

Silicides

MATERIAL	FORMULA	STANDARD PURITIES, *	THEORETICAL DENSITY, G/cm ³	LISTED MELTING POINT, °C	FABRICATION METHOD	SUGGESTED APPLICATIONS
Chromium silicide	Cr ₃ Si	99.5 - 99.99	6.52	1710	Hot-pressed	
Chromium silicide	CrSi ₂	99.5 - 99.99	4.94	1550	Hot-pressed	
Chromium silicide	xCr - ySi	99.5 - 99.99	varies	varies	Hot-pressed	Silicides in general are used for resistance and semi-conducting films
Hafnium silicide	HfSi ₂	99.5	8.03	1750	Hot-pressed	
Molybdenum silicide	MoSi ₂	99.5 - 99.95	6.24	2050	Hot-pressed	They are currently being used for fabrication of interconnections and gate electrodes in IC devices, where stoichiometry and low sodium content are essential.
Niobium silicide	NbSi ₂	99.5 - 99.95	5.72	2150	Hot-pressed	
Tantalum silicide	TaSi ₂	99.5 - 99.95	9.14	2200	Hot-pressed	New applications include metallization for MESFET technology on GaAs; as a base in metal base bipolar transistors; as a ring contact to specially made thin-layer transistors.
Tantalum silicide	Ta ₅ Si ₃	99.5 - 99.95	13.1	2165	Hot-pressed	
Titanium silicide	TiSi ₂	99.5 - 99.9	4.12	1540	Hot-pressed	Silicides are being investigated for use as diffusion barriers in both silicon and III-V device technology in multilevel metallization schemes involving
Titanium silicide	Ti ₅ Si ₃	99.5 - 99.9	4.32	2150	Hot-pressed	
Tungsten silicide	WSi ₂	99.5 - 99.95	9.28	2165	Hot-pressed	
Vanadium silicide	V ₃ Si	99.5	5.67	Ca. 1730	Hot-pressed	
Vanadium silicide	VSi ₂	99.5	4.71	1660	Hot-pressed	
Zirconium silicide	ZrSi ₂	99.5	4.71	1700	Hot-pressed	