Schedule of Accreditation

Organisation Name	MTS Ltd
Trading As	MTS Limited
INAB Reg No	120T
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Accreditation Standard	EN ISO/IEC 17025 T
Standard Version	2017
Date of award of accreditation	09/10/2000
Scope Classification	Construction materials testing
Scope Classification	Mechanical testing
Scope Classification	Biological and veterinary testing
Scope Classification	Chemical testing
Services available to the public[1]	Yes

[1] Refer to document on interpreting INAB Scopes of Accreditation

Sites from which accredited services are delivered		
(the detail of the accredited services delivered at each site are on the Scope of Accreditation)		
	Name	**Address**
1	Head Office	19 Kernanstown Industrial Estate, Carlow

Scope of Accreditation

Head Office

Biological and Veterinary Testing

Category: A

Biology/veterinary field - Tests	Test name	Technique	Matrix	Equipment	Std. reference
803 Culture of organisms in liquid or agar based culture media with visual or instrument monitoring for growth - .01 Culture of bacteria	Water Quality - Detection and enumeration of intestinal enterococci	Membrane Filtration Method	Waters - Potable water	Membrane Filtration Unit Incubator	ISO 7899-2 2000 / WSOP003
	Water Quality - Enumeration of Clostridium perfringens	Method using Membrane Filtration	Waters - Potable water	Membrane Filtration Unit Incubator	ISO 14189 2013 / WSOP004
	Water Quality - Enumeration of Escherichia coli (E.Coli) and Coliform bacteria	Membrane filtration method for waters with low bacterial background flora	Waters - Potable water	Membrane Filtration Unit Incubator	ISO 9308-1 2014 +A1: 2016 / WSOP002
820 Miscellaneous	Drinking Water Sample Collection	Sampling for biological contaminants: Total coliforms; E.Coli; Enterococci	Waters - Potable water	N/A	EPA Quick Guide to drinking water sample collection, 2nd Edition Sept 2016 / WSOP005
	Water Quality - Sampling for microbiological analysis	Potable water from a tap	Waters - Potable water	N/A	ISO 19458 2006 Clause 4.4.1 / WSOP005
	Water Quality - Sampling.	Sampling Faucets	Waters - Potable water	N/A	ISO 5667-5 2006 Guidance on sampling of drinking water from treatment

					works and piped distribution systems / WSOP005

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Chemical Testing

Category: A

Chemistry Field - Tests	Test name	Analyte	Range of measurement	Matrix	Equipment/technique	Standard reference/SOP
766 Environmental testing (inc waters) - .05 Inorganic	Turbidity		0-2000 NTU	Potable Water	Turbidity Meter(TN-100)	APHA Standard Method for Turbidity 2130 (24th Edition) / WSOP007
767 Physical test/measurement - .01 pH	pH		4-10 Units	Potable Water	pH electrode (INOLAB pH 7110)	APHA Standard Method for pH 4500-H+ (24th Edition) / WSOP006
767 Physical test/measurement - .02 Conductivity	Conductivity		0-2000us/cm	Potable Water	Conductivity Probe (INOLAB Cond 7110)	APHA Standard Method for Conductivity 2510 (24th Edition) / WSOP008

Construction Materials Testing

Category: A

Construction material/product - Tests	Matrix/methodology (where applicable if not insert n/a)	Equipment/technique	Range of measurement (where applicable)	Standard reference/SOP
212 Concrete - 212.10 Curing Specimens for Strength Tests	n/a	Curing of Test Specimens in Laboratory		IS EN12390-2:2019 / CSOP004
212 Concrete - 212.11 Compressive Strength Tests (Cubes and Cylinders)		Compressive strength of Moulded Specimens	(Loads from 120-3000kN)	EN12390-3 : 2019 / CSOP019
		Determination of Compressive strength of hardened concrete cores	(Loads from 120-3000kN)	IS EN 12504-1: 2019 +AC2020 / CSOP034
212 Concrete - 212.13 Density		Mass per Unit Volume of Hardened Concrete, Determination of Density		IS EN 12390-7 : 2019 / CSOP008
216 Aggregates - .03 Sample reduction		Methods for reducing laboratory samples		EN932-2:1999 / CSOP082
216 Aggregates - .04 Particle size distribution		Dry Sieving		IS EN 933 -1:2012 / CSOP079
		Washing & Sieving		IS EN 933-1: 2012 / CSOP079
216 Aggregates - .05 Flakiness index		Flakiness Index		IS EN 933-3 : 2012 / CSOP076
216 Aggregates - .06 Shape index		Particle Length (Railway Ballast)		Documented In House Procedure: CSOP100 (based on I.S. EN13450)
216 Aggregates - .07 Percent crushed and broken surfaces		Determination of the percentage of Crushed & Broken surfaces		IS EN 933-5: 1998 : Amd. 1: 2004 / CSOP089
216 Aggregates - .09 Assessment of fines		Methylene Blue Test	0 to 2 mm fraction in fine aggregate	I.S. EN 933-9 : 2022 / CSOP097
			0 to 2 mm fraction in fine aggregate	IS EN 933-9: 2022
			All-in aggregates	I.S. EN 933-9: 2022 CSOP097

