

SELECTED TIH TANK CAR CONDITIONAL PROBABILITY OF RELEASE (CPR)*

CHLORINE

Car Spec.	Head Thickness (in.)	Shell Thickness (in.)	Jacket	Head Shield	Shell Inside Diameter (in.)	CPR	Percent Improvement Over Pre-HM-246 Baseline
105A500W	0.812	0.775	YES	NO	100.45	0.042	N/A
105J600I	0.954	0.954	YES	FULL	100.45	0.019	54.8 %

ANHYDROUS AMMONIA

Car Spec.	Head Thickness (in.)	Shell Thickness (in.)	Jacket	Head Shield	Shell Inside Diameter (in.)	CPR	Percent Improvement Over Pre-HM-246 Baseline
112J340W	0.625	0.625	YES	FULL	119	0.033	N/A
112J500I	0.900	0.900	YES	FULL	116.75	0.016	51.5 %

ETHYLENE OXIDE

Car Spec.	Head Thickness (in.)	Shell Thickness (in.)	Jacket	Head Shield	Shell Inside Diameter (in.)	CPR	Percent Improvement Over Pre-HM-246 Baseline
105J300W	0.603	0.562	YES	FULL	117.87	0.041	N/A
105J500I	0.900	0.900	YES	FULL	116.75	0.016	61.0 %

*Average mainline derailment conditions – train speed at time of derailment = 26 mph, 11 cars derailed, tank car is the 6th car derailed.

CPR or “Conditional Probability of Release” is a measure for probability of a spill under certain accident conditions.

The car dimensions shown in Table 1 are meant to be illustrative. They are based on the most commonly built designs as of the publication of this report.