

## Aluminum Squeeze Cast Plate Property Data Sheet

Date: 2-6-2010

7075-T6 and A206-T7 Squeeze Cast Properties						
Cast Alloy Type	Casting Thickness	Sample Quantity	$\sigma_y$	$\sigma_{uts}$	$\epsilon_{uts}$	$\epsilon_{failure}$
A206-T7	1-1/2"	8	40200	57967	15.0 (14.6-15.4%)	
A206-T7	11/16"	6	45680	60800	11.0 (10-12%)	15.2 (13.5-17%)
7075-T6	1-1/2"	6	73280	78440	3.3 (2-5%)	
7075-T6	1-1/4"	3	71100	79800	2.7 (1.4-4.3%)	
7075-T6	7/8"	6	72375	72483	1.08 (0.6-2%)	
7075 - As Cast	1-1/4"	3	27333	33533	1.5 (1.2-1.8%)	
7075-T6 Composite*	1"	3	NA	58333	0.4 (0.25-0.45%)	
<b>Process Notes:</b>	ASTM tensile samples were machined from plates of each alloy were cast in a 9" x 13" flat die. Die Temperature: 200°C (390°F) Melt Temp: 780°C (1430°F) * Composite - 7075-40%SiC-3% Saffil Fiber - Elastic Modulus of 22 Mpsi					

### Heat Treatment Parameters for the Above Materials

		Time (hr)	Temp (F)	Quench type
7075	Solutionize	5	935	Water
	Age (T6)	24	250	Air
A206	Solutionize	2	950-960	-
	Solutionize	16	980-990	Water
	Age (T7)	8	390	Air