			All-in Aggregates	IS EN 933-9: 2022
216 Aggregates - .11 Microdeval co-efficient		Determination of Resistance to Wear		IS EN 1097-1 : 2011 / CSOP095
216 Aggregates - .12 Railway ballast: Micro deval co-efficient		Determination of Resistance to Wear - Railway Ballast		IS EN 1097-1 : 2011 including Railway Ballast - EN13450 Annex E / CSOP095
216 Aggregates - .13 Resistance to fragmentation		Determination of Resistance to Fragmentation (Los Angeles Abrasion Value)		IS EN 1097-2 : 2020 / CSOP093
216 Aggregates - .14 Railway ballast: Resistance to fragmentation		Determination of Resistance to Fragmentation (Los Angeles Abrasion Value) Railway Ballast		IS EN 1097-2 : 2020 - Including Railway Ballast - IS EN 13450 Annex C / CSOP093
216 Aggregates - .17 Water content		Determination of Water Content		IS EN1097-5: 2008 /CSOP084
216 Aggregates - .18 Particle density and water absorption		Determination of Particle Density	(i) Saturated & Surface Dry, (ii) Oven Dried basis, (iii) Apparent Particle Density, (iv) Water Absorption	IS EN 933-9: 2022
		Determination of Particle Density on a (i) saturated and surface-dried basis; (ii)oven dried basis; (iii) Apparent particle density; (iv) Water absorption		IS EN 1097-6:2022 / CSOP151
216 Aggregates - .20 Polished stone value		Determination of Polished Stone Value		IS EN 1097-8 : 2020 / CSOP088
216 Aggregates - .23 Magnesium sulphate		Magnesium Sulfate Test		IS EN 1367 -2:2009 / CSOP094
216 Aggregates - .99 Other tests		Laboratory reference density and water content using vibrating hammer (Optimum Water Content)		IS EN13286-4: 2021 / CSOP074
217 Bituminous materials - .02 Preparation of samples		Preparation of samples for determining Binder Content, Water Content & Grading		IS EN 12697-28: 2020 / CSOP069
217 Bituminous materials - .03 Determination of dimension		Determination of Dimensions of a bituminous specimen		IS EN12697-29: 2020 / CSOP059
217 Bituminous materials - .09 Hot Sand test for adhesivity		Hot Sand Test		IS EN 12697-37: 2003 / CSOP072

217 Bituminous materials - .15 Binder content		Determination of Binder Content By Ignition Method		IS EN 12697 -39: 2020 / CSOP056
217 Bituminous materials - .16 Binder content - difference		Determination of Binder Content by Pressure Filter method		IS EN 12697 - 1: 2020 / CSOP005
217 Bituminous materials - .17 Binder content - Recovery		Determination of Binder content by Rolling Bottle Method - Volume Calculation		IS EN 12697-1: 2020 / CSOP062
		Determination of bitumen recovery	Rotary Evaporator	IS EN 12697-3: 2013 +A1: 2018
217 Bituminous materials - .18 Particle Size distribution		Determination of Particle Size Distribution		IS EN 12697-2: 2015+A1:2019 / CSOP057
217 Bituminous materials - .19 Maximum density		Determination of Maximum Density		IS EN 12697-5: 2018 / CSOP049
217 Bituminous materials - .20 Affinity between aggregate and bitumen		Determination of the Affinity between Aggregate and Bitumen		IS EN12697-11: 2020: Clause 6 / CSOP065
217 Bituminous materials - .28 Bulk density		Determination of Bulk density of Bituminous Specimens		IS EN 12697-6: 2020 / CSOP052
217 Bituminous materials - .31 Voids conent		Determination of Voids Characteristics of Bituminous Specimens		IS EN 12697-8: 2018 / CSOP054
217 Bituminous materials - .33 Percentage refusal density (PRD)		Percentage Refusal Density (PRD), Vibratory Compaction		EN 12697-32: 2019 / CSOP066
217 Bituminous materials - .40 Softening point		Softening Point	25 to 200°C	EN 1427: 2015 / CSOP036
217 Bituminous materials - .49 Distillation		Determination of Residual Binder & Oil Distillate from Bitumen Emulsions by Distillation	Oil distillate % by mass	IS EN 1431: 2018 / CSOP047
			Residue % by mass	IS EN 1431: 2018 CSOP047
217 Bituminous materials - .50 Needle penetration		Determination of Needle Penetration	0 to 350 x 0.1 mm @ 25°C	EN 1426: 2015 / CSOP037
217 Bituminous materials - .51 Sieve test		Determination of residue on Sieving of bituminous emulsions	Residue on 0.500mm sieve	IS EN 1429: 2013 / CSOP038
217 Bituminous materials - .56 Water content		Water Content		IS EN 1428: 2012 / CSOP039
217 Bituminous materials - .57 Breaking value		Determination of Breaking Value of cationic bituminous emulsions		IS EN 13075-1: 2016 / CSOP045

