## 1.0 SHEET AND PLATE - GAUGES AND TOLERANCES - GENERAL

This standard specifies the standard gauges (thicknesses) and the standard thickness tolerances for sheet and plate material.

Definitions:

Sheet: For aluminum alloys, sheet refers to a rolled rectangular section, .006 thru .249" thick. For ferrous, nickel and titanium alloys, sheet refers to a rolled rectangular section, .006 thru .187" thick.

Plate: For aluminum alloys, plate refers to a rolled rectangular section, .250" thick and over. For ferrous, nickel and titanium alloys, plate refers to a rolled rectangular section, .1875" thick and over.

## 2.0 GAUGES FOR SHEET AND PLATE

2.1 The "Standard" gauges which are commonly available from the mill are shown in Table 1. The "Special" gauges shown require a mill-run of a minimum quantity of 4000 lbs per order (except 7075-T651). This information is based on MIL-STD-204.

## 3.0 THICKNESS TOLERANCES FOR SHEET AND PLATE

3.1 The specifications defining the thickness tolerances for sheet and plate are specified in the "Tolerance Specifications" column of Table 2. ANSI H35.2 covering aluminum mill products has been reproduced, in part, in Table 3. For thickness tolerances of other alloys, refer to the applicable specification listed in Table 3.

| LIST OF CURRENT SHEETS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PAGE | 1 | 2 | 3 | 4 | | | | | | | |
| REVISION | - | - | - | - | | | | | | | |

**Table 1 - GAUGES (inches)**

| STANDARD | SPECIAL |
|---|---|
| .006 | |
| | .007. |
| .008 | |
| | .009 |
| .010 | |
| | .011 |
| .012 | |
| .014 | |
| .016 | |
| .018 | |
| .020 | |
| .022 | |
| | .024 |
| .025 | |
| | .026 |
| .028 | |
| | .030 |
| .032 | |
| | .034 |
| .036 | |
| | .038 |
| .040 | |
| | .042 |
| .045 | |
| | .048 |
| .050 | |
| | .053 |
| .056 | |

| STANDARD | SPECIAL |
|---|---|
| | .060 |
| .063 | |
| | .067 |
| .071 | |
| | .075 |
| .080 | |
| | .085 |
| .090 | |
| | .095 |
| .100 | |
| | .106 |
| .112 | |
| | .118 |
| .125 | |
| | .132 |
| .140 | |
| | .150 |
| .160 | |
| | .170 |
| .180 | |
| | .190 |
| .200 | |
| | .212 |
| .224 | |
| | .236 |
| For larger gauges consult. Standards Engineering | |

## Table 2 - THICKNESS TOLERANCE SPECIFICATIONS

| MATERIAL | ALLOY | DESCRIP. | MATERIAL SPECIFICATION | TOLERANCE SPECIFICATION | REF. TABLE |
|---|---|---|---|---|---|
| ALUMINUM | 2024 | BARE | QQ-A-250/4 | ANSI H35.2 | 1 |
| | | ALCLAD | QQ-A-250/5 | | |
| | 5052 | BARE | QQ-A-250/8 | | |
| | 6061 | BARE | QQ-A-250/11 | | |
| | 7075 | BARE | QQ-A-250/12 | | |
| | | ALCLAD | QQ-A-250/13 | | |
| | | ALCLAD ONE SIDE | QQ-A-250/18 | | |
| | 7050 | BARE | AMS 4050 | AMS 2202 | SEE THE APPLICABLE AMS/AND SPEC |
| | 7150 | BARE | AMS 4252 | | |
| FERROUS | 4130 | | MIL-S-18729 | AMS 2252 | |
| | 1095 | | MIL-S-7947 | AND 10355 | |
| | 301 | | MIL-S-5059 | AMS 2242 | |
| | 321 | | AMS 5510 | | |
| | 17-7PH | | MIL-S-25043 | | |
| TITANIUM | Ti-CP-40 | | MIL-T-9046, CLASS CP-3 | | |
| | Ti-CP-70 | | MIL-T-9046, CLASS CP-1 | | |
| | Ti-6Al-4V | | MIL-T-9046, CLASS AB-1 | | |
| | Ti-5Al-2.5Sn | | MIL-T-9046, CLASS A-1 | | |
| NICKEL | INCONEL 625 | | AMS 5599 | AMS 2262 | |
| | INCONEL 718 | | AMS 5596 | | |

