

IDENTIFICATION OF MATERIAL FOR AN, MS, AND AS ENGINE AND PROPELLER STANDARD UTILITY PARTS AND ALSO FOR COMPANY PARTS

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1. **PURPOSE:** The purpose of this AS is to provide 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. It is also the purpose of this AS to provide similar material codes for company parts (such as nuts, bolts, etc.) having similar design configuration to other company parts or the Engine and Propeller Standard Utility Parts (AN, MS, and AS) that are not of the same material.
2. **MATERIAL IDENTIFICATION CODE:**
  - 2.1 Individual material code designations are restricted to materials of the same composition, irrespective of the raw stock configuration.
  - 2.2 **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. Corrosion resistant materials for parts generally used in temperature applications between 550°F and 800°F 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 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.
  - 2.3 **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 the prefix letter "S" for common temperature range materials. This was done in order to distinguish company parts from AN, MS and AS Engine and Propeller Standard Utility parts. The prefix "E" is reserved for AN and MS Engine and Propeller Standard Utility Parts as noted in ANA Bulletin No. 403 and also for AS standard utility parts.
  - 2.4 The following material codes have been assigned for materials in the common temperature range:

AN, MS, AS Standard Parts Material Code	Company Parts Material Code	Material Specification
E1	S1	AMS 6282, AMS 6320, AMS 6357 or AMS 6535
E2	S2	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
E7	S7	AMS 6280, AMS 6281, AMS 6355, AMS 6530 or AMS 6550
(a) E8	(a) S8	AMS 6327
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
(a) E15	(a) S15	AMS 4153
(a) E16	(a) S16	AMS 4154
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.(b) AMS 6365, AMS 6372
(a) E26	(a) S26	AMS 6355
(a) E27	(a) S27	AMS 6358
(a) E28	(a) S28	AMS 6370 or AMS 6371
E30	S30	AMS 6381 or AMS 6382
E31	S31	AMS 6412 or AMS 6413
E32	S32	AMS 6440 or AMS 6441

**NOTE:** This AS supersedes and cancels ARP 269 originally released on 12-1-54 and reissued as ARP 269A and ARP 269B. On 1-15-62 ARP 269 was assigned AS status and released as AS 269C.

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<u>AN, MS, AS Standard Parts Material Code</u>	<u>Company Parts Material Code</u>	<u>Material Specification</u>
E33	S33	AMS 4500
E34	S34	AMS 6359 or AMS 6415
E36	S36	AMS 6300 (b)
E37	S37	AMS 6304
E38	S38	AMS 6418
E39	S39	AMS 6485
E40	S40	AMS 4003

2.5 The following material codes have been assigned for corrosion resistant materials:

<u>AN, MS, AS Standard Parts Material Code</u>	<u>Company Parts Material Code</u>	<u>Material Specification</u>
EC1	C1	AMS 5640
EC2	C2	AMS 5628
EC3	C3	AMS 5515, AMS 5516, AMS 5517, AMS 5518, AMS 5519 AMS 5636, AMS 5637, or AMS 7472
EC4	C4	AMS 7228
(a) EC5	(a) C5	AMS 5636
EC6	C6	AMS 5354 AMS 5508 or AMS 5616
EC7	C7	AMS 5610
EC8	C8	AMS 5504 or AMS 5613
EC9	C9	AMS 5624
EC10	C10	AMS 5513, AMS 5560, AMS 5565, AMS 5566 or AMS 5639
(a) EC11	(a) C11	AMS 5504
EC12	C12	AMS 5738
EC13	C13	AMS 5630
EC14	C14	AMS 5643
EC15	C15	AMS 5625

2.6 The following material codes have been assigned for heat resistant materials:

<u>AN, MS, AS Standard Parts Material Code</u>	<u>Company Parts Material Code</u>	<u>Material Specification</u>
EH1	H1	AMS 7229
EH2	H2	AMS 7232
EH3	H3	AMS 5526, AMS 5527 AMS 5720, AMS 5721, 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
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
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 5735, or AMS 5736
EH20	H20	AMS 5511 or AMS 5647
EH21	H21	AMS 5754
EH22	H22	AMS 5530, AMS 5750
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 or AMS 7471