

 A JOULON COMPANY	SARA SAE ENGINEERING SPECIFICATION		
	Section: SES 26 – 818		
	Issue: “A”	Rev No: “0”	
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**MATERIAL SPECIFICATION FOR INCONEL 625 FOR RING GASKETS
(314-414 MPa YIELD)**

Rev	Reason of Change	Date	Made By	Reviewed By	Approved By	Status
0	Initial release	31-03-2017	MN	AS	KKD	Released

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1.0 SCOPE

1.1 This specification describes the requirements for UNS N06625 Inconel 625.

2.0 APPLICABLE SPECIFICATIONS

2.1 Ni-Cr-Mo Alloy UNS N06625

3.0 CHEMICAL COMPOSITION

3.1 The chemistry shall be as follows:

Chromium.....	20.0 - 23.0%
Iron, max	5.0%
Molybdenum.....	8.0 - 10.0%
Columbium & Tantalum	3.15 - 4.15%
Carbon, max.....	0.10%
Manganese.....	0.50%
Silicon, max.....	0.50%
Phosphorus, max.....	0.015%
Sulfur, max	0.015%
Aluminum, max.....	0.40%
Titanium, max.....	0.40%
Cobalt, max1	.0%*
Nickel	Balance

* Not required for routine inspection.

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4.0 MECHANICAL PROPERTIES

Yield Strength 0.2%, min.	314 - 414 MPa (45,500 - 60,000 psi)
Tensile Strength, min.	693 MPa (100,500 psi)
Elongation, $L_0 = 4d$, min. ¹	30%
Reduction of Area, min.	40%
Hardness, max.	230 HBW (20 HRC)

Note: ¹ L_0 = Gauge Length, d = Specimen Diameter

5.0 HEAT TREATMENT

5.1 Option I (Hot Formed)

5.1.1 Heat to 1700°-2125°F for up to one hour.

5.1.2 Air cool.

5.2 Option II (Solution Annealed)

5.2.1 Heat to 2000°-2200°F for up to one hour.

5.2.2 Air cool or water quench.

6.0 INSPECTION

The material shall be 100% ultrasonic examined. The method shall be in accordance with API 6A PSL 3 (ISO 10423 PSL 3)