

CERTIFICATE OF ACCREDITATION

Korea Testing and Research Institute

Accreditation No. : KT011

Corporation Registration No. : 134122-0007297

Address of Laboratory : 98, Gyoyukwon-ro, Gwacheon-si, Gyeonggi-do, Korea
68, Gajaeul-ro, Seo-gu, Incheon, Korea
15, Jongga-ro, Jung-gu, Ulsan, Korea
42-27, Jungbu-daero 2517beon-gil, Yangji-myeon, Cheoin-gu,
Yongin-si, Gyeonggi-do, Korea
5, Myeongji ocean city 9-ro, Gangseo-gu, Busan, Korea
12-63, Sandan-gil, Hwasun-eup, Hwasun-gun, Jeollanam-do, Korea
122-11, Seongseo4chacheomdan-ro, Dalseo-gu, Daegu, Korea

date of Initial Accreditation : December 10, 1994

Duration : April 28, 2014 ~ April 27, 2018

Scope of Accreditation : Attached Annex

Date of issue : August 7, 2017

This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 8 January 2009).



Jung Dong Hee

Administrator

Korea Laboratory Accreditation Scheme

Korea Laboratory Accreditation Scheme

No. KT011

Address of Laboratory : 15, Jongga-ro, Jung-gu, Ulsan, Korea

01. Mechanical Test

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
KS B 0233 : 2005	Mechanical properties of steel bolts and screws	Max. 2 000 kN
KS B 0234 : 2009	Mechanical properties of steel nuts	Max. 2 000 kN
KS B 0241 : 2016	Mechanical properties of corrosion-resistant stainless-steel fasteners	Max. 2 000 kN
KS B 0802 : 2003	Method of tensile test for metallic materials	Max. 2 000 kN
KS B 0804 : 2001	Metallic materials-Bend test	Max. 2 000 kN
KS B 0805 : 2000	Metallic materials-Test method of brinell hardness	(4 903 ~ 29 420) N
KS B 0806 : 2000	Metallic materials-Test method of rockwell hardness	Scale B, C
KS B 0810 : 2003	Method of impact test for metallic materials 8. Charpy Absorbed Energy 8. Lateral Expansion 8. Percent Shear Fracture	Max. 450 J (0 ~ 100) % (0 ~ 25) mm
KS B 0811 : 2003	Metallic materials-Vickers hardness test-Part 1 : Test method	(0.0981 ~ 490.3) N
KS B 0821 : 2007	Method of tension and impact test for deposited metal	Tension Test Max. 2 000 kN Impact Test Max. 450 J
KS B ISO 5173 : 2000	Destructive tests on welds in metallic materials-Bend tests	Max. 2 000 kN
KS B 0833 : 2001	Fusion-welded butt joints in steel-Transverse tensile test	Max. 2 000 kN
KS B ISO 9018 : 2003	Destructive tests on welds in metallic materials-Tensile test on cruciform and lapped joints	Max. 2 000 kN

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
KS D 0027 : 2002	Methods of measuring case depth for steel hardened by flame or induction hardening process 6. Measurement method by hardness test	(0 ~ 25) mm Resolution : 0.01 mm
KS D 0201 : 2016	Testing methods for hot-dipped zinc coating 4.2 Mass of zinc coating-Indirect method 5. Cupric sulphate test 6.5 Adhesion test-Hammer test 7. Alkaline test	-
KS D 0202 : 1987	Methods for estimating the average grain size of wrought copper and copper alloy 8. Spheroid area method	x 25 ~ x 1 000
KS D 0204 : 2007	Steel – Determination of content of nonmetallic inclusions – Micrographic method using standard diagrams	-
KS D 0205 : 2002	Steel-Micrographic determination of the ferritic or austenitic grain size	x 25 ~ x 1 000, G0 ~ G14.0
KS D 0206 : 2002	Steel – Hardenability test by end quenching (Jominy test)	-
KS D 0210 : 1992	Macrostructure Detecting Method for Steel	-
KS D 0215 : 2000	Steel Determination and verification of the effective depth of carburized and hardened cases	(0 ~ 25) mm Resolution : 0.01 mm
KS D 0216 : 2001	Methods of measuring decarburized depth for steel 6.2 Measurement method by hardness test	(0 ~ 25) mm Resolution : 0.01 mm

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
KS D 0274 : 1993	Method of measuring nitrided case depth for iron and steel 5. Measurement method by hardness test	(0 ~ 25) mm Resolution : 0.01 mm
KS D 3504 : 2016	Steel bars for concrete reinforcement 9.2 Mechanical Test	D4 ~ D51
SPS-KFCA-D4302-5016 : 2014	Spheroidal graphite iron castings 12.6 Spheroidized percent of graphite	-
JIS G 0551 : 2013	Steels-Micrographic determination of the apparent grain size	× 25 ~ × 1 000, G00 ~ G14.0
JIS G 0553 : 2012	Steel-Macroscopic examination by etching	-
JIS G 0555 : 2003	Microscopic testing method for the non-metallic inclusions in steel	-
JIS G 0559 : 2008	Steel-Determination of case depth after flame hardening or induction hardening	(0 ~ 25) mm Resolution : 0.01mm
JIS G 0557 : 2006	Methods of measuring case depth hardened by carburizing treatment for steel 6. Measurement method by hardness test	(0 ~ 25) mm Resolution : 0.01mm
JIS G 0558 : 2007	Steel-Determination of depth of decarburization 6.2 Measurement method by hardness test	(0 ~ 25) mm Resolution : 0.01mm
JIS G 0561 : 2011	Method of hardenability test for steel (Endquenchingmethod)	-
JIS G 0562 : 1993	Methods of measuring nitrided case depth for iron and steel 5. Measurement method by hardness test	(0 ~ 25) mm Resolution : 0.01 mm
JIS H 0401 : 2013	The methods for hot dip galvanized	-

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
	coatings 5.2 Mass of zinc coating- Indirect method 6. Cupric sulphate test 7.3 Adhesion test-Hammer test 8. Alkaline test	
JIS Z 2241 : 2011	Metallic materials - Tensile testing - Method of test at room temperature 10.3.2.6. Tensile strength 11 Upper yield strength 12 Lower yield strength 13. Yield strength(offset method) 19. Percentage total extension at fracture 21. Reduction of area	Max. 2 000 kN Max. 2 000 kN Max. 2 000 kN Max. 2 000 kN (0 ~ 100) % (0 ~ 100) %
JIS Z 2242 : 2005	Method for Charpy pendulum impact test of metallic materials Charpy impact test (Charpy impact absorbed energy) Annex B Lateral expansion Annex C Percentage of Shear Fracture Area	Max. 450 J (0 ~ 25) mm (0 ~ 100) %
JIS Z 2243 : 2008	Brinell hardness test - Test method	(4 903 ~ 29 420) N
JIS Z 2244 : 2009	Vickers hardness test - Test method	(0.098 1 ~ 490.3) N
JIS Z 2245 : 2016	Rockwell hardness test - Test method	Scale B, C
JIS Z 2248 : 2014	Metallic materials - Bend test	Max. 2 000 kN
JIS Z 3111 : 2005	Methods of tension and impact tests for deposited metal	Tension Test : Max. 2 000 kN Impact Test : Max. 450 J
JIS Z 3121 : 2013	Methods of tensile test for butt welded joints	Max. 2 000 kN
JIS Z 3122 : 2013	Methods of Bend Test for Butt Welded Joint	Max. 2 000 kN

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
ASTM A90 / A90M-13	Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings	-
ASTM E1077-14	Standard Test Methods for Estimating the Depth of Decarburization of Steel Specimens	-
ASTM E1245 : 03(2016)	Standard Practice for Determining the Inclusion or Second-Phase Constituent Content of Metals by Automatic Image Analysis	x 25 ~ x 1 000
ASME BPVC, 2015 SECTION II, PART A, SA-370	<p>TEST METHODS AND DEFINITIONS FOR MECHANICAL TESTING OF STEEL PRODUCTS</p> <p>13.1 TENSILE TEST - Yield Point</p> <p>13.2 TENSILE TEST - Yield Strength</p> <p>13.3 TENSILE TEST - Tensile Strength</p> <p>13.4 TENSILE TEST - Elongation</p> <p>13.5 TENSILE TEST - Reduction Area</p> <p>14. BEND TEST</p> <p>16. HARDNESS TEST - Brinell Test</p> <p>17. HARDNESS TEST - Rockwell Test</p> <p>25.4.1 CHARPY IMPACT TESTING - Impact energy</p> <p>25.4.2 CHARPY IMPACT TESTING Percentage of Shear Fracture Area</p> <p>25.4.3 CHARPY IMPACT TESTING Lateral Expansion</p>	<p>Max. 2 000 kN</p> <p>Max. 2 000 kN</p> <p>Max. 2 000 kN</p> <p>(0 ~ 100) %</p> <p>(0 ~ 100) %</p> <p>Max. 2 000 kN</p> <p>(4 903 ~ 29 420) N</p> <p>Scale B, C</p> <p>Max. 450 J</p> <p>(0 ~ 100) %</p> <p>(0 ~ 25) mm</p>

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
ASME BPVC,2015 Section IX.	QUALIFICATION STANDARD FOR WELDING AND BRAZING PROCEDURES, WELDERS, BRAZERS, AND WELDING AND BRAZING OPERATORS QW-150 TENSION TESTS QW-160 GUIDED-BEND TESTS QW-170 NOTCH-TOUGHNESS TESTS - Charpy V-Notch QW-183 Macro-Examination – Procedure Specimens QW-184 Macro - Examination - Performance Specimens	Max. 2 000 kN Max. 2 000 kN Max.450J - -
AWS D1.1/D1.1M : 2015	Structural Welding Code - Steel 4.9.3 Mechanical Testing (Bend Tests, Tension Test) 4.9.4 Macroetch Test	Max. 2 000kN -
ISO 642 : 1999(E)	Steel -- Hardenability test by end quenching (Jominy test)	-
ISO 945-1 : 2008	Microstructure of cast irons -- Part 1 : Graphite classification by visual analysis	-
ASTM A247-10	Standard Test Method for Evaluating the Microstructure of Graphite in Iron Castings	-
ASTM A255-10(2014)	Standard Test Methods for Determining Hardenability of Steel	-
ASTM A352/A352M-06(2012)	Standard Specification for Steel Castings, Ferritic and Martensitic, for Pressure- Containing Parts, Suitable for low-Temperature Service 7.2 Charpy Absorbed Energy	Max. 450 J

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
ASTM A370-17	Standard Test Methods and Definitions for Mechanical Testing of Steel Products	Max. 2 000 kN
ASTM E8 / E8M-16a	Standard Test Methods for Tension Testing of Metallic Materials	Max. 2 000 kN
ASTM E10-17	Standard Test Method for Brinell Hardness of Metallic Materials	(4 903~29 420) N
ASTM E18-16	Standard Test Methods for Rockwell Hardness of Metallic Materials	Scale B, C
ASTM E23-16b	Standard Test Methods for Notched Bar Impact Testing of Metallic Materials 9.1 The Absorbed Energy (Charpy Impact Test) 9.2 Lateral Expansion Measurement (Charpy Impact Test)	Max. 450 J (0 ~ 25) mm
ASTM E45-13	Standard Test Methods for Determining the Inclusion Content of Steel	-
ASTM E112-13	Standard Test Methods for Determining Average Grain Size	× 25 ~ × 1 000, G00 ~ G14.0
ASTM E208 : 06(2012)	Standard Test Method for Conducting Drop-Weight Test to Determine Nil - Ductility Transition Temperature of Ferritic Steels	-
ASTM E384-11e1	Standard Test Method for Knoop and Vickers Hardness of Materials	(0.098 1 ~ 490.3) N
ASTM E407-07(2015)e1	Standard Practice for Microetching Metals and Alloys	-
ASTM E562-11	Standard Test Method for Determining Volume Fraction by Systematic Manual Point Count	× 25 ~ × 1 000

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
ISO 4967 : 2013	Steel -- Determination of content of nonmetallic inclusions-- Micrographic method using standards diagrams	-
ISO 4969 : 2015	Steel -- Macroscopic examination by etching with strong mineral acids	-
ISO 6508-1 : 2016(E)	Metallic materials -- Rockwell hardness test --Part1 : Test method	Scales B, C
ISO 17639 : 2003	Destructive tests on welds in metallic materials -- Macroscopic and microscopic examination of welds	Macro : ~ ×50, Micro : ×25 ~ ×1 000
AS 1391 : 2007	Metallic materials - Tensile testing at ambient temperature	Max. 2 000 kN
AS 1544.2 : 2003	Methods for impact tests on metals Charpy V-notch	Max. 450 J
AS 1544.3 : 2003	Methods for impact tests on metal Charpy U-notch and keyhole notch	Max. 450 J
AS 1544.5 : 2003	Methods for impact tests on metals Assessment of fracture surface appearance of steel	(0 ~ 100) %
ASTM E 399-12e3	Standard Test Method for Linear-Elastic Plane-Strain Fracture Toughness K_{Ic} of Metallic Materials	Max. 250 kN
ASTM E 340-15	Standard Test Method for Macroetching Metals and Alloys	~ ×50
ASTM E 1820-16	Standard Test Method for Measurement of Fracture Toughness	Max. 250 kN
BS 7448-1 : 1991	Fracture mechanics toughness tests. Method for determination of K_{Ic} , critical CTOD and critical J values of metallic materials 6.4 Fatigue precracking 8 Test procedure	Max. 250 kN

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
	9.2 Determination of plane strain fracture toughness K_{Ic} 9.3 Determination of CTOD	
BS 7448-2 : 1997	Fracture mechanics toughness tests. Method for determination of K_{Ic} , critical CTOD and critical J values of welds in metallic materials 9.1 Fatigue precracking 10 Test procedure for K_{Ic} , CTOD(or d) and J tests (Except for J)	Max. 250 kN
BS EN ISO 148-1 : 2016	Metallic materials - Charpy pendulum impact test - Part 1 : Test method	Charpy Absorbed Energy : Max. 450 J, Lateral Expansion : (0 ~ 25) mm, Percent Shear Fracture : (0 ~ 100) %
BS EN ISO 4136 : 2012	Destructive tests on welds in metallic materials. Transverse tensile test	Max. 2 000 kN
BS EN ISO 5173 : 2010+A1 : 2011	Destructive tests on welds in metallic materials. Bend tests	Max. 2 000 kN
BS EN ISO 5178 : 2011	Destructive tests on welds in metallic materials - Longitudinal tensile test on weld metal in fusion welded joints	Max. 2 000 kN
BS EN ISO 6506-1 : 2014	Metallic materials - Brinell hardness test - Part 1 : Test method	(0.098 1~ 490.3)N
BS EN ISO 6507-1 : 2005	Metallic materials - Vickers hardness test - Part 1 : Test method	(0.098 1 ~ 490.3) N
BS EN ISO 6508-1 : 2016	Metallic materials - Rockwell hardness test - Part 1 : Test method (scales A, B, C, D, E, F, G, H, K, N, T)	Scale B, C

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
BS EN ISO 6892-1 : 2016	Metallic materials - Tensile testing - Part 1_ Method of test at ambient temperature	Max. 2 000 kN
BS EN ISO 7438 : 2016	Metallic materials - Bend test	Max. 2 000 kN
BS EN ISO 9015-1 : 2011	Destructive tests on welds in metallic materials. Hardness testing. Hardness test on arc welded joints	Brinell hardness : (0.098 1 ~ 490.3) N, Vickers hardness : (4 903 ~ 29 420) N
BS EN ISO 9015-2 : 2016	Destructive tests on welds in metallic materials. Hardness testing. Microhardness testing of welded joints	(0.098 1 ~ 490.3) N
BS EN ISO 9016 : 2012	Destructive tests on welds in metallic materials. Impact tests. Test specimen location, notch orientation and examination	Charpy Absorbed Energy : Max. 450 J, Lateral Expansion : (0 ~ 25) mm, Percent Shear Fracture : (0 ~ 100) %
BS EN ISO 12737 : 2010	Metallic materials. Determination of plane-strain fracture toughness	Max. 250 kN
BS EN ISO 15653 : 2010	Metallic materials. Method of test for the determination of quasistatic fracture toughness of welds 9.1 Fatigue precracking 10 Test apparatus, requirements and test procedure 12.2 K_{Ic} 12.3 d and J (Except for J)	Max. 250 kN