217 Bituminous materials - .58 Efflux time		Determination of Efflux Time using Redwood No.2 Viscometer		IS EN16345: 2012 / CSOP098
218 Soils for Geotechnical Investigation & Testing:Lab Testing of Soils. Soils (Chemical Tests) - .01 Water content		Determination of Water Content		IS EN ISO 17892-1: 2014 & A1: 2022
				IS EN ISO 17892-1:2014 / CSOP114
219 Soils for civil engineering purposes - .02 Moisture content		Determination of the Moisture Content		BS 1377 Part 2: 2022 Clause 4.3 / CSOP116
		Determination of Water Content	Oven Drying Method	BS1377-2: 2022 Clause 4.1
219 Soils for civil engineering purposes - .04 Liquid limit		Determination of Liquid Limit	Cone penetrometer method (definitive method)	BS1377-2: 2022 Clause 5.2
		Determination of the Liquid Limit - Definitive method		BS1377 Part 2: 2022 Clause 5.2 Definatitive Method / CSOP117
		Determination of the Liquid Limit - One point method		BS 1377 Part 2: 2022 Clause 5.3 / CSOP117
219 Soils for civil engineering purposes - .05 Plastic limit		Determination of Plastic Limit		BS1377-2: 2022 Clause 6
		Determination of the Plastic Limit		BS 1377 Part 2: 2022 Clause 6 / CSOP118
219 Soils for civil engineering purposes - .06 Plasticity index		Determination of Liquid and Plastic Limits	4 Point Fall Cone Method	IS EN ISO 17892-12: 2018 + A1: 2021 & A2: 2022 / CSOP119
		Determination of Plasticity Index		BS1377-2: 2022 Clause 6
		Determination of the Plasticity Index		BS 1377 Part 2: 2022 Clause 6 / CSOP110
219 Soils for civil engineering purposes - .10 Particle density		Determination of Particle Density	Gas Jar Method	BS1377-2: 2022 Clause 9.2
219 Soils for civil engineering purposes - .11 Particle size distribution		Determination of Particle Size Distribution	Sieving method (Wet & Dry)	IS EN ISO 17892-4:2016 / CSOP112
			Wet & Dry	BS1377-2: 2022 Clause 10
		Determination of the Particle Size Distribution - Wet sieving method		BS 1377 Part 2: 2022 Clause 10 / CSOP092

