



Test Methods and Results

Description of the test	Test Methode	Obtained Results	Limit Values (tolerances)
Classification of Material	AISI standard	AISI 304 grade	standard
PVD Thickness	Calibration	0.03 UM	0.01 - 0.5 UM
Determination of Brightness - Upper and lower Gloss Values - Tolerance	Reflektometer		
	"Dr.Lange"	55 degree	+/- 5 %
Determination of Color - Upper and lower color Values - Tolerance	Spectrophotometer		
	"Konica Minolta"	L:73, a:3, b:32	+/- 5%
Determination of surface quality	QC	free from pinhole and wrinkle	
Test of the adhesion of the PVD Coating - Adherence - Determine of the value	bending tests	full bond	-
Impact test of the PVD coating	Hardness Vickers	1800 HV	+/- 5%
Bending test of the PVD coating	90 degree	pass	-
Enviromental Tests - Reaction with Water	no reaction with water		
	SGS Test Report	free from contaminating elements	
Enviromental Tests - PVD coating at high temperature condition - Warm Water Test	Heat Resistance Test		
	50hrs., at +100C	no change	-
Enviromental Tests - PVD coating at low temperature condition - Low temperature Test	supply to Russia for over 16 years		
	- 40 C	no change	-
Enviromental Tests - PVD coating at high humidity condition - Moisture Resistance	Accelerated Weathering Test CIELAB		
	ASTM G 53	0.7 ^E*ab	-

Chemical Resistance Test - PVD coating in contact with acidic liquids	5% HNO ₃ (Nitric Acid)		
	50hrs., at +40C	no change	-
5% NaOH (Sodium Hydroxide)			must avoid contact with cement during installation
Chemical Resistance Test - PVD coating in contact with alkaline liquids	50hrs., at +40C	color changed	

Resistance to Contamination Test (Oil-based marker, Ethanol)			
Chemical Resistance Test - PVD coating in contact with petroleum - derived liquids	50hrs., at +30C	no change	-
Salt Spray Test	300hrs.		
	ASTM B 117	no change	-
Aging (Color fading) Test	Abrasion Resistance Test ASTM D 968		
	200L of falling sand		no color change