

FLATNESS TOLERANCE

The maximum deviation from a horizontal flat surface—the material is to be placed on a perfectly flat table. A ruler which does not flatten the material will give the degree of flatness. The measurement being from the highest point (or points) of the sheet or plate to the table surface minus the material thickness. Note: If not otherwise specified, **commercial quality is supplied**. Flatness tolerances listed are of roller leveled sheets or plates with no or minimum margins. For material 10' or less in length, variation should not exceed amount shown in table. For material longer than 10', the variation in flatness for any 10 feet of length should not exceed the amount shown. Where the longer dimension is under 36" the variation in flatness along the length and across the width should not exceed 1/4" in each direction. When the longer dimension is from 36" to 72" the flatness variation should not exceed 75% of the amount shown for the specified width, but in no case less than 1/4". Margins will usually increase the maximum deviation; please consult your IPA member supplier.

Three levels of quality are available:

Commercial Quality, Superior Quality, and Special Quality.

H.R. & C.R. Steel Sheet, Plate & Hot Dipped Galvanized Sheets

| Thickness Range | To 36" Width | | |
|-----------------|--------------|--------|-------|
| | Tolerance | | |
| | Comm. | Sup. | Spec. |
| 28-20GA | 3/8" | 5/16" | |
| 19-16GA | 1/2" | 7/16" | |
| 15-12GA | 5/8" | 1/2" | |
| 11GA-1/4" | 5/8" | 1/2" | |
| 5/16"-3/8" | 9/16" | 15/32" | |
| 7/16"-1/2" | 1/2" | 7/16" | |
| 9/16"-3/4" | 7/16" | 11/32" | |

Heat Treated Steel Plate (Hardness Range 185-360 Brinell)

| | | | |
|------------|---------|---------|--|
| To 1/4" | 1-5/16" | 1-5/32" | |
| 1/4"-3/8" | 1-1/4" | 1-1/8" | |
| 7/16"-1/2" | 1-1/4" | 1-1/8" | |
| 9/16"-3/4" | 1-1/8" | 1" | |

Stainless Steel and Other Heat Resistant Alloys Sheet & Plate

| | | | |
|------------|--------|-------|--|
| 30-20GA | 1/2" | 7/16" | |
| 19-16GA | 5/8" | 1/2" | |
| 15-12GA | 3/4" | 5/8" | |
| 11GA-1/4" | 3/4" | 5/8" | |
| 5/16"-3/8" | 11/16" | 9/16" | |

Aluminum & Copper

| | | | |
|-------------|--------|--------|--|
| .012"-.032" | 5/16" | 1/4" | |
| .033"-.063" | 7/16" | 11/32" | |
| .064"-.125" | 9/16" | 15/32" | |
| .126"-.500" | 5/8" | 9/16" | |
| .501"-.750" | 11/16" | 5/8" | |

FLATNESS TOLERANCE, continued

H.R. & C.R. Steel Sheet, Plate & Hot Dipped Galvanized Sheets

| Thickness Range | Over 36" - 48" Width | | |
|-----------------|----------------------|--------|-------|
| | Tolerance | | |
| | Comm. | Sup. | Spec. |
| 28-20GA | 1/2" | 7/16" | |
| 19-16GA | 5/8" | 1/2" | |
| 15-12GA | 3/4" | 5/8" | |
| 11GA-1/4" | 7/8" | 23/32" | |
| 5/16"-3/8" | 3/4" | 5/8" | |
| 7/16"-1/2" | 5/8" | 1/2" | |
| 9/16"-3/4" | 9/16" | 15/32" | |

Heat Treated Steel Plate (Hardness Range 185-360 Brinell)

| | | | |
|------------|---------|---------|--|
| To 1/4" | 1-5/8" | 1-7/16" | |
| 1/4"-3/8" | 1-7/16" | 1-1/4" | |
| 7/16"-1/2" | 1-3/8" | 1-7/32" | |
| 9/16"-3/4" | 1-1/4" | 1-1/8" | |

Stainless Steel and Other Heat Resistant Alloys Sheet & Plate

| | | | |
|------------|--------|--------|--|
| 30-20GA | 5/8" | 1/2" | |
| 19-16GA | 3/4" | 5/8" | |
| 15-12GA | 7/8" | 23/32" | |
| 11GA-1/4" | 1" | 13/16" | |
| 5/16"-3/8" | 13/16" | 21/32" | |

Aluminum & Copper

| | | | |
|-------------|--------|--------|--|
| .012"-.032" | 7/16" | 11/32" | |
| .033"-.063" | 9/16" | 15/32" | |
| .064"-.125" | 11/16" | 9/16" | |
| .126"-.500" | 3/4" | 11/16" | |
| .501"-.750" | 13/16" | 3/4" | |