2618A Aluminium Alloy

Smiths High Performance

Aluminium for Pistons

2618A is used in racing engine piston production and offers unique performance characteristics, which make it an ideal choice.

2618A Aluminium (DTD 5014A) was one of the first aluminium alloy products sold by Smiths High Performance.

Although initially developed for aerospace applications, the product has become a popular engineering material in the motorsport sector due to the alloy's high strength. Grade 2618A contains copper and aluminium, offering good machinability and fair corrosion resistance in atmospheric conditions. Components subjected to high operating temperatures benefit from 2618A's performance characteristics.

Supply Options:

The product is available in plate, bar and tube. 2618A aluminium is popular in applications including racing engine components, pistons, chassis components and applications requiring better performance at higher temperatures. The alloy retains its mechanical strength up to 200°C and deployment up to a maximum temperature of 300°C.

2618A Aluminium continues to be the leading engineering material for racing pistons.

Stock Availability:

We stock 2618A in bars, plates, forged blocks and tubes.

Benefits:

- Superior mechanical strength at elevated temperatures
- Good overall strength
- Good machinability

Typical Applications:

- Pistons
- Racing engine components
- Chassis components
- High-temperature service applications

About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high-performance engineering materials. We are material supply chain partners supporting **high-technology market sectors**.

SCAN ME

Further technical data available on the reverse of this Datasheet

2618A Aluminium Alloy

Smiths High Performance

Chemical Composition (weight % for DTD 5014)

	Al	Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti+Zr	Pb	Sn		
Min:	Rem		0.90	1.80		1.20	0.80						
Max:	Rem	0.25	1.40	2.70	0.20	1.80	1.40	0.10	0.20	0.05	0.05		

Mechanical Properties (minima for T6 condition Bar/Sections - DTD 5014A)

Thickness >, mm	Thickness =/<, mm	0.2% PS, MPa	UTS, MPa	Elongation, % on 50mm
-	10	320	400	5
10	100	340	420	7

Comparison between 2618A and 4032 Aluminium Alloys

2618A vs **4032**

Positives

- Stronger
- More ductile
- Better fatigue life
- Excellent high-temperature strength

Negatives

- Slightly higher wear rate

Positives

- Excellent wear rate
- Slightly lighter
- Greater stiffness
- Lower density

Negatives

- Less ductile
- Less fatigue strength
- Slightly lower strength
- More difficult to machine

...where performance matters...

When you purchase high-performance materials from **Smiths High Performance**, you will join some of the biggest and best global engineering companies. We are a Tier 1 supply chain partner to the world's leading motorsport companies. Our unique business structure and ethos allow us to offer services otherwise unavailable in this market sector.

Unit 3, Juno Place
Stratton Business Park
Biggleswade SG18 8XP
Tel: +44 (0)1767 604 708