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
ISO 148-1 : 2016(E)	Metallic materials - Charpy pendulum impact test - Part 1 : Test method	Charpy Absorbed Energy : Max. 450 J, Lateral Expansion : (0 ~ 25) mm, Percent Shear Fracture : (0 ~ 100) %
ISO 4136 : 2012	Destructive tests on welds in metallic materials - Transverse tensile test	Max. 2 000 kN
ISO 5173 : 2009	Destructive tests on welds in metallic materials - Bend tests	Max. 2 000 kN
ISO 5178 : 2001	Destructive tests on welds in metallic materials - Longitudinal tensile test on weld metal in fusion welded joints	Max. 2 000 kN
ISO 6506-1 : 2014	Metallic materials - Brinell hardness test - Part 1 : Test method	(4 903 ~ 29 420) N
ISO 6507-1 : 2005	Metallic materials - Vickers hardness test - Part 1 : Test method	(0.098 1 ~ 490.3) N
ISO 6892-1 : 2016	Metallic materials - Tensile testing - Part 1 : Method of test at room temperature	Max. 2 000 kN
ISO 7438 : 2016	Metallic materials - Bend test	Max. 2 000 kN
ISO 9015-1 : 2001	Destructive tests on welds in metallic materials - Hardness testing - Part 1 : Hardness test on arc welded joints	(0.098 1 ~ 490.3) N, (4 903~29 420) N
ISO 9015-2 : 2016	Destructive tests on welds in metallic materials - Hardness testing - Part 2 : Microhardness testing of welded joints	(0.098 1 ~ 490.3) N

Korea Laboratory Accreditation Scheme

No. KT011

01.001 Metals and Metal Products

Test Method	Standard designation	Test range
ISO 9016 : 2012	Destructive tests on welds in metallic materials - Impact tests - Test specimen location, notch orientation and examination	Charpy Absorbed Energy : Max. 450 J, Lateral Expansion : (0 ~ 25) mm, Percent Shear Fracture : (0 ~ 100) %
ISO 9017 : 2001	Destructive tests on welds in metallic materials - Fracture test	Max. 2 000 kN
ISO 15653 : 2010	Metallic materials - Method of test for the determination of quasistatic fracture toughness of welds 9.1 Fatigue precracking 10 Test apparatus, requirements and test procedure 12.2 K_{Ic} 12.3 d and J (Except for J)	Max. 250 kN

Korea Laboratory Accreditation Scheme

No. KT011

01.004 Aggregate and Related Products

Test Method	Standard designation	Test range
KS F 2340 : 2014	Standard test method for sand equivalent value of soils and fine aggregate	(0 ~ 100) %
KS F 2470 : 2007	Testing method for surface moisture in coarse aggregate (production control of concrete)	(0.1 ~ 8 000) g
KS F 2502 : 2014	Standard test method for sieve analysis of fine and coarse aggregates	(0.032 ~ 100) mm
KS F 2503 : 2014	Standard test method for density and absorption of coarse aggregate	(0.01 ~60.00) kg
KS F 2504 : 2014	Standard test method for density and absorption of fine aggregates	(0.1 ~ 8 000) g
KS F 2505 : 2002	Methods of test for bulk density of aggregates and solid content in aggregates	(1 ~ 30) L (0.01 ~60.00) kg
KS F 2507 : 2007	Method of test for soundness of aggregates by use of sodium sulfate	(0.1 ~ 8 000) g (0.01 ~60.00) kg
KS F 2508 : 2007	Method of test for resistance to abrasion of coarse aggregate by use of the Los Angeles machine	(0 ~ 40.0) %
KS F 2509 : 2002	Methods of test for surface moisture in fine aggregate	(0.1 ~ 8 000) g
KS F 2510 : 2002	Testing method of organic impurities in sands aggregate for concrete	-
KS F 2511 : 2007	Testing method for amount of material finer than 0.08 mm sieve in aggregate	(0.08 ~ 1.2) mm (0.1 ~ 8 000) g
KS F 2512 : 2012	Method of test for clay lumps contained in aggregates	(0.6 ~ 5.0) mm (0.01 ~ 60.00) kg
KS F 2515 : 2014	Standard test method for chloride content in aggregate	(0.1 ~ 8 000) g
KS F 2516 : 2014	Standard test method for content of soft particles in coarse aggregate by scratching	(10 ~ 65) mm
KS F 2518 : 2015	Testing method for absorption and bulk specific gravity of stone	(0.1 ~ 8 000) g

Korea Laboratory Accreditation Scheme

No. KT011

01.004 Aggregate and Related Products

Test Method	Standard designation	Test range
KS F 2519 : 2015	Testing method for compressive strength of natural building stone	(150 ~ 1 800) kN
KS F 2530 : 2015	Stones	(150 ~ 1 800) kN
KS F 2550 : 2002	Methods of test for total moisture content of aggregate and surface moisture in aggregate by drying	(0.1 ~ 4.0) g
ASTM C 117-13	Standard Test Method for Materials Finer than 75 μ m (No. 200) Sieve in Mineral Aggregates by Washing	(0.1 ~ 8 000) g
ASTM C 70-13	Standard Test Method for Surface Moisture in Fine Aggregate	(0.1 ~ 8 000) g (0.01 ~ 60.00) kg
ASTM C97/C97M-15	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone	(0.0 ~ 40.0) %
ASTM C170/C170M-16	Standard Test Method for Compressive Strength of Dimension Stone	(0.1 ~ 8 000) g

01.009 Rubber and Related products

Test Method	Standard designation	Test range
KS B 2805 : 2002R	O-ring	0.01 mm ~ 1 000 mm
	6. Dimension 7. Appearance 9.2 Materials Testing	- 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % \leq
KS F 3211 : 2015	Liquid-applied compounds for waterproofing membrane coating of roof 6.3 Tensile performance 6.4 Tear performance 6.5 The temperature dependence 6.7 Tensile performance after degradation treatment	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 N ~ 5 000 N -100 % \leq

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
	(Execpt Facilitate exposure) 6.8 Deterioration appearance at elongation (Execpt Facilitate exposure) 6.11 Falling resistance performance	(1 ~ 250) mPa - 0.01 mm ~ 1 000 mm
KS F 4911 : 2012	Waterproofing sheets of synthetic polymer	
	6.2 Appearance 6.3 Measurement of dimensions 6.4 Mass per unit area of the product 6.5 Tensile performance 6.6 Tear performance 6.7 The temperature dependence 6.9 Tensile performance after degradation treatment (Execpt Facilitate exposure) 6.10 Deterioration appearance at elongation (Execpt Facilitate exposure) 6.11 Joining Appearance	- 0.01 mm ~ 1 000 mm 0.000 1 g ~ 200 g 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 N ~ 5 000 N 0.1 % ≤ 0.1 % ≤ - -
KS F 4922 : 2007	Polyurea resin waterproofing membrane coating	
	5.2.6 Tensile Performance Test 5.2.7 Tear Performance Test 5.2.10 Tensile performance after degradation treatment (Execpt Facilitate exposure)	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 N ~ 5 000 N 0.01 % ~ 100 % 0.01 % ~ 1 250 %
KS M ISO 868 : 2003	Plastics and ebonite – Determination of indentation hardness by means of a durometer(Shore hardness)	0 ~ 100
KS M 6518 : 2016	Physical test methods for vulcanized rubber	
	5. Tensile Test 6. Tensile Set	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 % ~ 100 %

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
	7. Hardness 8. Accelerated Aging Test 9. Peel Test 10. Tear Test 11. Compression Set 13. Immersion in Oil 14. Determination of adhesion to metal 15. Low deformation of stress test 16. Ozone resistance test 17. Compression Test	0 ~ 100 -100 % ≤ 0.1 N ~ 5 000 N 0.1 N ~ 5 000 N 0.1 % ~ 100 % 0.000 1 g ~ 200 g -100 % ≤ 0.1 N ~ 30 000 N 0.1 N ~ 5 000 N (1 ~ 250) mPa 0.1 N ~ 30 000 N
KS M 6519 : 2008	Method of analysis for rubber goods	
	7.1.1 Specific gravity (How to quantify the amount in liquid)	0.000 1 g ~ 200 g
KS M 6521 : 2012	Rubber shoes and boots	
	5.1 Appearance 6.1 Dimension	- 0.01 mm ~ 1 000 mm
KS M 6522 : 2016	Canvas boots and rubber outsole	
	7.9 The cold test of outsole	-50 °C ≤
KS M 6523 : 2016	Rubber out soles and heels for shoes	
	4. Appearance	-
	7.1 Thickness Measurement	0.01 mm ~ 1 000 mm
	7.2 Measure the length and width	0.01 mm ~ 1 000 mm
	7.3 Hardness	0 ~ 100
	7.4 Tensile Strength & Elongation	0.1 N ~ 5 000 N 0.01 % ~ 1 250 %
7.5 Tear Strength	0.1 N ~ 5 000 N	
7.6 Immersion in oil	0.000 1 g ~ 200 g	
KS M 6529 : 2013	Butyl rubber tube for automobile	
	5.1 Appearance	-
KS M 6533 : 2016	Flat rubber belts	
	6. Width and No. of ply	0.01 mm ~ 1 000 mm
	7.1 Appearance	-
	8.1 Tensile strength	0.1 N ~ 5 000 N
	8.2 Peel strength	0.1 N ~ 5 000 N

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
KS M 6534 : 2016	Conveyor rubber belts	
	5.1 Appearance	-
	9.3 Dimension	0.01 mm ~ 1 000 mm
	9.4 Tensile Test of Cover rubber	0.1 N ~ 5 000 N
	9.5 Accelerated Aging Test of Cover rubber	0.01 % ~ 1 250 % -100 % ≤
	9.6 Ozone Resistance Test of Cover rubber	(1 ~ 250) mPa
	9.8 Tensile Test of Product	0.1 N ~ 30 000 N
KS M 6535 : 2003	9.9 Adhesive Strength	0.01 % ~ 1 250 % 0.1 N ~ 5 000 N
	Classical V-Belts for power transmission	
	4.1 Appearance	-
KS M 6540 : 2014	6. Dimension	0.01 mm ~ 1 000 mm
	8.2 Tensile Test	0.1 N ~ 5 000 N
	0.01 % ~ 1 250 %	
KS M ISO 1403 : 2007	Testing methods for rubber hoses	
	5.2.2 Low Temperature Test	-50 °C ≤
	5.2.4 Peel Test	0.1 N ~ 5 000 N
	5.3 Physical test of rubber (Except of Moist heat aging test)	0.1 N ~ 5 000 N
KS M ISO 2398 : 2012	0.01 % ~ 1 250 %	
	-100 % ≤	
	Rubber hoses, textile-reinforced, for general-purpose water applications – Specification	
KS M ISO 2398 : 2012	6.2 The tensile strength & elongation inner and outer rubber	0.1 N ~ 5 000 N
	6.3 Accelerated Aging Test	0.01 % ~ 1 250 %
	-100 % ≤	
KS M ISO 2398 : 2012	Rubber hose, textile-reinforced, for compressed air – Specification	
	6. Dimension	0.01 mm ~ 1 000 mm
	7. Physical Properties	
	-Minimum tensile strength	0.1 N ~ 5 000 N
	-Minimum elongation	0.01 % ~ 1 250 %
-Resistance of Accelerated Aging	-100 % ≤	

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
KS M 6546 : 2008	Rubber hoses for oil discharge	
	8.4 Tensile Test 8.5 Accelerated Aging Test 8.6 Immersion in Oil	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % ≤ 0.000 1 g ~ 200 g -100 % ≤
KS M 6592 : 2016	Engine accessory drive V-belts	
	6.2 Dimension 7.1 Appearance 7.3 Tensile Properties	0.01 mm ~ 1 000 mm - 0.1 N ~ 5 000 N 0.01 % ~ 1 250 %
KS M 6604 : 2016	Testing method for rubber vibration isolators	
	6. Static Spring Number 10. Tensile Test 11. Low Deformation of stress Test 12. Accelerated Aging Test 13. Ozone Resistance Test 14. Determination of Adhesion to Metal 15. Compression set 17. Immersion in Oil	0.1 N ~ 30 000 N 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 N ~ 5 000 N -100 % ≤ (1 ~ 250) mPa 0.1 N ~ 5 000 N 0.1 % ~ 100 % -100 % ≤
KS M 6613 : 2007	Rubber goods for water works service	
	7.1 Hardness 7.2 Tensile Test 7.3 Tensile Set 7.4 Accelerated Aging Test 7.5 Compression set	0 ~ 100 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.01 % ~ 1 250 % -100 % ≤ 0 ~ 100 0.1 % ~ 100 %
KS M 6614 : 2014	Rubber packing materials for industrial use	
	6.3 Immersion in Oil 6.4 Accelerated Aging Test	-100 % ≤ 0 ~ 100 -100 % ≤ 0 ~ 100

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
	6.5 Heat Test 6.6 Compression set 6.7 Compression Load Test 6.8 Low Temperature Bending Test	-100 % ≤ 0 ~ 100 0.1 % ~ 100 % 0.1 N ~ 5 000 N -
KS M 6617 : 2016	Rubber materials for vibration isolators	
	7.1 Low Deformation of stress Test 7.2 Elongation 7.3 Accelerated Aging Tes 7.4 Ozone Resistance Test 7.5 Compression set 7.6 Immersion in Oil	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % ≤ (1 ~ 250) mPa 0.1 % ~ 100 % -100 % ≤
KS M 6624 : 2008	Testing methods for abrasion of vulcanized rubber (Akron method)	0.000 1 g ~ 200 g
KS M 6626 : 2016	Classification system for elastomeric materials for automotive applications	
	5. Test Method - Tensile Strength - Elongation - Tear Strength - Hardness - Accelerated aging test - Immersion in oil - Compression set - Test of adhesion to metal - Low temperature test - Test methods in Appendix 5. Contamination test 6. Ozone resistance test	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 N ~ 5 000 N 0 ~ 100 -100 % ≤ 0 ~ 100 -100 % ≤ 0 ~ 100 0.000 1 g ~ 200 g 0.1 % ~ 100 % 0.1 N ~ 5 000 N -70 °C ≤ - (1 ~ 250) mPa
KS M 6629 : 2014	Rubber hoses for liquefied petroleum gases(LPGs) - Automobile, general equipment and home application - Specification	
	8.4 Low temperature bending test 8.5 Ozone resistance test 8.10 Tensile Test of Rubber 8.11 Accelerated aging test of Rubber	-50 °C ≤ (1 ~ 250) mPa 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % ≤

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
	8.12 Immersion in oil of Rubber	0.000 1 g ~ 200 g -100 % ≤
KS M 6633 : 2014	Household rubber gloves	
	4. Dimension 6.1 Appearance 7.2 Tensile Test 7.3 Immersion in 7.7 Pinhole test	0.01 mm ~ 1 000 mm - 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % ≤ -
KS M 6640 : 2014	Surgical rubber gloves	
	5. Appearance 6. Dimension 7.2 Tensile Strength & Elongation before Accelerated aging 7.3 Tensile Strength & Elongation after Accelerated aging 7.4 Tensile stress(modulus) at 300% 8. Pinhole test(Tightness test)	- 0.01 mm ~ 1 000 mm 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % ≤ 0.1 N ~ 5 000 N -
KS M 6660 : 2016	Physical testing method of expanded rubber	
	5.3 Spring hardness Test	0 ~ 100
KS M 6670 : 2016	Testing method for low-temperature compression set of vulcanized elastomers	-50 °C ≤
KS M 6676 : 2008	Rubber, vulcanized or thermoplastic—Determination of low temperature properties	
	5. Low temperature brittleness	-70 °C ≤
KS M 6685 : 2016	Mask for civil defence	
	5.2 Structure 7.1.2 Rubber Materials (Except of Low temperature test)	- 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0 ~ 100 -100 % ≤
KS M 6709 : 2003	Rubber fender	
	5.1 Appearance 6.1 Dimension 6.3 Test of Rubber Materials	- 0.01 mm ~ 1 000 mm 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0 ~ 100 -100 % ≤ 0.000 1 g ~ 200 g (1 ~ 250) mPa

