DUCTILE SiMo IRON

By increasing the Silicon and Molybdenum content of SG Iron, the heat resistance and strength at high temperatures is increased.

Physical properties depend on temperatures; typical values are detailed in the table below :

C=3.2-3.8%, Si=4.0-5.0%, S<0.02%, Mg=0.03-0.07%, Mo=0.5-1.5%

Temperature °C	Tensile Strength N/mm²	0.2% Proof Stress N/mm²	Modulus of Elasticity N/m x 10⁴	Hardness BHN
23	550	480	14.8	(200-240)
300	480	395	14	
500	350	270	12	
800	50	30	2.5	

The main application for SiMo is in Automotive Exhaust and Turbocharger systems, but it is suitable for any high temperature application where both strength and ductility are required.

Machineability is similar to that of EN-GJS-500-7

Guide Figures for Maximum Manifold and Exhaust Gas Temperatures

Material Grade	Max. Manifold Temperature °C	Max. Exhaust Gas Temperature °C
EN-GJS-400-15	700	770
EN-GJS-SiMo (0.5%Mo)	750	820
EN-GJS-SiMo (1.0%Mo)	780	820
EN-GJS-SiMoNi	795	835
Ni Resist D05S	870	950

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