MODIFIERS, GRAIN REFINERS and DEGRASSERS

Asbury Wilkinson offers titanium/boron additives for refining, as well as strontium alloys for modifying aluminum. Other metallic alloys are available, such as silicon metal and manganese flake. Our Tizox products are the most economical way to introduce titanium to hot metal. We also offer nucleating and degassing tablets as well as tablets for introducing gas back into the metal. Master Alloys for modifying and refining are also available in various forms. Chlorine- and nitrogen-based degassers are formulated for multifunctional needs, including oxide removal, furnace cleanliness, and the improvement of microstructure by grain refinement and/or silicon modification.

Chrome	FeW	Pig Iron
Copper Chops	HCFeCr	Silicon Carbide
75% FeSi	LC Steel	Silicon Metal
Fe Manganese	LCFeCr	SiMn
FeMo	LCFeMn	Tin
FeNb	Maganese Flake	Tungsten
FeSi	MgFeSi	Zinc
FeTi	Moly	
FeV	Nickel	

Master Alloys			
Tibor	3/1	5/1	-
Strontium	10%	15%	20%
Phos Copper Shot	15%		
Manganese - Aluminum	50%		
Magnesium Bells	99%		
Aluminum Deox Shot			

Tizox Grain Refiners					
Tizox	Ti %	В%	Ti:B	Note	
161	16	1	16:1	High Flux, multipurpose	
322	32	2	16:1	Good fluxing action, grain refiner	
323	32	2	16:1	Sodium-free version of 322	
401	40	1	40:1	Grain refiner, cleaner, good solution rate	
404	40	4	10:1	High boron ratio, sodium free	
501	50	1	50:1	Strong cleaning action	
604	60	4	15:1	No flux, sodium free	
750	75	0	-	Higher titanium, moderate cleaning	
751.5	75	1.5	50:1	Less flux, sodium free	
950	95	0	-	Little flux, high titanium	
980	98	0	-	Commercial-purity titanium	
999	20	4	5:1	Grain refiner, metal cleaner, fast acting, sodium free	

Degasser	Note
#185	Use with high-conductivity aluminum oron high-manganese-content alloys
#190	Active degassing action and grain refinement
#450	Effective degassing/cleaning agent, slow dispersal
#601	Easy application, low smoke
#752	Effective degassing/cleaning agent, low smoke

Degassers Formulations