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
KS M 6749 : 2012	Rubber draft gears for railway rolling stock	
	Appendix A.3.2 Hardness Test Appendix A.3.3 Tensile Test Appendix A.3.4 Accelerated aging test Appendix A.3.5 Compression set Appendix A.3.7 Test of adhesion to metal	0 ~ 100 0.1 N ~ 5 000 N 0.1 % ~ 100 % -100 % ≤ 0.1 % ~ 100 % 0.1 N ~ 5 000 N
KS M 6785 : 2009	Testing methods of stress-strain properties at low deformation for vulcanized rubber	1 N ~ 30 000 N 0.1 N ~ 5 000 N
Safety Certification Standard (The Agency for Technology and Standards Notice No.2012-43)	Automobile tires (tread rubber for tire recycling)	
	8.1 Hardness Test of Rubber 8.2 Tensile Test of Rubber 8.3 Accelerated aging test of Rubber 8.4 Peel test of joint	0 ~ 100 0.1 N ~ 5 000 N 0.01 % ~ 1 250 % -100 % ≤ 0.1 N ~ 5 000 N
JIS K 6251 : 2010	Rubber, vulcanized or thermoplastics - Determination of tensile stress-strain properties	0.1 N ~ 5 000 N 0.01 % ~ 1 250 %
JIS K 6253-3 : 2012	Rubber, vulcanized or thermoplastic - Determination of hardness - Part 3: Durometer method	0 ~ 100
JIS K 6254 : 2016	Rubber, vulcanized or thermoplastic - Determination of stress-strain properties	1 N ~ 30 000 N 0.1 % ~ 100 %
JIS K 6257 : 2010	Rubber, vulcanized or thermoplastic - Determination of heat ageing properties	-100 % ≤ 0 ~ 100
JIS K 6258 : 2016	Rubber, vulcanized or thermoplastic - Determination of the effect of liquids	0.000 1 g ~ 200 g -100 % ≤ 0 ~ 100
JIS K 6261 : 2006	Rubber, vulcanized or thermoplastic - Determination of low temperature properties	0.1 % ~ 100 % -70 °C ≤
JIS K 6262 : 2013	Rubber, vulcanized or thermoplastic - Determination of compression set at ambient, elevated or low temperatures	0.01 mm ~ 300 mm 0.1 % ~ 100 %

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
ASTM D1149-16	Standard Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment	(1 ~ 250) mPa
ASTM D1171-16	Standard Test Method for Rubber Deterioration—Surface Ozone Cracking Outdoors or Chamber (Triangular Specimens)	(1 ~ 250) mPa
ASTM D2000-12	Standard Classification System for Rubber Products in Automotive Applications	
	- Tensile strength	0.1 N ~ 5 000 N
	- Elongation	0.01 % ~ 1 250 %
ASTM D2137-11	Standard Test Methods for Rubber Property Brittleness Point of Flexible Polymers and Coated Fabrics	-70 °C ≤
ASTM D2240-05(2010)	Standard Test Method for Rubber Property—Durometer Hardness	0 ~ 100
ASTM D395-16	Standard Test Methods for Rubber Property—Compression Set (Method B- Compression Set Under Constant Deflection in Air)	0.1 % ~ 100 %
ASTM D4060-14	Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser	0.1 mg ≤
ASTM D412-16	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension	0.1 N ~ 5 000 N 0.01 % ~ 1 250 % 0.1 % ≤
ASTM D429-14	Standard Test Methods for Rubber Property—Adhesion to Rigid Substrates	1 N ~ 30 000 N
ASTM D471-16a	Standard Test Method for Rubber Property—Effect of Liquids	0.000 1 g ~ 200 g -100 % ≤ 0 ~ 100
ASTM D573-04(2015)	Standard Test Method for Rubber—Deterioration in an Air Oven	-100 % ≤ 0 ~ 100

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
ASTM D624-00(2012)	Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers	0.1 N ~ 5 000 N
ASTM D746-14	Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact	-70 °C ≤
ASTM D751-06(2011)	Standard Test Methods for Coated Fabrics	
	11. Tensile strength	0.1 N ~ 5 000 N
	17. Elongation	0.01 % ~ 1 250 %
	26. Tearing strength	0.1 N ~ 5 000 N
ISO 1817 : 2015	Rubber, vulcanized or thermoplastic - Determination of the effect of liquids	0.000 1 g ~ 200 g -100 % ≤
ISO 188 : 2011	Rubber, vulcanized or thermoplastic - Accelerated ageing and heat resistance tests	-100 % ≤ 0 ~ 100
ISO 34-1 : 2015	Rubber, vulcanized or thermoplastic - Determination of tear strength - Part 1: Trouser, angle and crescent test pieces	0.1 N ~ 5 000 N
ISO 37 : 2011	Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties	0.1 N ~ 5 000 N 0.01 % ~ 1 250 %
ISO 812 : 2011	Rubber, vulcanized or thermoplastic - Determination of low- temperature brittleness	-70 °C ≤
ISO 814 : 2011	Rubber, vulcanized or thermoplastic - Determination of adhesion to metal - Two-plate method	1 N ~ 30 000 N
ISO 815-1 : 2014	Rubber, vulcanized or thermoplastic - Determination of compression set - Part 1 : At ambient or elevated temperatures	0.1 % ~ 100 %

Korea Laboratory Accreditation Scheme

No. KT011

01.009 Rubber and Related products

Test Method	Standard designation	Test range
ISO 815-2 : 2014	Rubber, vulcanized or thermoplastic - Determination of compression set - Part 2 : At low temperatures	-50 °C ≤ 0.1 % ~ 100 %
ISO 1431-1 : 2012	Rubber, vulcanized or thermoplastic-Resistance to ozone cracking -Part 1: Static and dynamic strain testing	(1 ~ 250) mPa
ISO 7267-2 : 2008	Rubber-covered rollers - Determination of apparent hardness - Part 2: Shore-type durometer method	0 ~ 100

01.010 Plastic and related products

Test Method	Standard designation	Test range
KS L 9016 : 2010	Test methods for thermal transmission properties of thermal insulations	(0.015 ~ 0.43) W/(m·K)
KS M 3001 : 2001	Testing methods for mechanical characteristics of polyethylene film	100 N(0.01 N)
KS M 3015 : 2003	Testing methods for thermosetting plastics	0 ~ 100
	6.16 Hardness(Plastic materials and laminates)	
	6.17 Flexural strength and flexural modulus	30 kN(1 N)
	6.18 Tensile strength	30 kN(1 N)
	6.19 Compressive Strength	30 kN(1 N)
	6.20 Charpy impact strength(Molding material)	(2.82 ~ 25) J
	6.21 Izod impact strength(Laminates)	(2.82 ~ 25) J
	6.23 Heat-resistant	Max. 300 °C
	6.24 Flame resistance(Method A)	-
6.28 Specific Gravity	(0.000 1 ~ 200) g	

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
KS M 3015 : 2003	6.35 Deflection Temperature Under Load	Max. 300 °C
KS M 3026 : 2016	Testing methods for yellowness index and change of yellowness index of plastics	-
KS M 3387 : 2016	Testing method for Barcol hardness of glass fiber reinforced plastics	0 ~ 100
KS M 3401 : 2015	Unplasticized poly(vinyl chloride)(PVC-U) pipes for water supply 10.2 Appearance and shape	-
	10.3 Dimensions	(0.01 ~ 300) mm
	10.4 Tensile Strength Test	30 kN(1 N)
	10.5 Hydrostatic test	10 MPa
	10.6 Flattening test	30 kN(1 N)
	10.7 Impact test 10.8 Vicat softening temperature test	1 kg, 3 kg, 9 kg Max. 300 °C
KS M 3402 : 2016	Rigid poly(vinyl chloride)(PVC-U) pipe fittings for water supply 10.1 Appearance and shape	-
	10.2 Dimensions	(0.01 ~ 300) mm
	10.3 Tensile Strength Test	30 kN(1 N)
	10.4 Hydrostatic test	10 MPa
	10.5 Flattening test	30 kN(1 N)
	10.6 Impact test	1 kg, 3 kg, 9 kg
KS M 3402 : 2016	10.7 Vicat softening temperature test	Max. 300 °C
	10.9 Compression test 10.11 Heat flaccid test	30 kN(1 N) Max. 300 °C
KS M 3404 : 2016	Unplasticized poly(vinyl chloride)(PVC-U) pipes for general service 10.2 Appearance and shape	-
	10.3 Dimensions	(0.01 ~ 300) mm
	10.4 Tensile Strength Test	30 kN(1 N)
	10.5 Hydrostatic test 10.6 Joint hydrostatic test	10 MPa 10 MPa

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
	10.7 Impact test	30 kN(1 N)
	10.9 Vicat softening temperature test	Max. 300 °C
KS M 3407 : 2003	Polyethylene pipe for general purpose 5. Dimensions	(0.01 ~ 300) mm
	8.1 Tensile test 8.2 Hydrostatic test	30 kN(1 N) 10 MPa
KS M 3410 : 2016	Unplasticized poly(vinyl chloride)(PVC-U) pipe fittings for drain 10.1 Appearance and shape	-
	10.2 Dimensions	(0.01 ~ 300) mm
	10.3 Tensile Strength Test	30 kN(1 N)
	10.4 Hydrostatic test	10 MPa
	10.5 Flattening test	30 kN(1 N)
	10.7 Vicat softening temperature test	Max. 300 °C
KS M 3413 : 2016	Coextruded poly(vinyl chloride) (PVC) plastic pipe with a cellular core 9.4 Flattening test	30 kN(1 N)
	9.5 Falling weight impact test	9 kg
	9.6 Heat resistance test	Max. 300 °C
	9.7 High voltage test	10 kV
	9.8 Flame resistance	-
	9.9 Coefficient of friction test	-
KS T 1093 : 2016	Polyethylene films for packaging	100 N(0.01 N)
KS M 3600 : 2016	Structured-wall polyvinyl chloride(PVC) pipes for non-pressure underground drainage and sewerage – Double-wall corrugated pipe and rib pipe 9.2 Appearance	-
	9.3 Dimensions	(0.01 ~ 300) mm
	9.4 Ring Stiffness	30 kN(1 N)
	9.5 Ring Flexibility	30 kN(1 N)
	9.6 Falling weight impact test	(0.8 ~ 3.2) kg

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
	9.8 Tensile Strength Test	30 kN(1 N)
	9.9 Vicat softening temperature test	Max. 300 °C
KS M 3805 : 2004	Polyvinylchloride waterstop 9.8 Flexible temperature(Except)	5 kN(0.1 N)
KS M 3808 : 2011	Cellular polystyrene(PS) for thermal insulation	(0.01 ~ 300) mm 5 kN(0.1 N) (0.015 ~ 0.43) W/(m·K)
KS M 3809 : 2006	Rigid polyurethane foam for thermal insulation	(0.01 ~ 300) mm 30 kN(1 N) (0.015 ~ 0.43) W/(m·K)
KS M 3862 : 2001	Polyethylene foam for thermal insulation 5.9 Thickness shrinkage (Except)	(0.01 ~ 300) mm 5 kN(0.1 N) (0.015 ~ 0.43) W/(m·K)
KS M ISO 62 : 2016	Determination of Water Absorption 7.1 Percentage by mass of water absorbed	(0.000 1 ~ 200) g
KS M ISO 75-1 : 2015	Plastics-Determination of temperature of deflection under load-Part 1 : General test method	Max. 300 °C
KS M ISO 75-2 : 2013	Plastics-Determination of temperature of deflection under load-Part 2 : Plastics and ebonite	Max. 300 °C
KS M ISO 178 : 2012	Plastics-Determination of flexural properties	5 kN(0.1 N)
KS M ISO 179-1 : 2012	Plastics-Determination of Charpy impact properties Part 1 : Non-instrument impact test	(2.82 ~ 25) J
KS M ISO 180 : 2012	Plastics-Determination of Izod impact properties	(2.82 ~ 25) J

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
KS M ISO 306 : 2015	Plastics-Thermoplastics materials-Determination of Vicat softening temperature(VST)	Max. 300 °C
KS M ISO 527-1 : 2012	Plastics-Determination of tensile properties - Part 1 : General principles 10.4 Poisson's ratio(Except)	30 kN(1 N)
KS M ISO 527-2 : 2013	Plastics-Determination of tensile properties - Part 2 : Test conditions for moulding and extrusion plastics	30 kN(1 N)
KS M ISO 527-3 : 1995	Plastics-Determination of tensile properties - Part 3 : Test conditions for films and sheets	5 kN(0.1 N) 30 kN(1 N)
KS M ISO 527-4 : 2002	Plastics-Determination of tensile properties - Part 4 : Test conditions for isotropic and orthotropic fibre-reinforced plastic composites	30 kN(1 N)
KS M ISO 527-5 : 2012	Plastics-Determination of tensile properties -Part 3 : Test conditions for unidirectional fibre-reinforced plastic composites	30 kN(1 N)
KS M ISO 604 : 2013	Plastics-Determination of Compressive properties	30 kN(1 N)
KS M ISO 868 : 2016	Plastic and ebonite-Determination of indentation hardness by means of a durometer (Shore hardness)(Type A, Type D)	0 ~ 100

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
KS M ISO 1183 : 2006	Plastics-Method for determining the density of non-cellular plastics 1.1 Method A	(0.000 1 ~ 200) g
KS M ISO 2039-2 : 2008	Determination of hardness -- Part 2 : Rockwell hardness(R Scale, M Scale)	0 ~ 100
KS M ISO 3126 : 2005	Plastics piping system – Plastics piping components – Measurement and determination of dimensions	(0.01 ~ 300) mm
KS M ISO 4065 : 2008	Thermoplastics pipes – Universal wall thickness table	25 mm(0.01 mm)
KS M ISO 6259-1 : 2016	Thermoplastics pipes – Determination of tensile properties – Part 1 : General test method	30 kN(1 N)
KS M ISO 6259-2 : 2008	Thermoplastics pipes – Determination of tensile properties – Part 2 : Pipes made of unplasticized poly(vinyl chloride)(PVC-U),chlorinated poly(vinyl chloride)(PVC-C) and high-impact poly(vinyl chloride)(PVC-HI)	30 kN(1 N)
KS M ISO 6259-3 : 2016	Thermoplastics pipes – Determination of tensile properties – Part 3 : Polyolefin pipes	30 kN(1 N)
KS M ISO 9969 : 2016	Thermoplastics pipes – Determination of ring stiffness	30 kN(1 N)
KS M ISO 11922-1 : 2003	Thermoplastics pipes for the conveyance of fluids – Dimensions and tolerances – Part 1 : Metric series	(0.01 ~ 300) mm
KS M ISO 13968 : 2015	Plastics piping and ducting systems – Thermoplastics pipes – Determination of ring flexibility	30 kN(1 N)
KS M ISO 1133-1 : 2012	Plastics -- Determination of the melt mass-flow rate (MFR) and melt	Max. 400 °C

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
	volume-flow rate (MVR) of thermoplastics -- Part 1: Standard method	
SPS-KPS M 2009-0830 : 2016	Structured Wall Polyethylene Sewer and Drainage Pipes 10.2 Appearance	-
	10.3 Dimensions	(0.01 ~ 300) mm
	10.4 Ring Stiffness test	30 kN(1 N)
	10.5 Ring Flexibility test	30 kN(1 N)
	10.6 Impact Test	-
	10.8 Density	(0.000 1 ~ 200) g
	10.9 Melt Mass Flow Rate	Max. 400 °C
	10.10 Tensile yield strength	30 kN(1 N)
ASTM C518-15	Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	(0.015 ~ 0.43) W/(m·K)
ASTM D149-09(2013)	Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies 12.2.1 Method A	23 kV
ASTM D229-13	Standard Test Methods for Rigid Sheet and Plate Materials Used for Electrical Insulation 28 to 33. Dielectric strength	23 kV
	49 to 54. Bonding strength	30 kN(1 N)
ASTM D256-10e1	Standard Test Method for Determining the Izod Pendulum Impact Resistance of Plastics	(2.82 ~ 22.6) J

