



VBC Alloy 0032 4043 Aluminium

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| Designation and Description | GTAW and GMAW Solid Welding Wire Aluminium Base | Issued: Mar/2014 | MSRR: 9500/32 | AMS: 4190J |
| | | Revision: 01 | | |
| Cross Reference/ Conformance Specification | MSRR 9500/32 AMS 4190J OMat 310 BS 2901-4:1990 4043A N21 (NG21) Alloy 4043A (BS 2901 PT4) | BS EN ISO 18273:2004 Al 4043A AWS A5.10/A5.10M:1999 ER4043 R4043 UNS Number A94043 AA 4043 Fed-QQ-R-556 Class 4043 MSRR 8065 | | |
| Metallurgical Background Information | Alloy 4043 is a solid welding wire produced conventionally and surface cleaned to remove standard metal working lubricants. Alloy 4043 is an Al-5% Si Alloy, non-heat treatable Alloy 4043 has a lower melting range than the base metals for which it is commonly used and this can help to relieve contraction stresses during weld cooling. 4043 alloy is used in preference to 5356 alloy, where improved cosmetic appearance and extra ductility is required. | | | |
| Materials To Be Welded, Applications and Advice | 1xxx, 3xxx, 6xxx series alloys. 2014, 2219, 5005, 5050, 7005, 7039, N21 .Al-Si, Al-Si-Mg- casting alloys and combinations of above materials Al – Lithium alloys DTD372, LM4, LM2, LM6, LM9, LM20, LM25, LM27. Clean welding conditions and ultra dry argon help to minimise risk of hydrogen porosity. 4043 is a less rigid wire than 5356 and can cause wire feed issues for robotic and general GMAW. | | | |
| Wire Chemistry WT% (as per AMS) | Silicon – 4.50-6.0% | | Zinc – 0.10% max | |
| | Iron – 0.8%max | | Beryllium – 0.0003% | |
| | Copper – 0.30% max | | Other Elements (each) – 0.05% | |
| | Manganese – 0.05% max | | Other Elements (total) – 0.15% | |
| | Magnesium – 0.05% max | | Aluminium - Balance | |
| Weld Properties | Melting range (approx) 573°C - 632°C | | Density 2.69gm/cc | |
| Sizes and Forms of Supply | Straight Length: 2.5 kg Packs 36" / 914mm lengths Flag tagged (Double tagging and other lengths on request) | | Spoiled Wire: Precision layer wound with controlled cast and helix 300mm diameter standard | |

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