



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/Library.htm>