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
ASTM D543-14	Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents	(0.000 1 ~ 200) g
ASTM D635-14	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position	100 mm
ASTM D638-14	Standard Test Method for Tensile Properties of Plastics A3. Measurement of Poisson's Ratio(Except)	30 kN(1 N)
ASTM D648-16	Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position 7.1.1.2 Method B	Max. 300 °C
ASTM D695-15	Standard Test Method for Compressive Properties of Rigid Plastics	30 kN(1 N)
ASTM D732-10	Standard Test Method for Shear Strength of Plastics by Punch Tool	100 kN(0.5 N)
ASTM D785-08(2015)	Standard Test method for Rockwell Hardness of Plastics and Electrical Insulating Materials 11. Procedure A(R Scale, M Scale)	0 ~ 100
ASTM D790-15e2	Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials	5 kN(0.1 N)
ASTM D792-13	Standard Test Methods for Density and Specific Gravity(Relative Density) of Plastics by Displacement 1.2.1 Test Method A	(0.000 1 ~ 200) g

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
ASTM D882-12	Standard Test Method for Tensile Properties of Thin Plastic Sheeting 11.3 Tensile strength	30 kN(1 N)
	11.4 Tensile strength at break	30 kN(1 N)
	11.5 Percent elongation at break	30 kN(1 N)
	11.6 Tensile yield strength	30 kN(1 N)
	11.7 Percent elongation at yield	(0 ~ 250) mm (0.002 5 mm)
ASTM D1004-13	Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting	5 kN(0.1 N)
ASTM D1238-13	Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer	Max. 400 °C
ASTM D1525-09	Standard Test Method for Vicat Softening Temperature of Plastics	Max. 300 °C
ASTM D1621-16	Standard Test Method for Compressive Properties of Rigid Cellular Plastics	5 kN(0.1 N)
ASTM D1622/D1622M-14	Standard Test Method for Apparent Density of Rigid Cellular Plastics	(0.000 1 ~ 200) g
ASTM D1623-09	Standard Test Method for Tensile And Tensile Adhesion Properties of Rigid Cellular Plastics	30 kN(1 N)
ASTM D1693-15	Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics	240 h
ASTM D1790-14	Standard Test Method for Brittleness Temperature of Plastic Sheeting by Impact	Max. -70 °C
ASTM D2240-15	Standard Test Method for Rubber Property-Durometer Hardness 5.1.1.2 Type A, D	0 ~ 100

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
ASTM D2244-16	Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates	(300 ~ 700) nm
ASTM D2412-11	Standard test method for determination of external loading characteristics of plastic pipe by parallel-plate loading	30 kN(1 N)
ASTM D2583-13a	Standard Test Method for Indentation Hardness of Rigid Plastics by means of a Barcol Impressor	0 ~ 100
ISO 62 : 2008	Determination of Water Absorption 7.1 Percentage by mass of water absorbed	(0.000 1 ~ 200) g
ISO 75-1 : 2013	Plastics-Determination of temperature of deflection under load-Part 1 : General test method	Max. 300 °C
ISO 75-2 : 2013	Plastics-Determination of temperature of deflection under load-Part 2 : Plastics and ebonite	Max. 300 °C
ISO 178 : 2010	Plastics-Determination of flexural properties	5 kN(0.1 N)
ISO 179-1 : 2010	Plastics-Determination of Charpy impact properties Part 1 : Non-instrument impact test	(2.82 ~ 22.6) J
ISO 180 : 2000	Plastics-Determination of Izod impact properties	(2.82 ~ 22.6) J
ISO 306 : 2013	Plastics-Thermoplastics materials-Determination of Vicat softening temperature(VST)	Max. 300 °C

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
ISO 527-1 : 2012	Plastics-Determination of tensile properties - Part 1 : General principles 10.4 Poisson's ratio(Except)	30 kN(1 N)
ISO 527-2 : 2012	Plastics-Determination of tensile properties - Part 2 : Test conditions for moulding and extrusion plastics	30 kN(1 N)
ISO 527-3 : 1995	Plastics-Determination of tensile properties - Part 3 : Test conditions for films and sheets	5 kN(0.1 N) 30 kN(1 N)
ISO 527-4 : 1997	Plastics-Determination of tensile properties - Part 4 : Test conditions for isotropic and orthotropic fibre-reinforced plastic composites	30 kN(1 N)
ISO 527-5 : 2009	Plastics-Determination of tensile properties -Part 3 : Test conditions for unidirectional fibre-reinforced plastic composites	30 kN(1 N)
ISO 604 : 2002	Plastics-Determination of Compressive properties	30 kN(1 N)
ISO 868 : 2003	Plastic and ebonite-Determination of indentation hardness by means of a durometer (Shore hardness)(Type A, Type D)	0 ~ 100
ISO 974 : 2000	Determination of the brittleness temperature by impact	Max. -70 °C
ISO 1183-1 : 2012	Plastics-Method for determining the density of non-cellular plastics- Part 1 : Immersion method, liquid pycnometer method and titration method 5.1 Method A(Immersion method)	(0.000 1 ~ 200) g

Korea Laboratory Accreditation Scheme

No. KT011

01.010 Plastic and related products

Test Method	Standard designation	Test range
ISO 2039-2 : 1987	Determination of hardness -- Part 2 : Rockwell hardness(R Scale, M Scale)	0 ~ 100
ISO 7685 : 1998	Plastics piping systems -- Glass-reinforced thermosetting plastics (GRP) pipes -- Determination of initial specific ring stiffness	30 kN(1 N)
ISO 8301 : 1991 /Amd.1 : 2010	Thermal insulation -- Determination of steady-state thermal resistance and related properties -- Heat flow meter apparatus	(0.015 ~ 0.43) W/(m·K)
ISO 1133-1 : 2011	Plastics -- Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics -- Part 1: Standard method	Max. 400 °C

02. Chemical Test

02.001 Iron and Steel

Test Method	Standard designation	Test range
KS D 1652 : 2007	Iron and steel-Method for spark discharge atomic emission spectrometric analysis	
	C	(0.001 ~ 3.90) %
	Si	(0.002 ~ 3.10) %
	Mn	(0.003 ~ 16.0) %
	P	(0.003 ~ 0.061) %
	S	(0.001 ~ 0.328) %
	Ni	(0.002 ~ 24.3) %
	Cr	(0.002 ~ 25.9) %
	Mo	(0.001 ~ 4.91) %
	Cu	(0.001 ~ 3.20) %
W	(0.01 ~ 19.9) %	

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
	V Co Ti Al As Sn B Pb Zr Nb Mg Sb	(0.001 ~ 1.94) % (0.002 ~ 7.70) % (0.001 ~ 0.52) % (0.002 ~ 0.10) % (0.001 ~ 0.053) % (0.001 ~ 0.34) % (0.001 ~ 0.009 0) % (0.001 ~ 0.023) % (0.001 ~ 0.065) % (0.001 ~ 0.95) % (0.001 ~ 0.050) % (0.008 ~ 0.033) %
KS D 1673 : 2007	Methods for inductively coupled plasma emission spectrochemical analysis of steel Al Si P Ti V Cr Mn Co Ni Cu Mo	(0.004 ~ 0.10) % (0.10 ~ 0.60) % (0.003 ~ 0.10) % (0.001 ~ 0.30) % (0.002 ~ 0.50) % (0.01 ~ 3.00) % (0.01 ~ 2.00) % (0.003 ~ 0.20) % (0.01 ~ 4.00) % (0.01 ~ 0.50) % (0.01 ~ 1.20) %
KS D 1779 : 2016	General rules for determination of sulfur in metallic materials 8.7 Infrared Absorption(Integral calculus)	0.001 % over
KS D 1780 : 2016	General rules for determination of carbon in metallic materials 7.8 Infrared Absorption(Integral calculus)	0.001 % over
KS D 1803 : 2003	Methods for determination of sulfur in iron and steel 3. b-5) Infrared Absorption(Integral calculus)	0.005 % over

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
KS D 1804 : 2003	Determination of carbon in iron and steel 3. e) Infrared Absorption	0.001 % over
KS D 1805 : 2003	Determination of silicon in iron and steel 3. a) Gravimetric method	0.1 % over
KS D 1807 : 2003	Determination of chromium in iron and steel 3. a) Volumetric method	0.1 % over
KS D 1808 : 2003	Determination of silicon in iron and steel 3. b) Gravimetric method	0.05 % over
KS D 1806 : 2003	Determination of manganese in iron and steel 3.4 Photometric Method B	20 % below
KS D 1809 : 2003	Determination of molybdenum in iron and steel 3.2 Photometric Method	0.4 % below
KS D 1802 : 2001	Methods for determination of phosphorus in iron and steel 4. Photometric Method A	(0.005 ~ 0.5) %
KS D 1810 : 2003	Methods for determination of copper in iron and steel 4.2 Photometric Method A	(0.002 ~ 1) %
KS D 1789 : 2004	Methods for chemical analysis of nickel-chromium-iron alloys 11. iron analysis	(2 ~ 99)%
KS D ISO 10700 : 2008	Steel and iron - Determination of manganese content - Flame atomic absorption spectrometric method	(0.002 ~ 2.0) %
KS D ISO 11435 : 2006	Nickel alloys - Determination of molybdenum - Inductively coupled plasma atomic emission spectrometric method	(0.05 ~ 20) %
KS D ISO 11652 : 2002	Steel and iron - Determination of cobalt content - Flame atomic absorption spectrometric method	(0.003 ~ 5.0) %

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
KS D ISO 13898-2 : 2010	Steel and iron – Determination of nickel, copper and cobalt contents – Inductively coupled plasma atomic emission spectrometric method – Part 2 : Determination of nickel content	(0.001 ~ 0.30) %
KS D ISO 13898-3 : 2010	Steel and iron – Determination of nickel, copper and cobalt contents – Inductively coupled plasma atomic emission spectrometric method – Part 3 : Determination of copper content	(0.001 ~ 0.40) %
KS D ISO 13898-4 : 2010	Steel and iron – Determination of nickel, copper and cobalt contents – Inductively coupled plasma atomic emission spectrometric method – Part 4 : Determination of cobalt content	(0.001 ~ 0.10) %
KS D ISO 13899-1 : 2010	Steel – Determination of Mo, Nb and W contents in alloyed steel – Inductively coupled plasma atomic emission spectrometric method – Part 1 : Determination of Mo content	(0.03 ~ 8.5) %
KS D ISO 13899-2 : 2006	Steel – Determination of Mo, Nb and W contents in alloyed steel – Inductively coupled plasma atomic emission spectrometric method – Part 2 : Determination of Nb content	(0.005 ~ 5) %
KS D ISO 13899-3 : 2006	Steel – Determination of Mo, Nb and W contents in alloyed steel – Inductively coupled plasma atomic emission spectrometric method – Part 3 : Determination of W content	0.008 % over
KS D ISO 22033 : 2006	Nickel alloys - Determination of niobium - Inductively coupled plasma atomic emission spectrometric method	(0.1 ~ 10) %

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
KS D ISO 4940 : 2002	Steel and cast iron - Determination of nickel content - Flame atomic absorption spectrometric method	(0.002 ~ 0.5) %
KS D ISO 4943 : 2002	Steel and cast iron - Determination of copper content - Flame atomic absorption spectrometric method	(0.004 ~ 0.5) %
KS D ISO 7530-2 : 2012	Nickel alloys-Flame atomic absorption spectrometric analysis- Part 2 : Determination of cobalt content	(0.01 ~ 4) %
KS D ISO 7530-4 : 2012	Nickel alloys-Flame atomic absorption spectrometric analysis- Part 4 : Determination of copper content	(0.01 ~ 4) %
KS D ISO 7530-5 : 2012	Nickel alloys-Flame atomic absorption spectrometric analysis- Part 5 : Determination of iron content	(0.01 ~ 4) %
KS D ISO 7530-6 : 2012	Nickel alloys-Flame atomic absorption spectrometric analysis- Part 6 : Determination of manganese content	(0.01 ~ 4) %
KS D 1811 : 2003	Methods for determination of nitrogen in iron and steel 3.4 The inert gas fusion thermal conductivity test method	(0.003 ~ 0.39) %
KS D 1777 : 2016	General rules for determination of hydrogen in metallic materials 7.5 Thermal conductivity test method	(0.000 06 ~ 0.000 5) %
JIS G 1253 : 2013	Iron and steel - Method for spark discharge atomic emission spectrometric analysis C Si Mn P	(0.001 ~ 3.90) % (0.002 ~ 3.10) % (0.003 ~ 16.0) % (0.003 ~ 0.061) %

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
	S	(0.001 ~ 0.328) %
	Ni	(0.002 ~ 24.3) %
	Cr	(0.002 ~ 25.9) %
	Mo	(0.001 ~ 4.91) %
	Cu	(0.001 ~ 3.20) %
	W	(0.01 ~ 19.9) %
	V	(0.001 ~ 1.94) %
	Co	(0.002 ~ 7.70) %
	Ti	(0.001 ~ 0.52) %
	Al	(0.002 ~ 0.10) %
	As	(0.001 ~ 0.053) %
	Sn	(0.001 ~ 0.34) %
	B	(0.001 ~ 0.009 0) %
	Pb	(0.001 ~ 0.023) %
	Zr	(0.001 ~ 0.065) %
	Nb	(0.001 ~ 0.95) %
	Mg	(0.001 ~ 0.050) %
	Sb	(0.008 ~ 0.033) %
ASTM E415-15	Standard Test Method for Analysis of Carbon and Low-Alloy Steel by Spark Atomic Emission Spectrometry Aluminum Arsenic Boron Carbon Chromium Cobalt Copper Manganese Molybdenum Nickel Niobium	(0.002 ~ 0.075) % (0.001 ~ 0.053) % (0.001 ~ 0.007) % (0.001 ~ 1.1) % (0.002 ~ 2.25) % (0.002 ~ 0.18) % (0.001 ~ 0.5) % (0.003 ~ 2.0) % (0.001 ~ 0.6) % (0.002 ~ 5.0) % (0.001 ~ 0.085) %

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
	Phosphorous Silicon Sulfur Tin Titanium Vanadium Zirconium	(0.001 ~ 0.062) % (0.002 ~ 1.15) % (0.001 ~ 0.055) % (0.001 ~ 0.045) % (0.001 ~ 0.2) % (0.001 ~ 0.3) % (0.001 ~ 0.05) %
ASTM E1019-11	Standard Test Methods for Determination of Carbon, Sulfur, Nitrogen, and Oxygen in Steel, Iron, Nickel, and Cobalt Alloys by Various Combustion and Fusion Techniques	(0.001 ~ 4.5) %
ASTM E1086-14	Standard Test Method for Analysis of Austenitic Stainless Steel by Spark Atomic Emission Spectrometry Chromium Nickel Molybdenum Manganese Silicon Copper Carbon Phosphorous Sulfur	(17.0 ~ 23.0) % (7.5 ~ 13.0) % (0.01 ~ 3.0) % (0.01 ~ 2.0) % (0.01 ~ 0.90) % (0.01 ~ 0.30) % (0.005 ~ 0.25) % (0.003 ~ 0.062) % (0.003 ~ 0.065) %
ASTM A262-15	Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels ¹ PRACTICE A-OXALIC ACID ETCH TEST FOR CLASSIFICATION OF ETCH STRUCTURES OF AUSTENITIC STAINLESS STEELS (1) ⁴ PRACTICE B-FERRIC SULFATE-SULFURIC ACID TEST FOR DETECTING SUSCEPTIBILITY TO INTERGRANULAR ATTACK IN AUSTENITIC STRAINLESS STEELS	- -

