SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

SAE AS269 | REV. H

Issued 1954-12
Revised 1996-09
Reaffirmed 2012-11

Superseding AS269G

Identification of Material for AN, MS, and AS Engine and Propeller Standard Utility Parts and Also for Company Parts

RATIONALE

AS269H has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

This SAE Aerospace Standard (AS) provides material identification codes for aluminum alloys, copper alloys, carbon steels, alloy steels, titanium alloys, corrosion resistant materials, and heat resistant materials that are used to make AN, MS, and AS engine and propeller standard utility parts. This document also provides similar material codes for company parts (such as nuts, bolts, etc.) having design configuration similar to other company parts or the engine and propeller standard utility parts (AN, MS, and AS) that are not of the same material.

2. REFERENCES:

All documents listed in Figure 1 and Table 1 are available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

3. MATERIAL IDENTIFICATION CODE:

3.1 Individual material code designations are restricted to materials of the same composition, irrespective of the raw stock configuration.

3.2 AN, MS, and AS Engine and Propeller Standard Utility Parts:

The material codes established for engine and propeller standard utility parts (AN, MS, and AS) are prefixed with the letter "E" in order to identify engine and propeller constant quality standard parts. In common temperature ranges the "E" prefix and number comprise the material code for materials specified on parts generally used in temperature applications not exceeding 550 °F (288 °C). Corrosion resistant materials for parts generally used in temperature applications between 550 °F and 800 °F (288 °C and 427 °C) have a material code consisting of an "EC" prefix and a number. Heat resistant materials for parts generally used in temperature applications above 800 °F (427 °C) have a material code consisting of an "EH" prefix and a number. Titanium alloys have a material code consisting of an "ET" prefix and a number.

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
SAE WEB ADDRESS: http://www.sae.org

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS269H

3.3 Company Parts:

The material codes used for company parts agree in principle with those used on AN, MS, and AS engine and propeller standard utility parts except that the letter “E” prefixing the standard utility parts material code has been omitted on titanium alloy materials, corrosion resistant materials, and heat resistant materials. The prefix letter “E” was replaced with prefix letter “S” for common temperature range materials.

3.4 Material codes have been assigned for common temperature range, corrosion resistant, heat resistant, and titanium materials as shown in Figure 1.

4. NEW MATERIALS:

Upon request the SAE will consider assigning material codes to materials not listed in this document. The SAE will coordinate proposed additions or alterations in this document with SAE Committee E-25. Material codes should not be assigned to new materials without the approval of the SAE.

5. CANCELLED MATERIAL CODES:

The following documents and their respective material codes have been cancelled:

E25	S25	AMS 6353
E29	S29	AMS 6380
EH10	H10	AMS 5767

6. NOTES:

(a) Inactive for new design after September 1, 1959. Materials of the same type (i.e., same chemical composition) have been reassigned a single code regardless of raw stockform.

(b) The following material specifications are "Noncurrent":

AMS 5750
AMS 6418
AMS 6485
AMS 6535
AMS 6550

(c) The following material specifications have been cancelled and replaced by an "AS" specification.

AMS 7225 replaced by AS7225
AMS 7228 replaced by AS7228
AMS 7229 replaced by AS7229
AMS 7232 replaced by AS7232

Material Code		
Stand. Parts AN, MS, AS	Company Parts	Material Specification
E1	S1	AMS 6282, AMS 6320, AMS 6357, or AMS 6535 (b)
E2	S2	(c) AMS 7225
E3	S3	AMS 4121, AMS 4135, or AMS 4153
E4	S4	AMS 5061
E5	S5	AMS 5045
(a)E6	(a)S6	AMS 6357 (See E1)
E7	S7	AMS 6280, AMS 6281, AMS 6355, AMS 6530, or AMS 6550 (b)
(a)E8	(a)S8	AMS 6327 (See E11)
E9	S9	AMS 5024
E10	S10	AMS 5040
E11	S11	AMS 6322, AMS 6323, AMS 6325, AMS 6327, or AMS 6358
E12	S12	AMS 4037, AMS 4120, or AMS 4152
E13	S13	AMS 4045, AMS 4122, AMS 4139, or AMS 4154
(a)E14	(a)S14	AMS 4152 (See E12)
(a)E15	(a)S15	AMS 4153 (See E3)
(a)E16	(a)S16	AMS 4154 (See E13)
E17	S17	AMS 5060
E18	S18	AMS 5062
E19	S19	AMS 5120
E20	S20	AMS 5121
E21	S21	AMS 6324
E22	S22	AMS 6328
E23	S23	AMS 6350, AMS 6370, or AMS 6371
E24	S24	AMS 6352, AMS 6365, or AMS 6372
(a)E26	(a)S26	AMS 6355 (See E7)
(a)E27	(a)S27	AMS 6358 (See E11)
(a)E28	(a)S28	AMS 6370 or AMS 6371 (See E23)
E30	S30	AMS 6381 or AMS 6382
E31	S31	AMS 6412 or AMS 6413
E32	S32	AMS 6440 or AMS 6441
E33	S33	AMS 4500
E34	S34	AMS 6359 or AMS 6415
E36	S36	AMS 6300

