

## Alloy 4643 Data Sheet

AWS A5.10  
ER4643  
AMS 4189  
UNS A94643  
USWC 4189(C)

Aerospace Material Specification 4189 is aluminum alloy 4643. A primary use is in the welding of heavy sections of certain aluminum alloys when multiple weld passes are used and dilution of the base metal into the puddle is negligible. This alloy could also offer advantages in brazing type applications on thin sections where dilution ratios are low.

Alloy 4643 is similar in weldability to 4043. The weld cracking characteristics, flow, pre-cleaning and machine settings are the same for this alloy as for 4043. The corrosion resistance is very good and equals or exceeds alloy 4043 in the weld zone and heat affected regions

Available in multiple diameters and sizes in straight length wire and in spools.

### CHEMICAL COMPOSITION (Wt %):

Si	Fe	Mn	Cu	Zn	Mg	Al	Be	Ti	Other impurity	Other element
3.6-4.6	0.08	0.05	0.10	0.10	0.10-0.30	Bal	0.0003	0.15	0.05	0.15

Note: Single values are maximum unless otherwise noted.

**Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.**

**CAUTION:** Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, “Safety in Welding and Cutting,” published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210. SDS’ may be obtained at the website below.