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
	(3) PRACTICE C-NITRIC ACID TEST FOR DETECTING SUSCEPTIBILITY TO INTERGRANULAR ATTACK IN AUSTENITIC STAINLESS STEELS PRACTICE E-COPPER-COPPER SULFATE-16% SULFURIC ACID TEST FOR DETECTING SUSCEPTIBILITY TO INTERGRANULAR ATTACK IN AUSTENITIC STAINLESS STEELS(6,7) PRACTICE F-COPPER-COPPER SULFATE-50% SULFURIC ACID TEST FOR DETERMINING SUSCEPTIBILITY TO INTERGRANULAR ATTACK IN AUSTENITIC STAINLESS STEELS	
ASTM G48-11(2015)	Standard Test Methods for Pitting and Crevice Corrosion Resistance of Stainless Steels and Related Alloys by Use of Ferric Chloride Solution ¹ Method A – Ferric Chloride Pitting Test Method B – Ferric Chloride Crevice Corrosion Test (10) Method C – Critical Pitting Temperature Test for Nickel-Base and Chromium-Bearing Alloys Method D – Critical Crevice Temperature Test for Nickel-Base and Chromium-Bearing Alloys (13) Method E – Critical Pitting Temperature Test for Stainless Steels Method F – Critical Crevice Temperature Test for stainless steels	- -

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
ASTM E353-14	Standard Test Methods for Chemical Analysis of Stainless, Heat-Resisting, Maraging, and Other Similar Chromium-Nickel-Iron Alloys NICKEL BY THE DIMETHYLGLYOXIME GRAVIMETRIC METHOD	(0.1 ~ 48.0) %
	CHROMIUM BY THE PEROXYDISULFATE OXIDATION-TITRATION METHOD	(0.10 ~ 35.00) %
	SILICON BY GRAVIMETRIC METHOD	(0.05 ~ 4.00) %
	MANGANESE BY THE META PERIODATE PHOTOMETRIC METHOD	(0.01 ~ 5.00) %
	MOLYBDENUM BY THE PHOTOMETRIC METHOD	(0.01 ~ 1.50) %
	COPPER BY THE NEOCUPROINE PHOTOMETRIC METHOD	(0.01 ~ 5.00) %
ASTM E354-14	Standard Test Methods for Chemical Analysis of High-Temperature, Electrical, Magnetic, and Other Similar Iron, Nickel, and Cobalt Alloys NICKEL BY THE DIMETHYLGLYOXIME GRAVIMETRIC METHOD	(0.1 ~ 84.0) %
	CHROMIUM BY THE PEROXYDISULFATE OXIDATION-TITRATION METHOD	(0.10 ~ 33.00) %
	SILICON BY THE GRAVIMETRIC METHOD	(0.05 ~ 5.00) %
	MANGANESE BY THE	(0.05 ~ 2.00) %

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
	METAPERIODATE PHOTOMETRIC METHOD	
	MOLYBDENUM BY THE PHOTOMETRIC METHOD	(0.01 ~ 1.50) %
	COPPER BY THE NEOCUPROINE PHOTOMETRIC METHOD	(0.01 ~ 10.00) %
	PHOSPHORUS BY THE MOLYBDENUM BLUE PHOTOMETRIC METHOD	(0.002 ~ 0.08) %
ASTM E350-12	Standard Test Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron	
	NICKEL BY THE DIMETHYLGLYOXIME GRAVIMETRIC METHOD	(0.1 ~ 5.00) %
	CHROMIUM BY THE PEROXYDISULFATE OXIDATION-TITRATION METHOD	(0.05 ~ 3.99) %
	SILICON BY THE GRAVIMETRIC METHOD	(0.05 ~ 3.5) %
	MANGANESE BY THE METAPERIODATE SPECTROPHOTOMETRIC METHOD	(0.01 ~ 2.5) %
	MOLYBDENUM BY THE THIOCYANATE SPECTROPHOTOMETRIC METHOD	(0.01 ~ 1.50) %
	COPPER BY THE NEOCUPROINE SPECTROPHOTOMETRIC METHOD	(0.005 ~ 1.50) %
	PHOSPHORUS BY THE MOLYBDENUM BLUE SPECTROPHOTOMETRIC METHOD	(0.003 ~ 0.09) %

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
ASTM E351-13	Standard Test Methods for Chemical Analysis of Cast Iron-All Types NICKEL BY THE DIMETHYLGLYOXIME GRAVIMETRIC METHOD	(0.1 ~ 36.00) %
	CHROMIUM BY THE PEROXYDISULFATE OXIDATION-TITRATION METHOD	(0.05 ~ 30.0) %
	SILICON BY THE GRAVIMETRIC METHOD	(0.1 ~ 6.0) %
	MANGANESE BY THE METAPERIODATE SPECTROPHOTOMETRIC METHOD	(0.10 ~ 2.00) %
	MOLYBDENUM BY THE SPECTROPHOTOMETRIC METHOD	(0.01 ~ 1.50) %
	COPPER BY THE NEOCUPROINE SPECTROPHOTOMETRIC METHOD	(0.03 ~ 7.50) %
ASTM E 352-13	PHOSPHORUS BY THE MOLYBDENUM BLUE SPECTROPHOTOMETRIC METHOD	(0.02 ~ 0.90) %
	Standard Test Methods for Chemical Analysis of Tool Steels and Other Similar Medium- and High-Alloy Steels NICKEL BY THE DIMETHYLGLYOXIME GRAVIMETRIC METHOD	(0.1 ~ 4.0) %
	CHROMIUM BY THE PEROXYDISULFATE OXIDATION-TITRATION METHOD	(0.10 ~ 14.00) %
	SILICON BY THE GRAVIMETRIC METHOD	(0.10 ~ 2.50) %
	MANGANESE BY THE METAPERIODATE SPECTROPHOTOMETRIC METHOD	(0.10 ~ 5.00) %
MOLYBDENUM BY THE SPECTROPHOTOMETRIC METHOD	(0.01 ~ 1.50) %	

Korea Laboratory Accreditation Scheme

No. KT011

02.001 Iron and Steel

Test Method	Standard designation	Test range
	COPPER BY THE NEOCUPROINE SPECTROPHOTOMETRIC METHOD PHOSPHORUS BY THE MOLYBDENUM BLUE SPECTROPHOTOMETRIC METHOD	(0.01 ~ 2.00) % (0.002 ~ 0.05) %
ASTM G28-02(2015)	Standard Test Methods for Detecting Susceptibility to Intergranular Corrosion in Wrought, Nickel-Rich, Chromium-Bearing Alloys ¹ METHOD A-Ferric Sulfate-Sulfuric Acid Test METHOD B-Mixed Acid-Oxidating Salt Test	-
ASTM A923-08	Standard Test Methods for Detecting Detrimental Intermetallic Phase in Duplex Austenitic/Ferritic Stainless Steels ¹ TEST METHOD A – SODIUM HYDROXIDE ETCH TEST FOR CLASSIFICATION OF ETCH STRUCTURES OF DUPLEX STAINLESS STEELS TEST METHOD C – FERRIC CHLORIDE CORROSION TEST FOR CLASSIFICATION OF STRUCTURES OF DUPLEX STAINLESS STEELS	-
ASTM G36 : 94-13	Standard Practice for Evaluating Stress-Corrosion-Cracking Resistance of Metals and Alloys in a Boiling Magnesium Chloride Solution ¹	-

Korea Laboratory Accreditation Scheme

No. KT011

02.002 Non-ferrous Metal

Test method	Standard designation	Test range
KS D 1678 : 2012	Methods for inductively coupled plasma emission spectrometric analysis of aluminium and aluminium alloys	
	4. a) Method A	(0.002 ~ 1.0) %
	4. b) Method B	(0.01 ~ 12.0) %
KS D 1863 : 2003	Methods for determination of silicon in aluminium and aluminium alloys 4. a) Gravimetric method	0.1 % over
KS D 1886 : 2012	Methods for determination of cobalt in copper and copper alloys 7. Inductively coupled plasma atomic emission spectrometric method	(0.01 ~ 1.0) %
KS D 1889 : 2016	Methods for determination of aluminium in copper and copper alloys 8. Inductively coupled plasma atomic emission spectrometric method	(0.002 ~ 12.0) %
KS D 1892 : 2016	Methods for determination of iron in copper and copper alloys 9. Inductively coupled plasma atomic emission spectrometric method	(0.01 ~ 6.0) %
KS D 1893 : 2016	Methods for determination of copper in copper and copper alloys	
	5. Electroplate gravimetry(sulfuric acid method)	more than 54 %
	6. Electroplate gravimetry(hydrobromic acid method)	(44.0 ~ 96.0) %
KS D 1894 : 2013	Methods for determination of tin in copper and copper alloys 9. Inductively coupled plasma atomic emission spectrometric method	(0.02 ~ 15) %
KS D 1895 : 2014	Methods for determination of lead in copper and copper alloys 10. Inductively coupled plasma atomic emission spectrometric method	(0.1 ~ 22) %

Korea Laboratory Accreditation Scheme

No. KT011

02.002 Non-ferrous Metal

Test method	Standard designation	Test range
KS D 1896 : 2016	Methods for determination of manganese in copper and copper alloys 8. Inductively coupled plasma atomic emission spectrometric method	(0.01 ~ 15) %
KS D 1897 : 2016	Methods for determination of nickel in copper and copper alloys 5. The Dimethylglyoxime Gravimetric Method	(2.0 ~ 50) %
	8. Inductively coupled plasma atomic emission spectrometric method	(0.01 ~ 7.0) %
KS D 0235 : 2015	Laboratory test method of sacrificial anodes for cathodic protection	-
ASTM E 1251-11	Standard Test Method for Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry	
	Calcium	(0.001 ~ 0.009) %
	Chromium	(0.001 ~ 0.23) %
	Copper	(0.001 ~ 4.40) %
	Iron	(0.2 ~ 0.5) %
	Lead	(0.04 ~ 0.26) %
	Magnesium	(0.03 ~ 4.49) %
	Manganese	(0.001 ~ 1.2) %
	Nickel	(0.005 ~ 0.89) %
	Silicon	(0.07 ~ 16) %
	Tin	(0.03 ~ 0.133) %
	Titanium	(0.001 ~ 0.12) %
	Vanadium	(0.002 ~ 0.022) %
Zinc	(0.002 ~ 5.4) %	
Zirconium	(0.001 ~ 0.010) %	
JSCE S-9301 : 1993	Laboratory Test Method of Galvanic Anodes for Cathodic Protection	-

Korea Laboratory Accreditation Scheme

No. KT011

02.002 Non-ferrous Metal

Test method	Standard designation	Test range
DNV-RP-B401 : 2010	CATHODIC PROTECTION DESIGN	-
	Annex B-Laboratory Testing of Galvanic Anode Materials for Quality Control	-
	Annex C-Laboratory Testing of Galvanic Anode Materials for Qualification of Electrochemical Performance	-

02.013 Petroleum Product

Test Method	Standard designation	Test range
ASTM D5291:16	Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants	Carbon (75 ~ 87) mass% Hydrogen (9 ~ 16) mass% Nitrogen (0.1 ~ 2.0) mass%
IP 501/05	Determination of aluminium, silicon, vanadium, nickel, iron, sodium, calcium, zinc and phosphorus in residual fuel oil by ashing, fusion and inductively coupled plasma emission spectrometry	Al : (5 ~ 150) mg/kg Si : (10 ~ 250) mg/kg Na : (1 ~ 100) mg/kg V : (1 ~ 400) mg/kg Ni : (1 ~ 100) mg/kg Fe : (2 ~ 60) mg/kg Ca : (3 ~ 100) mg/kg Zn : (1 ~ 70) mg/kg P : (1 ~ 60) mg/kg
ISO 10307-2 : 2009	Petroleum products -- Total sediment in residual fuel oils -- Part 2: Determination using standard procedures for ageing	(0.01 ~ 0.50) % (mm)

Korea Laboratory Accreditation Scheme

No. KT011

02.013 Petroleum Product

Test Method	Standard designation	Test range
ISO 4264 : 2007	Petroleum products—Calculation of cetane index of middle-distillate fuels by the four-variable equation	32.5 ~ 56.5
ISO 3405 : 2011	Petroleum products -- Determination of distillation characteristics at atmospheric pressure	(0 ~ 400) °C
ISO 12185 : 1996	Crude petroleum and petroleum products -Determination of density - Oscillating U-tube method	(600 ~ 1 100) kg/m ³
ASTM D4052-16	Standard Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter	(747 ~ 927) kg/m ³
ISO 12205 : 1995	Petroleum products--Determination of the oxidation stability of middle-distillate fuels	>1 g/m ³
ISO 3015 : 1992	Petroleum products -- Determination of cloud point	(-58 ~ +49) °C
ASTM D2500-16a	Standard Test Method for Cloud Point of Petroleum Products and Liquid Fuels	(-60 ~ +49) °C
ISO 3016 : 1994	Petroleum products -- Determination of pour point	(-48 ~ +51) °C
ISO 2719 : 2016	Determination of flash point - Pensky-Martens closed cup method	(40 ~ 370) °C
ASTM D93-16a	Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester	(40 ~ 370) °C
ISO 8754 : 2003	Petroleum products - Determination of sulfur content - Energy-dispersive X-ray fluorescence spectrometry	(0.03 ~ 5.00) % (m/m)
ASTM D4294-16	Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-ray Fluorescence Spectrometry	17 mg/kg ~ 4.6 % (m/m)

Korea Laboratory Accreditation Scheme

No. KT011

02.013 Petroleum Product

Test Method	Standard designation	Test range
ASTM D445-15a	Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)	(2.0 ~ 5 000) mm ² /s
ISO 3104 : 1994	Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity	(2.0 ~ 5 000) mm ² /s
ISO 10370 : 2014	Petroleum products -- Determination of carbon residue -- Micro method	(0.10 ~ 30.0) %(m/m)
ISO 6245 : 2001	Petroleum products -- Determination of ash	(0.001 ~ 0.18) %(m/m)
IP 570/14a	Determination of hydrogen sulfide in fuel oils - Rapid liquid phase extraction method	(0.40 ~ 15.3) mg/kg
ISO12156-1 : 2016	Dieselfuel--Assessmentoflubricityusingthe high-frequencyreciprocatingrig(HFRR)--Part1:Testmethod	(200 ~ 700) μm
ASTM E1064-16	Standard Test Method for Water in Organic Liquids by Coulometric Karl Fischer Titration	(0 ~ 2.0) %(m/m)

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS A 0066 : 2015	Method of measurement for colour of reflecting or transmitting objects	(300 ~ 700) nm
KS A 0531 : 2011	Viscosity of liquid – Methods of measurement 9. Method of viscosity by single cylindrical rotational viscometer	
KS D 0246 : 2001	Methods of thickness test for metallic coatings 7. Eddy current method	(5 ~ 1 500) μ m
	8. Magnetic method	(5 ~ 1 500) μ m
KS D 3520 : 2016	Prepainted hot-dip zinc-coated steel sheets and coils	
	13.1.1 Salt spray test	(35 ~ 50) $^{\circ}$ C
	13.2.3 Pencil hardness test of coatings	6B ~ 9H
	13.2.4 Impact test	Max. 1 000 g
	13.2.5 Adhesion test	-
KS D 6711 : 2012	Painted aluminium and aluminium alloy sheets and strips	
	4.3 Pencil hardness test of coatings	6B ~ 9H
	4.4 Adhesion test	-
	4.6 Impact test	Max. 2 000 g
	4.7 Salt spray test	(30 ~ 60) $^{\circ}$ C
	4.9 Acid resistance test, Alkali resistance test	-
	4.10 Humidity resistance test	(25 ~ 100) % R.H.
KS D 8303 : 2009	Combined coatings of anodic oxide and organic coatings on aluminium and aluminium alloys	
	5.5 Thickness test of coatings of anodic oxide	(5 ~ 1 500) μ m