FIGURE 1

Material Code		
Stand. Parts AN, MS, AS	Company Parts	Material Specification
E37	S37	AMS 6304
E38	S38	(b) AMS 6418
E39	S39	(b) AMS 6485
E40	S40	AMS 4003
E41	S41	AMS 4150
E42	S42	AMS 4352
		COMMON TEMPERATURE RANGE
EC1	C1	AMS 5640
EC2	C2	AMS 5628
EC3	C3	AMS 5515, AMS 5516, AMS 5517, AMS 5518, AMS 5519, AMS 5636, or AMS 5637
EC4	C4	(c) AMS 7228
(a)EC5	(a)C5	AMS 5636 (See EC3)
EC6	C6	AMS 5354, AMS 5508, or AMS 5616
EC7	C7	AMS 5610
EC8	C8	AMS 5504, AMS 5612, or AMS 5613
EC9	C9	AMS 5624
EC10	(a)C10	AMS 5513, AMS 5560, AMS 5565, AMS 5566, or AMS 5639
(a)EC11	(a)C11	AMS 5504 (See EC8)
EC12	C12	AMS 5738
EC13	C13	AMS 5630
EC14	C14	AMS 5643
EC15	C15	AMS 5625
EC16	C16	AMS 5506, AMS 5620, or AMS 5621
EC17	C17	AMS 5644
EC18	C18	AMS 5743
		CORROSION RESISTANT MATERIALS
EH1	H1	(c) AMS 7229
EH2	H2	(c) AMS 7232
EH3	H3	AMS 5526, AMS 5527, AMS 5720, AMS 5721, or AMS 5722
EH4	H4	AMS 5642
EH5	H5	AMS 5512, AMS 5571, or AMS 5646
EH6	H6	AMS 5733
EH7	H7	AMS 5510, AMS 5557, AMS 5559, AMS 5570, AMS 5576, or AMS 5645

FIGURE 1 (Continued)

Material Code		
Stand. Parts AN, MS, AS	Company Parts	Material Specification
EH8	H8	AMS 5524 or AMS 5648
EH9	H9	AMS 5540, AMS 5580, or AMS 5665
EH11	H11	AMS 5521, AMS 5572, or AMS 5651
EH12	H12	AMS 5522 or AMS 5652
(a)EH13	(a)H13	AMS 5720 (See EH3)
EH14	H14	AMS 5542, AMS 5667, or AMS 5668
EH15	H15	CHROMEL
EH16	H16	ALUMEL
EH17	H17	AMS 5649
EH18	H18	AMS 5532 or AMS 5768
EH19	H19	AMS 5525, AMS 5731, AMS 5732, AMS 5734, AMS 5735, AMS 5736, or AMS 5737
EH20	H20	AMS 5511 or AMS 5647
EH21	H21	AMS 5754
EH22	H22	AMS 5530 or AMS 5750 (b)
EH23	H23	AMS 5545, AMS 5712, or AMS 5713
EH24	H24	AMS 5551, AMS 5756, or AMS 5757
EH25	H25	AMS 5660
EH26	H26	AMS 5708
EH27	H27	AMS 5759
EH28	H28	AMS 5662
EH29	H29	AMS 5666
		HEAT RESISTANT MATERIALS
ET1	T1	AMS 4921
ET2	T2	AMS 4923
ET3	T3	AMS 4925
ET4	T4	AMS 4927
ET5	T5	AMS 4928 or AMS 4967
ET6	T6	AMS 4929
		TITANIUM ALLOYS

FIGURE 1 (Continued)

7. NUMERICAL INDEX OF AMS SPECIFICATIONS LISTED IN THIS DOCUMENT::

See Table 1.

TABLE 1

AMS Number	Material Code AN, MS, AS Standards	Material Code Company Parts
4003	E40	S40
4037	E12	S12
4045	E13	S13
4120	E12	S12
4121	E3	S3
4122	E13	S13
4135	E3	S3
4139	E13	S13
4150	E41	S41
4152	E12 (E14)	S12 (S14)
4153	E3 (E15)	S3 (S15)
4154	E13 (E16)	S13 (S16)
4352	E42	S42
4500	E33	S33
4921	ET1	T1
4923	ET2	T2
4925	ET3	T3
4927	ET4	T4
4928	ET5	T5
4929	ET6	T6
4967	ET5	T5
5024	E9	S9
5040	E10	S10
5045	E5	S5
5060	E17	S17
5061	E4	S4
5062	E18	S18
5120	E19	S19
5121	E20	S20
5354	EC6	C6
5504	EC8 (EC11)	C8 (C11)
5506	EC16	C16
5508	EC6	C6
5510	EH7	H7
5511	EH20	H20

TABLE 1 (CONTINUED)

AMS Number	Material Code AN, MS, AS Standards	Material Code Company Parts
5512	EH5	H5
5513	EC10	C10
5515	EC3	C3
5516	EC3	C3
5517	EC3	C3
5518	EC3	C3
5519	EC3	C3
5521	EH11	H11
5522	EH12	H12
5524	EH8	H8
5525	EH19	H19
5526	EH3	H3
5527	EH3	H3
5530	EH22	H22
5532	EH18	H18
5540	EH9	H9
5542	EH14	H14
5545	EH23	H23
5551	EH24	H24
5557	EH7	H7
5559	EH7	H7
5560	EC10	C10
5565	EC10	C10
5566	EC10	C10
5570	EH7	H7
5571	EH5	H5
5572	EH11	H11
5576	EH7	H7
5580	EH9	H9
5610	EC7	C7
5612	EC8	C8
5613	EC8	C8
5616	EC6	C6
5620	EC16	C16
5621	EC16	C16