## Table 3 - THICKNESS TOLERANCES FOR ALUMINUM ALLOYS

| SPECIFIED THICKNESS | | SPECIFIED WIDTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UP THRU 39.37 | OVER 39.37 THRU 47.24 | OVER 47.24 THRU 55.12 | OVER 55.12 THRU 59.06 | OVER 59.06 THRU 70.87 | OVER 70.87 THRU 78.74 | OVER 78.74 THRU 86.61 | OVER 86.61 THRU 98.43 | OVER 98.43 THRU 118.11 | OVER 118.11 THRU 137.80 | OVER 137.80 THRU 157.48 | OVER 157.48 THRU 177.17 |
| OVER | THRU | TOLERANCE ( ± ) | | | | | | | | | | | |
| .0059 | .010 | .0010 | .0020 | .0020 | .0020 | | | | | | | | |
| .010 | .016 | .0015 | .0025 | .0025 | .0025 | | | | | | | | |
| .016 | .025 | .0015 | .0025 | .0025 | .0025 | | | | | | | | |
| .025 | .032 | .0015 | .0015 | .0020 | .0030 | .0030 | | | | | | | |
| .032 | .039 | .0015 | .0015 | .0020 | .0030 | .0030 | .0035 | .0035 | .007 | | | | |
| .039 | .047 | .0020 | .0020 | .0020 | .0030 | .0030 | .0035 | .0035 | .008 | .010 | .011 | | |
| .047 | .063 | .0020 | .0020 | .0030 | .0030 | .0030 | .0035 | .0035 | .009 | .011 | .013 | | |
| .063 | .079 | .0020 | .0020 | .0030 | .0035 | .0035 | .0035 | .0035 | .010 | .013 | .015 | | |
| .079 | .098 | .0025 | .0025 | .0035 | .0040 | .0040 | .0045 | .0045 | .011 | .015 | .018 | | |
| .098 | .126 | .0035 | .0035 | .0035 | .0045 | .0045 | .0045 | .0045 | .013 | .016 | .020 | | |
| .126 | .158 | .0040 | .0040 | .0045 | .007 | .007 | .009 | .009 | .015 | .018 | .022 | | |
| .158 | .197 | .0055 | .007 | .007 | .009 | .009 | .011 | .011 | .018 | .022 | .026 | | |
| .197 | .248 | .009 | .012 | .012 | .012 | .017 | .017 | .021 | .021 | .025 | .029 | | |
| .248 | .315 | .012 | .015 | .015 | .015 | .019 | .019 | .024 | .024 | .029 | .033 | .041 | .051 |
| .315 | .394 | .017 | .018 | .018 | .018 | .022 | .022 | .028 | .028 | .033 | .039 | .047 | .054 |
| .394 | .630 | .023 | .023 | .023 | .023 | .028 | .028 | .033 | .033 | .039 | .047 | .059 | .070 |
| .630 | .984 | .031 | .031 | .031 | .031 | .037 | .037 | .043 | .043 | .051 | .060 | .070 | .085 |
| .984 | 1.575 | .039 | .039 | .039 | .039 | .047 | .047 | .055 | .055 | .065 | .075 | .090 | .105 |
| 1.575 | 2.362 | .055 | .055 | .055 | .055 | .060 | .060 | .070 | .070 | .090 | .100 | .115 | |
| 2.362 | 3.150 | .075 | .075 | .075 | .075 | .085 | .085 | .100 | .100 | .110 | .125 | | |
| 3.150 | 3.937 | .100 | .100 | .100 | .100 | .115 | .115 | .130 | .130 | .150 | .160 | | |
| 3.937 | 6.299 | .130 | .130 | .130 | .130 | .145 | .145 | .165 | .165 | | | | |