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
	5.6 Thickness test of organic coatings	(5 ~ 1 500) μm
	5.8 Adhesion test of organic coatings (Cross cut)	-
	5.9 Pencil hardness test of organic coatings	6B ~ 9H
	5.11 Alkali resistance test of organic coatings	-
	5.12 Accelerated weathering test of organic coatings a) Gloss retention	Over 1 %
	5.13 Boiling resistance test of combined films	-
KS D 8310 : 2001	Anodizing of aluminium and its alloys – Determination of mass per unit area(surface density) of anodic oxide coatings(gravimetric method) and determination of thickness of anodic oxide coatings (non-destructive measurement by split-beam microscope)	
	6. Eddy current method	(5 ~ 1 500) μm
KS D 9502 : 2009	Neutral, acetic acid and copper -accelerated acetic acid salt spray	(35 ~ 50) $^{\circ}\text{C}$
KS M 0009 : 2010	Test method for loss and residue of chemical products	
	5.1 Loss content of heat (Method 1)	Over 0.1 %
	5.4 Ignition residue and ash content (Method 1,2)	Over 0.1 %
KS M 3705 : 2015	General testing methods for adhesives	
	7.1 Density (7.1.1 Pycnometer method)	Over 0.01 g/cm^3
	7.3 Viscosity	(1 ~ 2 000 000) $\text{mPa}\cdot\text{s}$
	7.4 Non-volatile Content	Over 0.1 %
KS M 3802 : 2014	Floor covering – PVC	
	7.12 Contamination test b) Contamination test	-

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M 5000 : 2014	Testing method for organic coatings and their related materials	-
	2011 Testing method for condition of organic coating materials in container	-
	2021 Testing method for skinning of paint, varnish, lacquer and related materials	-
	2031 Testing method for storage stability of paint, varnish, lacquer and related materials	-
	2041 Testing method for odor of paint, varnish, lacquer and related materials	-
	2051 Testing method of appearance for transparent liquids (coating materials)	-
	2111 Testing method for pigment content of organic coating materials	Over 0.1 %
	2112 Testing method for Non-volatile Vehicle Content	Over 0.1 %
	2121 Testing method of viscosity for transparent liquids (gardner tube)	A5 ~ Z10
	2122 Testing method of consistency for pigmented material (Krebs-stormer viscometer)	(49 ~ 141) K.U
	2141 Testing method for fineness of grind	(0 ~ 100) μm
	2311 Testing method for reducibility and dilution Stability of paint, varnish, lacquer and related materials	-
	2411 Testing method for brushing properties of paint, varnish, lacquer and related materials	-
	2412 Testing method for spraying properties of paint, varnish, lacquer and	-

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M 5000 : 2014	related materials	
	2421 Testing method for working properties and appearance for dried films of organic coating materials	-
	2511 Testing method of drying time (vanishes, lacquers, enamels and water paints)	Over 1 min
	3011 Testing method of color for pigmented coatings	-
	3022 Testing method of color for paint	(300 ~ 700) nm
	3031 Testing method of lightness index difference of paint and color	(300 ~ 700) nm
	3121 Testing method of 45°, 0° directional reflectance of organic coating materials	(300 ~ 700) nm
	3211 Testing method of yellowness index of dried film of paint, varnish, lacquer and related material	(300 ~ 700) nm
	3231 Testing method for accelerate weathering (4. Xenon-arc type)	(290 ~ 800) nm
	3331 Testing method of flexibility for organic coating materials	(3.2 ~ 38) mm
	3421 Testing method for heat resistance of dried film of paint, varnish, lacquer and related materials	(40 ~ 1 200) °C
	6011 Testing method for Flash point of Varnish and volatile thinners (Tag closed tester)	(20 ~ 80) °C
	6022 Testing method for Distillation of volatile solvent for organic coating materials	(60 ~ 200) °C
6041 Testing method for specific gravity	Over 0.001	

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range	
	solvents and thinners (Method 4 with hydrometer)		
KS M ISO 16862 : 2011	Paints and varishes—Evaluation of sag resistance	(25 ~ 1 500) μm	
KS M 6010 : 2014	Synthetic resin emulsion paint (The first, second grade)	(49 ~ 141) K.U	
	4.1.2.b Consistency		Over 0.1 %
	4.1.2.c Non-volatile content		Over 0.1 %
	4.1.2.d Pigment content		Over 1 min
	4.1.2.e Drying time		Over 1 %
	4.1.2.f 45°, 0° Directional reflectance		Over 0.1
	4.1.2.g Gloss (85°)		Over 1 %
	4.1.2.h Hiding power		-
	4.1.2.j Heat stability		-
	4.1.2.k Freezing stability		-
	4.1.2.m Condition in container	-	
	4.1.2.n Alkali resistance test	-	
	4.1.2.p Storage stability (Not full in container)	-	
	4.1.2.q Odor	-	
	First class Paints, ready mixed (The first, second grade)	(3.2 ~ 38) mm	
	4.1.2.b Color		-
	4.1.2.c Pigment content		Over 0.1 %
	4.1.2.d Non-volatile vehicle content		Over 0.1 %
	4.1.2.e Gloss		Over 0.1
	4.1.2.f Hiding power		Over 1 %
4.1.2.g 45°, 0° Directional reflectance	Over 1 %		
4.1.2.h Drying time	Over 1 min		
4.1.2.i Condition in container	-		
4.1.2.j Flexibility			
Second class Enamel air-drying type			

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M 6010 : 2014	Glossy (The first, second grade), Semi-Glossy, Non-Glossy	
	4.2.2.b Non-volatile content	Over 0.1 %
	4.2.2.c Non-volatile vehicle content	Over 0.1 %
	4.2.2.d Hiding power	Over 1 %
	4.2.2.e Gloss	Over 0.1
	4.2.2.f 45°, 0° Directional reflectance	Over 1 %
	4.2.2.g Drying time	Over 1 min
	4.2.2.h Flexibility	(3.2 ~ 38) mm
	4.2.2.i Knife test	-
	4.2.2.j Condition in container	-
	4.2.2.k Storage stability (Not full in container)	-
	4.2.2.m Dilution stability	-
	4.2.2.n Water resistance test	-
	4.2.2.o Gasoline resistance test	-
	Third class Aluminum paints	
	4.3.2.b Condition in container	-
	4.3.2.c Tack-free	Over 1 min
	4.3.2.d Gloss	Over 0.1
	4.3.2.e Hiding power	Over 1 %
	4.3.2.f Water resistance test	-
	4.3.2.g Flexibility	(3.2 ~ 38) mm
	4.3.2.h Non-volatile content	Over 0.1 %
	Fourth class Acrylic paints	
	4.4.2.b Non-volatile content	Over 0.1 %
	4.4.2.c Non-volatile vehicle content	Over 0.1 %
	4.4.2.d Hiding power	Over 1 %
	4.4.2.e Gloss	Over 0.1
	4.4.2.f Drying time	Over 1 min
	4.4.2.g Condition in container	-
	4.4.2.h Dilution stability	-
	4.4.2.j Water resistance test	-
4.4.2.l Alkali resistance test	-	

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M 6030 : 2014	First class, Red lead bases, ready mixed (The first, second, third and fourth grade)	-
	4.1.2.b Pigment content	Over 0.1 %
	4.1.2.e Non-volatile vehicle content	Over 0.1 %
	4.1.2.f Drying time	Over 1 min
	4.1.2.g Dilution stability	-
	4.1.2.i Flexibility	(3.2 ~ 38) mm
	Second class, Zinc chromate rust preventing paints (The first, second grade)	
	4.2.2.f Pigment content	Over 0.1 %
	4.2.2.g Non-volatile content	Over 0.1 %
	4.2.2.h Drying time	Over 1 min
	4.2.2.i Flexibility	(3.2 ~ 38) mm
	4.2.2.j Dilution stability	-
	4.2.2.k Water resistance test	-
	4.2.2.l Condition in container	-
	Third class, Zinc dust-zinc oxide primers (The first, second and third grade)	
	4.3.2.c Pigment content	Over 0.1 %
	4.3.2.d Non-volatile vehicle content	Over 0.1 %
	4.3.2.f Drying time	Over 1 min
	4.3.2.g Flexibility	(3.2 ~ 38) mm
	4.3.2.i Water resistance test	-
	4.2.3.j Condition in container	-
	Fourth class, Etching primer (The first, second and third grade)	
	4.4.2.c Non-volatile content	Over 0.1 %
4.4.2.d Pigment content	Over 0.1 %	
4.4.2.g Condition in container	-	
4.4.2.j Drying time	Over 1 min	
4.4.2.k Impact test	Max. 1 000 g	
4.4.2.l Flexibility	(3.2 ~ 38) mm	

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M 6030 : 2014	4.4.2.m Salt water resistance test Fifth class, Read lead zinc chromate rust preventing primer	-
	4.5.2.d Pigment content	Over 0.1 %
	4.5.2.e Non-volatile content	Over 0.1 %
	4.5.2.f Drying time	Over 1 min
	4.5.2.g Flexibility	(3.2 ~ 38) mm
	4.5.2.h Salt water resistance test Sixth class, Tar epoxy resin paints	-
	4.6.2.c Condition in container	-
	4.6.2.d Tack-free	Over 1 min
	4.2.8.f Flexibility	(3.2 ~ 38) mm
	4.2.8.g Impact test	Max. 1 000 g
	4.6.2.i Alkali resistance test	-
	4.6.2.j Acid resistance test	-
	4.6.2.k Gasoline resistance test	-
	4.6.2.m Salt spray test	(35 ~ 50) °C
	4.6.2.o Non-volatile content in mixed paint	Over 0.1 %
4.6.2.p Epoxy resin detection	(300 ~ 4 000) nm	
KS M 6050 : 2014	Varnish (The first, second and third grade)	
	4.2.b Drying time	Over 1 min
	4.2.c Free from after tack	Over 1 min
	4.2.g Skinning	-
	4.2.i Cold storage stability	-
	4.2.j Non-volatile content	Over 0.1 %
4.2.l Water resistance test	-	
KS M 6060 : 2014	Thinner for organic coating materials (The first, second, third and fourth grade)	
	4.2.b Distillation test	(60 ~ 200) °C
	4.2.f Non-volatile content	Over 0.000 1 g
	4.2.g Appearance	-
	4.2.h Spot test	-

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M 6080 : 2014	Traffic paints	
	5.1.3 Non-volatile content	Over 0.1 %
	5.1.4 Condition in container	-
	5.1.6 Heat stability	-
	5.1.8 45°, 0° Directional reflectance	Over 1 %
	5.1.9 Hiding power	Over 1 %
	5.1.13 Water resistance test	-
	5.1.14 Alkali resistance test	-
	5.1.15 Freezing stability	-
	5.1.16 Pigment content	Over 0.1 %
	5.1.18 Color	-
KS M ISO 1518-1 : 2012	Paints and varnishes—Determination of scratch resistance—Part 1 : Constant - loading method	(100 ~ 2 000) g
KS M ISO 3248 : 2007	Paints and varnishes - Determination of the effect of heat	-
KS M ISO 3251 : 2011	Paints, varnishes and plastics—Determination of non-volatile-matter content	Over 0.1 %
KS M ISO 2409 : 2013	Paints and varnishes – Cross-cut test	Less than 5 Grade
KS M ISO 2811-1 : 2012	Paints and varnishes - Determination of density - Part 1 : Pyknometer Method	Over 0.001 g/mL
KS M ISO 2812-1 : 2012	Paints and varnishes—Determination of resistance to liquids— Part 1 : Immersion in liquids other than water	-
KS M ISO 2812-2 : 2012	Paints and varnishes—Determination of resistance to liquids—Part 2 : Water immersion method	-
KS M ISO 2813 : 2015	Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°	Over 0.1

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
KS M ISO 2814 : 2002	Paints and varnishes – Comparison of contrast ratio (hiding power) of paints of the same type and colour	Over 1 %
KS M ISO 1519 : 2012	Paints and varnishes - Bend test (cylindrical mandrel)	(3.2 ~ 38) mm
KS M ISO 14680-2 : 2007	Paints and varnishes - Determination of pigment content-Part 2 : Ashing method	Over 0.1 %
KS M ISO 15184 : 2013	Paints and varnishes – Determination of film hardness by pencil test	9B ~ 9H
ASTM B117-16	Standard Practice for Operating Salt Spray (Fog) Apparatus	35 °C
ASTM D523-14	Standard Test Method for Specular Gloss	Over 0.1
ASTM D344-11	Standard Test Method for Relative Hiding Power of Paints by the Visual Evaluation of Brushouts	-
ASTM D562-10	Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer	(49 ~ 141) K.U
ASTM D1210-05	Standard Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage	(0 ~ 100) μm
ASTM D1308-02	Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes	-
ASTM D1475-13	Standard Test Method For Density of Liquid Coatings, Inks, and Related Products	Over 0.001 g/mL

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
ASTM D2196 : 15	Standard Test Methods for Rheological Properties of Non-Newtonian Materials by Rotational (Brookfield type) Viscometer	(1 ~ 2 000 000) mPa·s
ASTM D2248-01a	Standard Practice for Detergent Resistance of Organic Finishes	-
ASTM D3359-09	Standard Test Methods for Measuring Adhesion by Tape Test	0A ~ 5A 0B ~ 5B
ASTM D3363-05	Standard Test Method for Film Hardness by Pencil Test	6B ~ 9H
ASTM D4145-10	Standard Test Method for Coating Flexibility of Prepainted Sheet	(3.2 ~ 38) mm
ASTM D4541-09	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers (Type II, IV)	Less than 15 MPa
ASTM D4587-11	Standard Practice for Fluorescent UV-Condensation Exposures of Paint and Related Coatings	(300 ~ 400) nm
ASTM D5162-15	Standard Practice for Discontinuity (Holiday) Testing of Nonconductive Protective Coating on Metallic Substrates	Less than 15 kV
ASTM E1252-98	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis	(300 ~ 4 000) nm
ASTM G154-16	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials	(300 ~ 400) nm
ASTM G155-13	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of	(290 ~ 800) nm

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
	Non-Metallic Materials	
ISO 2808 : 2007(E)	Paints and varnishes-Determination of film thickness 5.5.7 Method 7C-Magnetic-induction gauge 5.5.8 Method 7D-Eddy-current gauge	(5 ~ 1 500) μm
ISO 2811-1 : 2016	Paints and varnishes-Determination of density-Part 1 : Pycnometer method	Over 0.001 g/mL
ISO 4624 : 2016	Paints and varnishes - Pull-off test for adhesion 9.4.2 Method for testing from one side only, using a single dolly (suitable for rigid substrates only)	Less than 50 MPa
ISO 4628-2 : 2016	Paints and varnishes-Evaluation of degradation of coatings-Designation of quantity and size of defects, and of intensity of uniform changes in appearance-Part 2 : Assessment of degree of blistering	density : 0 ~ 5 size : 1 ~ 5
ISO 4628-3 : 2016	Paints and varnishes-Evaluation of degradation of coatings-Designation of quantity and size of defects, and of intensity of uniform changes in appearance-Part 3 : Assessment of degree of rusting	-
ISO 4628-8 : 2012(E)	Paints and varnishes-Evaluation of degradation of coatings-Designation of quantity and size of defects, and of intensity of uniform changes in appearance-Part 8 : Assessment of degree of delamination and corrosion around a scribe or other artificial defect	-
ISO 6270-1 : 1998(E)	Paints and varnishes-Determination of resistance to humidity-Part 1 :Continuous condensation	-

Korea Laboratory Accreditation Scheme

No. KT011

02.014 Paint

Test Method	Standard designation	Test range
ISO 8502-3 : 1992(E)	Preparation of steel substrates before application of paints and related products -Tests for the assessment of surface cleanliness-Part 3 : Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)	-
ISO 8502-6 : 2006(E)	Preparation of steel substrates before application of paints and related products-Tests for the assessment of surface cleanliness- Part 6 : Extraction of soluble contaminants for analysis-The Bresle method	Resolution : 0.01 μ S/cm
ISO 8503-4 : 2012(E)	Preparation of steel substrates before application of paints and related products- Surface roughness characteristics of blast-cleaned steel substrates-Part 4 : Method for the calibration of ISO surface profile comparator and for the determination of surface profile-Stylus instrument procedure	Resolution : 0.1 μ m
ISO 15711 : 2003(E)	Paints and varnishes-Determination of resistance to cathodic disbonding of coatings exposed to sea water (Method B)	-

