



**Database name:** SGTE Solutions Database  
**Database acronym:** SSOL4  
**Database owner:** Scientific Group Thermodata Europe  
**Database segment:** Solutions

**Database version:** 4.9

### Brief description

The SSOL4 Solutions Database is a sophisticated important thermochemical database for many non-ideal multicomponent solution phases. SSOL4 is designed for Thermo-Calc Classic, Thermo-Calc for Windows, DICTRA and Programming Interfaces.

### Applications

Alloy design and engineering; Inorganic materials.

### Included Elements

Ag	Al	Am	As	Au	B	Ba	Be	Bi	C	Ca	Cd	Ce	Co	Cr	Cs	Cu
Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	In	Ir	K	La	Li	Lu	Mg
Mn	Mo	N	Na	Nb	Nd	Ni	Np	O	Os	P	Pa	Pb	Pd	Pr	Pt	Pu
Rb	Re	Rh	Ru	S	Sb	Sc	Se	Si	Sm	Sn	Sr	Ta	Tb	Tc	Te	Th
Ti	Tl	Tm	U	V	W	Y	Yb	Zn	Zr							

### Included Phases

AL4C3	CR2B_ORTH	HEXAGONAL_A8	MC_SHP	RHOMBO_A10
AL4SIC4	CR2VC2	HIGH_SIGMA	MN2P	RHOMBOHEDRAL_A
AL8SIC7	CR3B4	IONIC_LIQUID	MN3P	RHOMBOHEDRAL_SM
ALB12_ALPHA	CR5B3	KSI_CARBIIDE	MN4N	SIB3
ALB12_BETA	CRB	L102_FCC	MN6N4	SIB6
ALB2	CRB2	L12_FCC	MN6N5	SIC
ALN	CRB4	LAVES_C14	MNP	SIGMA
ALPHA_PU	CU3P	LAVES_C15	MNP3	TAN_EPSILON
ASP	CUB_A13	LAVES_C36	MONOCLINIC_S	TET_ALPHA1
B2_BCC	CUB_A15	LAVES_PHASE	MU_PHASE	TETRAG_AD
B4C	DHCP	LIQUID	NI3B	TETRAGONAL_A6
BCC_A2	DIAMOND_A4	M12C	NI4B3	TETRAGONAL_U
BCC_B2	FCC_A1	M23C6	NIB	TI2N
BCT_A5	FE2B	M2B_TETR	OMEGA_ZR	TI3N2
BCT_AA	FE4N	M2P	ORTHORHOMBIC_A	TI4N3
BETA_PU	FE8SI2C	M3B4	ORTHORHOMBIC_AC	V2B3
BETA_RHOMB_BCSI	FEB	M3C2	ORTHORHOMBIC_G	V3B2
BETA_RHOMBO_B	FECN_CHI	M3P	ORTHORHOMBIC_S	V3B4
BN_HP4	FEP	M5C2	OXIDE_LIQUID	V3C2
CAC2_BETA	GAMMA_PU	M6C	P_PHASE	VB
CAC2_GAMMA	GAS	M7C3	PI_PHASE	VB2
CBCC_A12	GRAPHITE	MB	PSI	WHITE_P
CEMENTITE	HCP_A3	MB2	R_PHASE	WN_DELTA
CHI_A12	HCP_ZN	MC_ETA	RED_P	ZINCBLENDE_B3

The total number of solution phases and intermetallic compound phases are many more than listed above, and today the SSOL4 SGTE Solutions Database includes 716 different phases.

### Assessed Systems

Included thermodynamic data that have been critically assessed are available for many binary, ternary and higher-order subsystems in various multicomponent solution phases, as well as for many important intermetallic compound phases within a chemical framework of 78 elements.

### Limits

Combinations of several critically-assessed systems can calculate and extrapolate higher-order multicomponent systems. Such extrapolations require experience and understanding and the producer or vendor should be contacted if problems occur. Critical calculations must always be verified by equilibrium experimental data; it is the user's responsibility to verify the calculations but Thermo-Calc Software is interested to know about any significant deviations in order to improve any future release.

### Scientific Models & References

See the Thermo-Calc Software reference list available at:

[http://www.thermocalc.com/DOWNLOAD\\_AREA/References.html](http://www.thermocalc.com/DOWNLOAD_AREA/References.html)