

# SA 563 Gr C3 E

# ALLOY STEEL

WEATHERING STEEL

CORTEN STEEL

NUT MATERIAL FOR STRUCTURAL SERVICE

SA 563 covers chemical and mechanical requirements for eight grades of carbon and alloy steel nuts for general structural and mechanical uses on bolts, studs and other externally threaded parts. Grades C3 and DH3 nuts have atmospheric corrosion resistance and weathering characteristics. The atmospheric corrosion resistance of these steels is substantially better than that of carbon steel with or without copper addition. When properly exposed to the atmosphere, these steels can be used bare(uncoated) for many applications.

### Chemical Properties

C	Mn	P	S	Si	Cr	Ni	Cu
0.18-0.27	0.56-1.04	0.045 Max	0.045 Max	0.13-0.37	0.55-0.95	0.27-0.63	0.27-0.63

### Mechanical Properties Nuts with UNC, 8 UN, 6 UN and Coarser Pitch Threads

#### Proof Load Stress, ksi(A)

TYPE	1/4 to 4	
	Non-Zinc Coated	Zinc Coated
HEAVY HEX	144	144

#### Hardness

BHN	HRB	HRC
143-352	78 Min	38 Max

### Heat Treatment

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### Equivalent Designation

UNS
EN number
EN Name
W.Nr.
SS
AFNOR

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