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
The Ministry of Environment Notice No. 2015-214	Standard methods for the examination of environmental pollution (drinking water)	
	ES 05301.1a Hardness-EDTA Titrimetric Method	1 mg/L above
	ES 05302.1b Consumption of KMnO ₄	0.3 mg/L above
	ES 05303.1b Odor	obtain, none
	ES 05304.1b Taste	obtain, none
	ES 05305.1b Color-Visual Comparison Method	1 above
	ES 05306.1b pH-Electrometric Method	1 ~ 14
	ES 05307.1b Total Solids	5 mg/L above
	ES 05308.1b Turbidity	0.02 NTU above
	ES 05309.1c Surfactants-UV/visible Spectrometry	0.1 mg/L above
	ES 05311.1a Phenols-UV/visible Spectrometry	0.005 mg/L above
	ES 05351.1a Fluoride-Ion Chromatography	0.02 mg/L above
	ES 05352.1b Cyanide-UV/visible Spectrometry	0.01 mg/L above
	ES 05353.1b Ammonium Nitrogen-UV/visible Spectrometry	0.01 mg/L above
	ES 05354.1a Nitrate Nitrogen-Ion Chromatography	0.02 mg/L above
	ES 05355.1a Chloride-Ion Chromatography	0.4 mg/L above
	ES 05356.1a Sulfate-Ion Chromatography	0.1 mg/L above
	ES 05401.3b Copper-Inductively Coupled Plasma-Mass Spectrometry	0.000 45 mg/L above
	ES 05402.3b Lead-Inductively Coupled Plasma-Mass Spectrometry	0.000 37 mg/L above
	ES 05403.3b Manganese-Inductively Coupled Plasma-Mass Spectrometry	0.000 15 mg/L above
ES 05404.1b Boron-Inductively Coupled Plasma-Mass Spectrometry	0.002 mg/L above	
ES 05405.3b Arsenic-Inductively	0.002 87 mg/L above	

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
The Ministry of Environment Notice No. 2015-214	Coupled Plasma-Mass Spectrometry ES 05406.3b Selenium-Inductively Coupled Plasma-Mass Spectrometry	0.000 49 mg/L above
	ES 05407.1b Mercury-Cold Vapor/Atomic Absorption Spectrometry	0.000 5 mg/L above
	ES 05408.3b Zinc-Inductively Coupled Plasma-Mass Spectrometry	0.000 23 mg/L above
	ES 05409.4a Aluminium-Inductively Coupled Plasma-Mass Spectrometry	0.001 82 mg/L above
	ES 05410.4a Iron-Inductively Coupled Plasma-Mass Spectrometry	0.013 76 mg/L above
	ES 05411.3a Cadmium-Inductively Coupled Plasma-Mass Spectrometry	0.000 36 mg/L above
	ES 05412.3a Chromium-Inductively Coupled Plasma-Mass Spectrometry	0.001 35 mg/L above
	ES 05501.1a Organophosphorus Pesticides-Gas Chromatograph-Mass Spectrometry	0.000 5 mg/L above
	ES 05502.1a Carbaryl-High Performance Liquid Chromatography	0.005 mg/L above
	ES 05413.2a Strontium-Inductively Coupled Plasma-Mass Spectrometry	0.001 mg/L above
	ES 05551.1b Chlorine Disinfection By-products-Gas Chromatograph-Mass Spectrometry	0.000 5 mg/L above
	ES 05552.1a Haloacetic Acids-Gas Chromatograph-Mass Spectrometry	0.001 mg/L above
	ES 05601.1b Volatile Organic Compounds-Purge/Trap-Gas Chromatograph-Mass Spectrometry	0.001 mg/L above
	ES 05602.1a 1,4-Dioxane-Liquid Extraction/Gas Chromatograph-Mass Spectrometry	0.001 mg/L above
	ES 05701.1b Total Colony Counts in 21 °C- Pour Plate Method	30 CFU/mL above
	ES 05702.1a Total Colony Counts in 35 °C- Pour Plate Method	30 CFU/mL above
	ES 05703.1a Total Coliforms-Multiple Tube Fermentation Technique	1.8/100 mL above
	ES 05703.2a Total	2/100 mL above

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
	Coliforms-Membrane Filtration Method ES 05704.1b Fecal Coliforms-Multiple Tube Fermentation Technique	-
Standard Methods for the Examination of Water and Wastewater, 22nd Edition (APHA, AWWA, WEF) : 2012	2120 Color B. Visual Comparison Method	5 CU above
	2130 Turbidity	0.02 NTU above
	2310 Acidity B. Titration Method	0.5 mL above
	2320 Alkalinity (P-Alkalinity)	20 mg/L above
	2320 Alkalinity (M-Alkalinity)	20 mg/L above
	2340 Hardness	5 mg/L
	2350 Oxidant Demand/Requirement B. Chlorine Demand/Requirement	18 µg/L
	2510 Conductivity	0.1 µS/cm
	2540 Solids B. Total Solids Dried at 103 - 105 °C	1 mg/L above
	2540 Solids D. Total Suspended Solids Dried at 103 - 105 °C	1 mg/L above
	3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (B)	5 µg/L above
	3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (As)	50 µg/L above
	3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (Al)	40 µg/L above
3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (Na)	30 µg/L above	
3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled	10 µg/L above	

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
Standard Methods for the Examination of Water and Wastewater, 22nd Edition (APHA, AWWA, WEF) : 2012	Plasma (ICP) Method (Ca)	
	3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (K)	100 µg/L above
	3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (Mg)	30 µg/L above
	3120 Metals by Plasma Emission Spectroscopy B. Inductively Coupled Plasma (ICP) Method (Ni)	15 µg/L above
	3500-Cd Cadmium	4 µg/L above
	3500-Cr Chromium	7 µg/L above
	3500-Cr B. Colorimetric Method	(100 ~ 1 000) µg/L
	3500-Cu Copper	6 µg/L above
	3500-Fe B. Phenanthroline Method	7 µg/L above
	3500-Hg Mercury	2 µg/L above
	3500-Mn Manganese	2 µg/L above
	3500-Pb Lead	40 µg/L above
	3500-Se Selenium	75 µg/L above
	3500-Zn Zinc	2 µg/L above
	4110 Determination of Anions by Ion Chromatography B. Ion Chromatography with Chemical Suppression of Eluent Conductivity (PO ₄ ³⁻)	14 µg/L above
	4500-Cl Chlorine (Residual) B. Iodometric Method I	40 µg/L
	4500-Br ⁻ Bromide	10.0 mg/L
4500-Cl ⁻ Chloride	500 µg/L	
4500-CN ⁻ Cyanide E. Colorimetric Method	0.02 mg/L	
4500-CO ₂ Carbon Dioxide C. Titrimetric Method for Free Carbon	-	

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
Standard Methods for the Examination of Water and Wastewater, 22nd Edition (APHA, AWWA, WEF) : 2012	Dioxide 4500-CO ₂ Carbon Dioxide D. Carbon Dioxide and Forms of Alkalinity by Calculation (Bicarbonate alkalinity)	500 mg/L below
	4500-CO ₂ Carbon Dioxide D. Carbon Dioxide and Forms of Alkalinity by Calculation (Carbonate alkalinity)	500 mg/L below
	4500-F ⁻ Fluoride	0.1 mg/L above
	4500-H ⁺ pH Value	1 ~ 14
	4500-I ⁻ Iodide B. Leuco Crystal Violet Method	6.0 mg/L above
	4500-N _{org} Nitrogen (Organic) B. Macro-Kjeldahl Method	5 mg/L above
	4500-N Nitrogen C. Persulfate Method	0.02 mg/L above
	4500-NH ₃ Nitrogen (Ammonia) F. Phenate Method	0.01 mg/L above
	4500-NO ₂ ⁻ Nitrogen (Nitrite) B. Colorimetric Method	0.004 mg/L above
	4500-NO ₃ ⁻ Nitrogen (Nitrate)	0.02 mg/L above
	4500-O Oxygen (Dissolved) C. Azide Modification	0.5 mg/L
	4500-CO ₂ Carbon Dioxide D. Carbon Dioxide and Forms of Alkalinity by Calculation (Hydroxide alkalinity)	-
	4500-P Phosphorus E. Ascorbic Acid Method	0.003 mg/L above
4500-S ²⁻ Sulfide D. Methylene Blue Method	(0.1 ~ 20) mg/L	
4500-SiO ₂ Silica	1 mg/L	
4500-SO ₃ ²⁻ Sulfite B. Iodometric Method	2 mg/L	

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
	4500-SO ₄ ²⁻ Sulfate	0.1 mg/L above
	5210 Biochemical Oxygen Demand (BOD) B. 5-Day BOD Test	0.5 mg/L above
	5220 Chemical Oxygen Demand (COD) B. Open Reflux Method	0.5 mg/L above
	5530 Phenols	1 mg/L
	5520 Oil and Grease B. Liquid-Liquid, Partition-Gravimetric Method	10 mg/L below
	5540 Surfactants C. Anionic Surfactants as MBAS	0.02 mg/L above
	6040 Constituent Concentration by Gas Extraction (1,1,1-Trichloroethane)	2.0 ng/L above
	6040 Constituent Concentration by Gas Extraction (Tetrachloroethene)	100 ng/L above
	6040 Constituent Concentration by Gas Extraction (Trichloroethene)	100 ng/L above
	6200 Volatile Organic Compounds (Methylene chloride)	0.055 µg/L above
	6200 Volatile Organic Compounds (Benzene)	0.036 µg/L above
	6200 Volatile Organic Compounds (Toluene)	0.047 µg/L above
	6200 Volatile Organic Compounds (Xylene)	0.038 µg/L above
	6200 Volatile Organic Compounds (1,1- Dichloroethene)	0.130 µg/L above
	6232 Trihalomethanes and Chlorinated Organic Solvents (Carbon tetrachloride)	(0.1 ~ 200) µg/L
	6232 Trihalomethanes and Chlorinated Organic Solvents C. Purge and Trap Gas Chromatographic/Mass Spectrometric Method (Total Trihalomethane)	(0.025 ~ 0.450) µg/L
	9215 Heterotrophic Plate Count	20 CFU/mL below
	9221 Multiple-tube-Fermentation Technique for Members of the Coliform Group	100 mL, Not detected
	9230 Fecal Enterococcus / Streptococcus Group	250 mL, Not detected

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
ISO 7393-2 : 1985	Water quality - Determination of free chlorine and total chlorine - Part 2 : Colorimetric method using N,N-diethyl-1,4-phenylenediamine, for routine control purposes	0.08 mg/L
ISO 8245 : 1999	Water quality - Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon (DOC)	TOC 0.08 mg/L DOC 0.08 mg/L
ISO 15061 : 2001	Water quality - Determination of dissolved bromate - Method by liquid chromatography of ions	0.5 µg/L
EPA 524.4 : 2013	Measurement of Purgeable Organic Compounds in Water by Gas Chromatography/Mass Spectrometry Using Nitrogen Purge Gas	Benzene 0.04 µg/L Bromobenzene 0.03 µg/L Bromochloromethane 0.04 µg/L Bromodichloromethane 0.08 µg/L Bromoform 0.12 µg/L Bromomethane 0.11 µg/L n-Butylbenzene 0.11 µg/L sec-Butylbenzene 0.13 µg/L tert-Butylbenzene 0.14 µg/L Carbon Tetrachloride 0.21 µg/L Chlorobenzene 0.04 µg/L Chloroethane 0.10 µg/L Chloroform 0.03 µg/L Chloromethane 0.13 µg/L 2-Chlorotoluene 0.04 µg/L 4-Chlorotoluene 0.06 µg/L Dibromochloromethane 0.05 µg/L 1,2-Dibromo-3-Chloropropane 0.26 µg/L 1,2-Dibromoethane

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
EPA 524.4 : 2013	Measurement of Purgeable Organic Compounds in Water by Gas Chromatography/Mass Spectrometry Using Nitrogen Purge Gas	0.06 µg/L Dibromomethane 0.24 µg/L 1,2-Dichlorobenzene 0.03 µg/L 1,3-Dichlorobenzene 0.12 µg/L 1,4-Dichlorobenzene 0.03 µg/L Dichlorodifluoromethane 0.10 µg/L 1,1-Dichloroethane 0.04 µg/L 1,2-Dichloroethane 0.06 µg/L 1,1-Dichloroethene 0.12 µg/L cis-1,2-Dichloroethene 0.12 µg/L trans-1,2-Dichloroethene 0.06 µg/L 1,2-Dichloropropane 0.04 µg/L 1,3-Dichloropropane 0.04 µg/L 2,2-Dichloropropane 0.35 µg/L 1,1-Dichloropropene 0.10 µg/L cis-1,2-Dichloropropene 0.03 µg/L trans-1,2-Dichloropropene 0.03 µg/L Ethylbenzene 0.06 µg/L Hexachlorobutadiene 0.11 µg/L Isopropylbenzene 0.15 µg/L 4-Isopropyltoluene 0.12 µg/L Methylene Chloride 0.03 µg/L Naphthalene 0.04 µg/L n-Propylbenzene 0.04 µg/L Styrene 0.04 µg/L 1,1,1,2-Tetrachloroeth

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
EPA 524.4 : 2013	Measurement of Purgeable Organic Compounds in Water by Gas Chromatography/Mass Spectrometry Using Nitrogen Purge Gas	ane 0.05 µg/L 1,1,2,2-Tetrachloroethane 0.04 µg/L Tetrachloroethene 0.14 µg/L Toluene 0.11 µg/L 1,2,3-Trichlorobenzene 0.03 µg/L 1,2,4-Trichlorobenzene 0.04 µg/L 1,1,1-Trichloroethane 0.08 µg/L 1,1,2-Trichloroethane 0.10 µg/L Trichloroethene 0.19 µg/L Trichlorofluoromethane 0.08 µg/L 1,2,3-Trichloropropane 0.32 µg/L 1,2,4-Trimethylbenzene 0.13 µg/L 1,3,5-Trimethylbenzene 0.05 µg/L Vinyl Chloride 0.17 µg/L o-Xylene 0.11 µg/L m-Xylene 0.05 µg/L p-Xylene 0.13 µg/L
ISO 8165-2 : 1999	Water quality - Determination of selected monovalent phenols - Part 2 : Method by derivatization and gas chromatography	0.1 µg/L
EPA 551.1 : 1995	Determination of chlorination disinfection by products, chlorinated solvents, and halogenated pesticides/herbicides in drinking water by liquid-liquid extraction and gas chromatography with electron-capture detection	Alachlor 0.015 µg/L Atrazine 0.099 µg/L Bromacil 0.037 µg/L Bromochloroacetonitrile 0.005 µg/L Bromodichloromethane 0.068 µg/L Bromoform 0.020 µg/L Carbon Tetrachloride 0.050 µg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
EPA 551.1 : 1995		Chloropicrin 0.006 µg/L Chloroform 0.080 µg/L Cyanazine 0.068 µg/L Dibromoacetonitrile 0.005 µg/L Dibromochloromethane 0.008 µg/L 1,2-Dibromo-3-Chloropropane 0.009 µg/L 1,2-Dibromoethane 0.032 µg/L Dichloroacetonitrile 0.022 µg/L 1,1-Dichloro-2-Propanone 0.006 µg/L Endrin 0.003 µg/L Endrin Aldehyde 0.004 µg/L Endrin Ketone 0.004 µg/L Heptachlor 0.006 µg/L Heptachlor Epoxide 0.007 µg/L Hexachlorobenzene 0.002 µg/L Hexachloropentadiene 0.016 µg/L Lindane (gamma-BHC) 0.017 µg/L Methoxychlor 0.026 µg/L Metolachlor 0.083 µg/L Metribuzin 0.041 µg/L Simazine 0.187 µg/L Tetrachloroethylene 0.008 µg/L Trichloroacetonitrile 0.004 µg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
EPA 551.1 : 1995		1,1,1-Trichloroethane 0.007 µg/L 1,1,2-Trichloroethane 0.017 µg/L Trichloroethylene 0.042 µg/L 1,2,3-Trichloropropan e 0.016 µg/L 1,1,1-Trichloro-2-Prop anone 0.005 µg/L Chloral Hydrate 0.01 µg/L
ISO 23631 : 2006	Water quality - Determination of dalapon, trichloroacetic acid and selected haloacetic acids - Method using gas chromatography (GC-ECD and/or GC-MS detection) after liquid-liquid extraction and derivatization	Monochloroacetic acid 0.24 µg/L Dalapon 0.04 µg/L Trichloroacetic acid 0.02 µg/L Monobromoacetic acid 0.04 µg/L Dichloroacetic acid 0.02 µg/L Dibromoacetic acid 0.01 µg/L Bromochloroacetic acid 0.02 µg/L
ISO 10304-1 : 2007	Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1 : Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate	Bromide 0.05 mg/L Nitrite 0.05 mg/L Chloride 0.1 mg/L Fluoride 0.1 mg/L Nitrate 0.1 mg/L Orthophosphate 0.1 mg/L Sulfate 0.1 mg/L
ISO 10304-4 : 1997	Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 4 :	Chlorate 0.03 mg/L Chloride 0.1 mg/L Chlorite 0.05 mg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.021 Water Quality

