with AIA/NAS Licensee= www.sepana.ir/5991803002, User=sam, albert
No reproduction or networking permitted without license from IHS. Not for Resale, 01/04/2016 22:35:25 MST TRADEMARKS RIGHTS.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST
REVISION DATE:

FORM 09-01

REVISION DATE: JULY 29, 2011

ISSUE DATE: MAY 1998

Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks can be obtained from the Department of Defense Single Stock Point (DODSSP) <http://dodssp.daps.dla.mil>.

- 2.2 **Non-Government publications.** The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B46.1 Surface Texture (Surface Roughness, Waviness, and Lay)

Copies can be obtained from ASME, Three Park Ave., New York, NY 10016-5990 www.asme.org

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 8/E 8M	Materials, Metallic, Tension Testing of
ASTM E290	Materials, Metallic, Semi-guided Bend Test for Ductility of
ASTM E1282	Standard Guide for Specifying the Chemical Compositions and Selecting Sampling Practices and Quantitative Analysis Methods for Metals and Alloys
ASTM D3951-90	Standard Practice for Commercial Packaging

Copies can be obtained from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959 USA www.astm.org

NATIONAL AEROSPACE STANDARDS (NAS)

NAS1130	Insert Screw Thread, Helical Coil, Free Running and Self-Locking, Tangless
NAS6603 thru 6620	Bolt, Hex Head, Close Tolerance, Alloy Steel, Long Thread, Self-Locking and Nonlocking
NAS1352	Screw, Cap, Socket Head and Screw Cap Socket Head, Self-Locking, Alloy Steel, Cadmium Plated, UNC-3A
NASM21209	Insert, Screw Thread, Coarse and Fine, Screw Locking, Helical Coil, CRES
NASM33537	Insert - Screw-Thread, Helical Coil Coarse and Fine Thread, Standard Dimensions for
NASM122076 thru	Insert - CRES Helical Coil Coarse Thread, 1 Dia Nominal Length
NASM122115	
NASM122116 thru	Insert - CRES Helical Coil Coarse Thread, 1-1/2 Dia Nominal Length
NASM122155	
NASM122156 thru	Insert - CRES Helical Coil Coarse Thread, 2 Dia Nominal Length
NASM122195	
NASM122196 thru	Insert - CRES Helical Coil Coarse Thread, 2-1/2 Dia Nominal Length
NASM122235	
NASM122236 thru	Insert-CRES Helical Coil Coarse Thread, 3 Dia Nominal Length
NASM122275	
NASM124651 thru	Insert CRES Helical Coil Fine Thread, 1 Dia Nominal Length
NASM124690	
NASM124691 thru	Insert CRES Helical Coil Fine Thread, 1-1/2 Dia Nominal Length
NASM124730	
NASM124731 thru	Insert CRES Helical Coil Fine Thread, 2 Dia Nominal Length
NASM124770	
NASM124771 thru	Insert CRES Helical Coil Fine Thread, 2-1/2 Dia Nominal Length
NASM124810	
NASM124811 thru	Insert CRES Helical Coil Fine Thread, 3 Dia Nominal Length
NASM124850	

Copies can be obtained from the Aerospace Industries Association, 1000 Wilson Blvd., Suite 1700, Arlington, VA 22209 www.aia-aerospace.org

① COMPLETELY REVISED

REVISION

1

NASM8846

SHEET 2



Document Sharing Hub

USE OF OR RELIANCE UPON THIS DOCUMENT OR ANY NATIONAL AEROSPACE STANDARD IS ENTIRELY VOLUNTARY. AIA DOES NOT QUALIFY SUPPLIERS OR CERTIFY

Copyright Aerospace Industries Association of America Inc. AIA MAKES NO REPRESENTATION OR CLAIM RESPECTING (1) THE SUITABILITY OF
Provided by IHS under license with AIA/NAS Licensee= www.sepana.ir/5991803002, User=sam, albert
No reproduction or networking permitted without license from IHS Not for Resale, 01/04/2016 22:35:25 MST TRADEMARKS RIGHTS.

Full document details: AIA NASM8846 2011

SAE International

- AS7245 Inserts, Screw Thread, Helical Coil 19Cr-9.2Ni, Corrosion Resistant Steel, Procurement for
AS71051 Pipe Threads, Taper, Aeronautical National Form, Symbol ANPT, General Requirements for
AS8879 Screw Threads, Controlled Radius Root with Increased Minor Diameter, General Specification for

Copies can be obtained from SAE International, 400 Commonwealth Dr., Warrendale, PA 15096-0001 www.sae.org

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

- 2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets, or MS and NAS standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

- 3.1 Associated specifications and standards. The individual item requirements shall be as specified herein and in accordance with the applicable standard. In the event of any conflict between the requirements of this specification and the MS sheets and NAS standard, the latter shall govern.
- 3.2 Material. Unless otherwise specified on the drawing, the wire shall be manufactured from induction furnace or electric arc furnace steel, cold drawn, and shaped by rolling to conform to this specification and the applicable MS and NAS standards.
- 3.2.1 Chemical composition. The chemical composition of the wire shall conform to Table I (AS7245).

TABLE I – Chemical Composition

Element	Analysis (Percent)
Carbon	0.15 Max
Manganese	2.00 Max
Silicon	1.00 Max
Phosphorus	0.045 Max
Sulfur	0.035 Max
Chromium	17.00 to 20.00
Nickel	8.00 to 10.50
Molybdenum	0.75 Max
Copper	0.75 Max
Iron	Remainder

- 3.2.2 Tensile Strength. Before coiling into parts, the wire shall have a tensile strength not lower than 150,000 pounds per square inch (psi) (see 4.4.2).
- 3.2.3 Cold-bending. Wire from which the inserts are made shall withstand, without cracking, bending at room temperature through an angle of 180 degrees around a diameter equal to twice the cross-sectional dimension of the wire in the plane of bend (see 4.4.3).
- 3.3 Design. The detail design and dimensions of the inserts shall conform to the applicable MS sheets and NAS standards (see 3.1).
- 3.3.1 Surface texture. The surface roughness of thread flanks shall be 32 microinches Ra or as specified in the detail specification or the product drawing. Roughness shall be specified in accordance with the method outlined ASME B46.1.

REVISION

1

NASM8846

SHEET 3

① COMPLETELY REVISED