

MATERIAL GRADE DATA SHEET

ASTM F436

WEATHERING

TYPF 3

BOLTING MATERIAL FOR STRUCTURAL PURPOSE

"ASTM F436 specification covers the chemical, mechanical, and dimensional requirements for hardened steel washers for use with fasteners having nominal thread diameters of ½ through 4 in. These washers are intended for general-purpose mechanical and structural use with bolts, nuts, studs, and other internally and externally threaded fasteners. These washers are suitable for use with fasteners covered in Specifications A325, A354, A449, and A490.

The washers are designated by type denoting the material and by style denoting the shape.

Type 1—Carbon steel.

Type 3—Weathering steel."

Chemical Properties

| P Max | S Max | Si Max | Cr | Ni | Си |
|----------|----------|-----------|-----------|-----------|-----------|
| 0.045 | 0.055 | 0.13-0.37 | 0.42-0.68 | 0.22-0.48 | 0.22-0.48 |

F436 Mechanical Properties

| | Hardness (HRC) | | | |
|----------------------|-------------------|-----|--|--|
| Nominal Washer Size | Self Colour/Black | | | |
| | min | max | | |
| M16 to M36 inclusive | 38 | 45 | | |

Characteristic Standard

| Materials&Manufacture | ASTM F436M | | | |
|--------------------------------|------------|--|--|--|
| FINISNCOatings(seirColour/Blac | ASTM F436M | | | |
| Mechanical Properties | ASTM F436M | | | |
| Dimensions&Tolerances | ASTM F436M | | | |
| Workmanship | ASTM F436M | | | |
| Product marking | ASTM F436M | | | |

F436M Washer Dimensions

| Nominal V | Vasher Size | M16 | M20 | M22 | M24 | M27 | M30 | M36 |
|-----------|-------------|------|------|------|------|------|------|------|
| d1 | max | 18.4 | 22.5 | 24.5 | 26.5 | 30.5 | 33.6 | 39.6 |
| a i | min | 18.0 | 22.0 | 24.0 | 26.0 | 30.0 | 33.0 | 39.0 |
| -10 | max | 34.0 | 42.0 | 44.0 | 50.0 | 56.0 | 60.0 | 72.0 |
| d2 | min | 32.4 | 40.4 | 42.4 | 48.4 | 54.1 | 58.1 | 71.0 |
| h | max | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| n | min | 3.1 | 3.1 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |

Heat Treatment

HARDENED

CUSTOMER ASSISTANCE : customer@TorqBolt.com

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