Test method	Standard designation	Test range
	Determination of chlorate, chloride and chlorite in water with low contamination	
ISO 10530 : 1992	Water quality - Determination of dissolved sulfide - Photometric method using methylene blue	0.04 mg/L

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2016-196 of the ministry of Environment	Standard methods for the examination of environmental pollution(waste)	
	ES 06304.1 pH-Electrometric Method	1 - 14
	ES 06303.1 Humidity and Total Solid-Gravimetry	0.1 %
	ES 06301.1b Humidity and Total Organics-Gravimetry	0.1 %
	ES 06302.1a Oil and Grease-Gravimetry	0.1 % below
	ES 06351.1 Cyanide-UV/Visible Spectrometry	0.01 mg/L
	ES 06406.2 Chromium-Inductively Coupled Plasma Atomic Emission Spectrometry	0.007 mg/L
	ES 06407.3a Hexavalent Chromium-UV/Visible Spectrometry	0.002 mg
	ES 06401.2 Copper-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.006 mg/L
	ES 06405.2 Cadmium-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.004 mg/L
ES 06402.2 Lead-Inductively Coupled Plasma-Atomic	0.040 mg/L	

Korea Laboratory Accreditation Scheme

No. KT011

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2016-196 of the ministry of Environment	Emission Spectrometry ES 06403.2 Arsenic-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.050 mg/L
	ES 06404.1 Mercury-Atomic Absorption Spectrophotometry	0.000 5 mg/L
	ES 06501.1 Organophosphorus Pesticides-Gas Chromatography	0.000 5 mg/L
	ES 06502.1a Polychlorinated Biphenyls-Gas Chromatography	0.000 5 mg/L liquid waste : 0.05 mg/L
	ES 06502.2a Polychlorinated Biphenyls-Gas Chromatograph-Mass Spectrometry	1.0 mg/L
	ES 06602.1 Vulgar Chlorine Hydrocarbons-Gas Chromatography	TCE : 0.008 mg/L PCE : 0.002 mg/L
	ES 06601.1 Halogenated Compounds-Gas Chromatography-Mass Spectrometry	10 mg/kg
The notice No. 2017-4 of the ministry of Environment	ES 06601.2 Halogenated Compounds-Gas Chromatography	10 mg/kg
	Standard methods for the examination of environmental pollution(water pollution)	
	ES 04302.1b n-Hexane extractable material	0.5 mg/L
	ES 04303.1b Suspended Solids	2 mg
	ES 04304.1b Color	1 degree
	ES 04305.1b BOD	1 mg/L
	ES 04306.1b pH	1 ~ 14
	ES 04308.1b Dissolved Oxygen-Titrimetric Method	0.1 mg/L
	ES 04308.2b Dissolved Oxygen-Electrode Method	0.5 mg/L
	ES 04309.2b Chlorine-Titration method	2.0 mg/L
	ES 04310.1b Conductivity	1 μS/cm
ES 04311.1b Total Organic Carbon	0.3 mg/L	
ES 04313.1b Turbidity	0.02 NTU	
ES 04315.1a Chemical Oxygen	1 mg/L	

Korea Laboratory Accreditation Scheme

No. KT011

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2017-4 of the ministry of Environment	Demand-Titrimetric Method-Acidic Permanganate	
	ES 04315.2a Chemical Oxygen Demand-Titrimetric Method-Alkaline Permanganate	1 mg/L
	ES 04315.3b Chemical Oxygen Demand-Titrimetric Method-Dicromate	1 mg/L
	ES 04351.1b Fluoride-UV/visible Spectrometry	0.15 mg/L
	ES 04351.2a Fluoride-Ion Selective Electrode Method	0.1 mg/L
	ES 04351.3a Fluoride-Ion Chromatography	0.05 mg/L
	ES 04352.1a Bromide-Ion Chromatography	0.03 mg/L
	ES 04353.1b Cyanide-UV/Visible Spectrometry	0.01 mg/L
	ES 04353.3b Cyanide-Continuous Flow Analysis(CFA)	0.01 mg/L
	ES 04354.1b Nitrite-Nitrogen-UV/Visible Spectrometry	0.004 mg/L
	ES 04354.2a Nitrite-N-Ion Chromatography	0.1 mg/L
	ES 04355.1b Ammonium Nitrogen-UV/visible Spectrometry	0.01 mg/L
	ES 04356.1a Chloride-Ion Chromatography	0.1 mg/L
	ES 04356.3b Chloride-Titrimetric Method	0.7 mg/L
	ES 04359.1b Anionic surfactants-UV/Visible Spectrometry	0.02 mg/L
	ES 04359.2b Anionic surfactants-Continuous Flow Analysis	0.09 mg/L
	ES 04360.2b Phosphate P-UV/Vis Spectrometry-Ascorbic Acid Method	0.003 mg/L
	ES 04360.3a Phosphate P-Ion Chromatography	0.1 mg/L
	ES 04361.1 Nitrate Nitrogen-Ion Chromatography	0.1 mg/L
	ES 04361.2b Nitrate Nitrogen-UV/Visible Spectrometry-Brucine method	0.1 mg/L
	ES 04362.1b Total Phosphorus-UV/Visible	0.005 mg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2017-4 of the ministry of Environment	Spectrometry ES 04362.2b Total Phosphorus-Continuous Flow Analysis	0.003 mg/L
	ES 04363.1b Total Nitrogen-UV/Visible Spectrometry-Oxidation Method	0.1 mg/L
	ES 04363.4b Total Nitrogen-Continuous Flow Analysis	0.06 mg/L
	ES 04364.2b Perchlorate-Ion Chromatography	0.002 mg/L
	ES 04365.1b Phenols-UV/visible Spectrometry	0.05 mg/L
	ES 04365.2b Phenols-Continuous Flow Analysis	0.007 mg/L
	ES 04366.1b Sulfate-Ion Chromatography	0.5 mg/L
	ES 04401.3a Copper-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.006 mg/L
	ES 04401.4a Copper-Inductively Coupled Plasma-Mass Spectrometry	0.002 mg/L
	ES 04402.3a Lead-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.04 mg/L
	ES 04402.4a Lead-Inductively Coupled Plasma-Mass Spectrometry	0.002 mg/L
	ES 04403.3a Nickel-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.015 mg/L
	ES 04403.4a Nickel-Inductively Coupled Plasma-Mass Spectrometry	0.002 mg/L
	ES 04404.3a Manganese-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.002 mg/L
	ES 04404.4a Manganese-Inductively Coupled Plasma-Mass Spectrometry	0.000 5 mg/L
	ES 04405.2a Barium-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.003 mg/L
	ES 04405.3a Barium-Inductively Coupled Plasma-Mass Spectrometry	0.003 mg/L
	ES 04406.1b Arsenic-Hydride generation-Atomic Absorption Spectrometry	0.005 mg/L
	ES 04406.3a Arsenic-Inductively Coupled	0.05 mg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2017-4 of the ministry of Environment	Plasma-Atomic Emission Spectrometry ES 04406.4a Arsenic-Inductively Coupled Plasma-Mass Spectrometry	0.006 mg/L
	ES 04407.1b Se-Hydride Generation-Atomic Absorption Spectrometry	0.005 mg/L
	ES 04407.2a Se-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.03 mg/L
	ES 04408.1b Hg-Cold Vapor-Atomic Absorption Spectrometry	0.000 5 mg/L
	ES 04409.3a Zn-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.002 mg/L
	ES 04409.4a Zn-Inductively Coupled Plasma-Mass Spectrometry	0.006 mg/L
	ES 04410.1a Sb-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.02 mg/L
	ES 04410.2a Sb-Inductively Coupled Plasma-Mass Spectrometry	0.000 4 mg/L
	ES 04411.2a Tin-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.02 mg/L
	ES 04411.3a Tin-Inductively Coupled Plasma-Mass Spectrometry	0.000 1 mg/L
	ES 04412.3a Fe-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.007 mg/L
	ES 04413.3a Cd-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.004 mg/L
	ES 04413.4a Cd-Inductively Coupled Plasma-Mass Spectrometry	0.002 mg/L
	ES 04414.3a Cr-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.007 mg/L
	ES 04414.4a Cr-Inductively Coupled Plasma-Mass Spectrometry	0.000 2 mg/L
	ES 04415.2b Cr6+-UV/Visible Spectrometry	0.04 mg/L
	ES 04416.1b Alkyl Hg-Gas Chromatography	0.000 5 mg/L
	ES 04501.1b Di-(2-Ethylhexyl)Phthalate - Liquid Extraction/GasChromatograph	0.002 5 mg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2017-4 of the ministry of Environment	- Mass Spectrometry ES 04502.1b Total Petroleum Hydrocarbon-Liquid Extraction/Gas Chromatography	0.2 mg/L
	ES 04503.1b Organophosphorus Pesticides-Liquid Extraction/Gas Chromatography (Diazinon, parathion, EPN, methyl demeton, phenthoate)	0.000 5 mg/L
	ES 04504.1b Polychlorinated Biphenyls -Gas Chromatography	0.000 5 mg/L
	ES 04601.4b 1,4-Dioxane-Liquid Extraction/ Gas Chromatograph/Mass Spectrometry	0.01 mg/L
	ES 04602.1b Bromoform, Vinyl Chloride, Acrylonitrile-Headspace-Gas Chromatograph	0.005 mg/L
	-Mass Spectrometry ES 04603.1b Volatile Organic Compounds-Purge/Trap-Gas Chromatograph-Mass Spectrometry	0.001 mg/L
	ES 04603.2b Volatile Organic Compounds -Headspace-Gas Chromatograph	0.005 mg/L
	-Mass Spectrometry ES 04603.3b Volatile Organic Compounds-Purge □Trap-Gas Chromatography	0.002 mg/L
	ES 04603.4b Volatile Organic Compounds -Headspace-Gas Chromatography	0.002 mg/L
	ES 04603.5b Volatile Organic Compounds -Liquid Extraction/-Gas Chromatograph -Mass Spectrometry	0.002 mg/L

Korea Laboratory Accreditation Scheme

No. KT011

02.022 Wastewater and Waste matter

Test method	Standard designation	Test range
The notice No. 2017-4 of the ministry of Environment	ES 04603.6b Volatile Organic Compounds -Liquid Extraction/Gas Chromatography	0.002 mg/L
	ES 04701.2c Total Coliform-Multiple Tube Fermentation Method	1.8/100 mL
	ES 04701.3b Total Coliform-Multiple Pour Plate Method	30 CFU/mL
	ES 04702.2c Fecal Coliform-Multiple Tube Fermentation Method	1.8/100 mL

Korea Laboratory Accreditation Scheme

No. KT011

02.024 Soils

Test method	Standard designation	Test range
The notice No. 2015-261 of the ministry of Environment	Standard methods for the examination of environmental pollution(soil pollution)	
	ES 07301.1a Moisture Content	0.1 %
	ES 07302.1a pH-Glass Electrode Method	1 ~ 14
	ES 07351.1a Fluoride-UV/visible Spectrometry	10 mg/kg
	ES 07352.1a Cyanide-UV/visible Spectrometry	0.2 mg/kg
	ES 07401.2a Copper-Inductively Coupled Plasma-Atomic Emission Spectrometry	1.0 mg/kg
	ES 07402.2a Lead-Inductively Coupled Plasma-Atomic Emission Spectrometry	1.5 mg/kg
	ES 07403.2a Nickel-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.4 mg/kg
	ES 07404.2a Arsenic-Inductively Coupled Plasma-Atomic Emission Spectrometry	1.50 mg/kg
	ES 07405.1a Mercury-Cold Vapor/Atomic Absorption Spectrometry	0.05 mg/kg
	ES 07406.2a Zinc-Inductively Coupled Plasma-Atomic Emission Spectrometry	1.0 mg/kg
	ES 07407.2a Cadmium-Inductively Coupled Plasma-Atomic Emission Spectrometry	0.10 mg/kg
	ES 07408.1a Hexavalent Chromium-UV/visible Spectrometry	0.5 mg/kg
	ES 07501.1a Organophosphorus Pesticides-Gas Chromatography	0.05 mg/kg
	ES 07551.1a Benzo(a)pyrene-Gas Chromatograph-Mass Spectrometry	0.005 mg/kg
	ES 07552.1a TPH-Gas Chromatography	50 mg/kg
	ES 07553.1a Phenols-Gas Chromatography	Phenol 0.02 mg/kg Pentachlorophenol 0.1 mg/kg
	ES 07554.1a PCBs-Gas Chromatography	0.05 mg/kg
	ES 07601.1a Benzene, Toluene, Ethylbenzene, Xylene-Purge-Trap- Gas Chromatograph-Mass Spectrometry	0.1 mg/kg
	ES 07602.1a aTCE, PCE-Purge-Trap-Gas Chromatograph-Mass Spectrometry	0.1 mg/kg

Korea Laboratory Accreditation Scheme

No. KT011

02.025 Environment(Electrotechnical products-RoHS)

Test method	Standard designation	Test range
IEC 62321 Ed. 1.0 : 2008	Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)	Pb, Cd : Max. 10 mg/kg Hg : 4 mg/kg ~ 1 000 mg/kg Cr(VI)(face) : Max. 0.02 mg/kg Cr(VI)(material) : (1 ~ 20) mg/kg, PBB, PBDE : 100 mg/kg ~ 2 000 mg/kg decaBDE : Min. 100 000 mg/kg
IEC 62321-4 Ed. 1.0 : 2013	Determination of certain substances in electrotechnical products - Part 4 : Mercury in polymers, metals and electronics by CV-AAS, CV-AFS, ICP-OES and ICP-MS	Hg 1 mg/kg
IEC 62321-5 Ed. 1.0 : 2013	Determination of certain substances in electrotechnical products - Part 5 : Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by AAS, AFS, ICP-OES and ICP-MS	Cd 1 mg/kg Pb 5 mg/kg Cr 1 mg/kg
IEC 62321-6 Ed. 1.0 : 2015	Determination of certain substances in electrotechnical products - Part 6: Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography -mass spectrometry (GC-MS)	PBBs 10 mg/kg PBDEs 10 mg/kg
IEC 62321-7-1 Ed. 1.0 : 2015	Determination of certain substances in electrotechnical products - Part 7-1: Hexavalent chromium - Presence of hexavalent chromium (Cr(VI)) in colourless and coloured corrosion-protected coatings on metals by the colorimetric method	Cr(VI)(face) : Max. 0.02 mg/kg Cr(VI)(material) : (1 ~ 20) mg/kg