

**MAX Phases : M – Early transitional metal ( red )**  
**A – Group IIIA /IVA element ( blue )**  
**X – Nitrogen / Carbon ( black )**

Legend:  
■ M: early transition metal  
■ A: group A element  
■ X: C and/or N

IA	IIA												IIIA	IVA	VA	VIA	VII	VIIIA
													B	C	N	O	F	He
Li	Be												Al	Si	P	S	Cl	Ar
Na	Mg												Ga	Ge	As	Se	Br	Kr
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn		In	Sn	Sb	Te	I	Xe
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd		Tl	Pb	Bi	Po	At	Rn
Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg							
Fr	Ra	Lr	Unq	Unp	Unh	Uns	Uno	Une										

<b>211</b>	$Ti_2AlC^*$	$Ti_2AlN^*$	$Hf_2PbC^*$	$Cr_2GaC$	$V_2AsC$	$Ti_2InN$
	$Nb_2AlC^*$	$(Nb,Ti)_2AlC^*$	$Ti_2AlN_{0.5}C_{0.5}^*$	$Nb_2GaC$	$Nb_2AsC$	$Zr_2InN$
	$Ti_2GeC^*$	$Cr_2AlC$	$Zr_2SC$	$Mo_2GaC$	$Ti_2CdC$	$Hf_2InN$
	$Zr_2SnC^*$	$Ta_2AlC$	$Ti_2SC$	$Ta_2GaC^*$	$Sc_2InC$	$Hf_2SnN$
	$Hf_2SnC^*$	$V_2AlC$	$Nb_2SC$	$Ti_2GaN$	$Ti_2InC$	$Ti_2TiC$
	$Ti_2SnC^*$	$V_2PC$	$Hf_2SC$	$Cr_2GaN$	$Zr_2InC$	$Zr_2TiC$
	$Nb_2SnC^*$	$Nb_2PC$	$Ti_2GaC$	$V_2GaN$	$Nb_2InC$	$Hf_2TiC$
	$Zr_2PbC^*$	$Ti_2PbC^*$	$V_2GaC$	$V_2GeC$	$Hf_2InC$	$Zr_2TiN$

<b>312</b>	$Ti_3AlC_2^*$	$Ti_3GeC_2^*$
	$Ti_3SiC_2^*$	

<b>413</b>	$Ti_4AlN_3^*$
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