ALUMINIUM ALLOY, BRIGHT ANODISING QUALITY, SHEET AND STRIP

WSD-M2A146-A1
WSD-M2A146-A2
WSD-M2A146-A3
WSD-M2A146-A4

1. SCOPE

The materials defined by these specifications are aluminum-magnesium alloys, which achieve stated mechanical properties and performance criteria.

2. APPLICATION

These materials were released originally for bright anodized exterior and interior automotive trim.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 CHEMICAL COMPOSITION

The chemical composition of any alloy specified on the engineering drawing shall conform to the requirements of SAE and/or Aluminum Association standards.

3.3 MECHANICAL PROPERTIES
(ASTM B 557M)

ALLOY TYPE	ULTIMATE TENSILE STRENGTH	YIELD STRENGTH (MPa)	ELONGATION (%) (MPa)
A1	275 min.	250 min.	2 min.
A2	255 min.	240 min.	4 min.
A3	230 min.	200 min.	7 min.
A4	180 min.	145 min.	12 min.

3.4 COLOR AND BRIGHTNESS

Components fabricated from these materials shall satisfy the requirements of the styling master, established for each part.

Date	Action	Revisions
2003 09 18	Revised	Para 3.0 inserted; para 3.1, 3.6 and 4 deleted
1989 06 28	SM/ER5962TC	Released K. Thurgood; J. Lines, EAC; J. A. Ferrari, NAAO

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3.5 PERFORMANCE

All materials to this specification shall be suitable for bright anodizing to meet the performance specification specified on the engineering drawing.

5. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of these specifications.

5.1 CHEMICAL COMPOSITION

Magnesium contents usually range from 0.20 to 2.80%. The total percentage of all elements (except aluminum and magnesium) is unlikely to exceed 0.20.

5.2 APPROVED ALLOYS AND TEMPERS

	A1	A2	A3	A4
5250				H24
5252	H19	H171	H27	
5351	H19			H24

5.3 ALLOY PURITY

Higher purity alloys for improved appearance are available in WSD-M2A147-A1/A2

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