

## Material Specification Sheet:

### UML - SAE 52100

**Grade-** SAE 52100

International Steel Grades

DIN : 100 Cr 6

ASTM : SAE 52100

### Material Group : High Carbon Anti- Friction Bearing Steel

Chemical Composition	C	Mn	P	S	Si	Cr	Ni	Mo	Cu.	O max	Al (max.)
%	0.93/ 1.05	0.25/ 0.40	0.025 max.	0.015 max	0.15/ 0.35	1.35/ 1.60	0.10 max	0.10 max	0.10 max	15 ppm	0.050

**Application** : For use in the manufacture of anti-friction bearings.

### **Metallurgical Properties:**

Macro Etch : C2R2S2 max. ASTM E 381

Inclusion Rating : A 2.5/ 1.5, B 2/1, C 1/2 / ½ , D 1/1, E 45 A

Grain Size : Fine grain size - ASTM No. 6-8

Decarburization &

Surface Imperfections : 1 % of size max.

Microstructure : SEP 1520 Rating  
CN 5.7 max./ 4.2 max. , CG- 2.1/ 2.3  
C2 6.3/ 7.4 max. PA 3.1 max

### **Mechanical Properties**\_\_:

Coils, Hot rolled,  
Annealed - : 207 BHN max.

Coils, Hot rolled : 350 BHN max.