219 Soils for civil engineering purposes - .12 Uniformity coefficient		Uniformity Coefficient		BS 6100: 1992 Clause 2.2.1 / CSOP126
219 Soils for civil engineering purposes - .13 Dry density/moisture content relationship		Determination of Dry Density / water content relationship	2.5kg Rammer	BS1377-2: 2022 Clause 11
			4.5kg Rammer	BS1377-2: 2022 Clause 11
			Vibrating Hammer	BS1377-2: 2022 Clause 11
		Optimum Moisture Content 4.5 kg rammer		BS 1377 Part 2: 2022 Clause 11 / CSOP123
		Optimum Moisture Content 2.5kg rammer		BS 1377 Part 2: 2022 Clause 11 / CSOP124
		Optimum Moisture Content Vibrating hammer		BS 1377 Part 2: 2022 Clause 11 / CSOP125
219 Soils for civil engineering purposes - .15 Moisture condition value (MCV)		Determination of Moisture Condition Value (MCV)		BS1377-2: 2022 Clause 13
		Determination of the Moisture Condition Value (MCV)		BS 1377 Part 2: 2022 Clause 13 / CSOP118
219 Soils for civil engineering purposes - .17 California bearing ratio		Determination of California Bearing Ratio (CBR)	2.5kg Rammer	BS1377-2: 2022 Clause 15
			4.5kg Rammer	BS1377-2: 2022 Clause 15
			Static Compaction - Loads 0.4 to 50kN	BS1377-2: 2022 Clause 15
			Vibrating Hammer	BS1377-2: 2022 Clause 15
220 Highways/roads and other paved surfaces including airfields - .10 Slid/skid resistence - pendulum test		Method for Measurement of Slip/skid resistance of surface		IS EN 13036-4: 2011 / CSOP087
223 Pedestrian Surfaces - .02 Slip Resistance-Pendulum Test-Wet & Dry surfaces		Dry Pedestrian surface	Dry	BS 7976-2: 2002 (+A1: 2013) / CSOP108
		Wet Pedestrian surface	Wet	BS 7976-2: 2002 (+A1: 2013) / CSOP108

227 Unbound & Hydraulically Bound Mixtures - .01 Laboratory reference density		Laboratory Reference Density & Water Content using Vibrating Hammer (Optimum Water Content)		IS EN 13286-4: 2021 / CSOP139
229 Construction Products - .01 Dimensions		Determination of Dimensions of Masonry unit		EN 772-16:2011 / CSOP015
229 Construction Products - .02 Compressive Strength		Determination of Compressive Strength of Masonry Unit		IS EN 772-1: 2011 + A1: 2015 / CSOP014
229 Construction Products - .03 Water Absorption		Determination of Water Absorption of Masonry Units		EN 772-11: 2011 / CSOP018
229 Construction Products - .10 Dry Bulk Desnity		Determination of net and gross Dry Density of Masonry Unit		I.S. EN 772-13: 2000 / CSOP020
229 Construction Products - .32 Flatness Deviation		Determination of Flatness of faces of masonry units		EN 772-20: 2000 / CSOP021
229 Construction Products - .46 Moisture Expansion		Determination of moisture movement of masonry units		EN 772-14: 2002 / CSOP026

Construction Materials Testing

Category: B

Construction material/product - Tests	Matrix/methodology (where applicable if not insert n/a)	Equipment/technique	Range of measurement (where applicable)	Standard reference/SOP
212 Concrete - 212.01 Sampling	n/a	Sampling - Spot sample and Composite sample		IS EN 12350-1: 2019 / CSOP001
212 Concrete - 212.04 Workability		Testing Fresh Concrete - Slump Test		IS EN 12350-2: 2019 / CSOP002
212 Concrete - 212.09 Making Specimens for Strength Tests		Making specimens for strength tests		IS EN 12390-2:2019 / CSOP004
212 Concrete - 212.10 Curing Specimens for Strength Tests		Curing specimens for strength tests		IS EN 12390-2:2019 / CSOP030
214 Soils (Site Tests) - .03 Moisture Condition Value		Determination of the Moisture Condition Value (MCV)		BS 1377: Part 2: 2022 Clause 13 / CSOP118
214 Soils (Site Tests) - .04 In-situ Density Tests		Determination of Field Density and Moisture Density using a Nuclear Density Gauge		CC-SPW-00800 October 2023: Annex A
		Determination of In-situ density by Sand Replacement method		BS 1377: Part 9: 1990 Clause 2.2 / CSOP136
		Determination of In-situ density using Nuclear Density Gauge (NDG)		BS 1377: Part 9:1990 Section 2.5 / CSOP007.3
214 Soils (Site Tests) - .06 In-situ Vertical Deformation and Strength Tests (PLT)		Plate bearing test including conversion to California Bearing Ratio (CBR) up to 1.25mm deflection		Documented In House Procedure: CSOP142.1 based on BS1377: Part 9-1990 (CBR calculation using NRA DMRB Vol 7, Section 2, Part 2A HD 25-26/10)
214 Soils (Site Tests) - .07 Equivalent CBR Value determined from PLT & DCP Data				Documented In House Procedure: CSOP142.2 based on BS1377: Part 9-1990 (CBR calculation using NRA DMRB Vol 7, Section 2, Part 2A HD 25-26/10)
216 Aggregates - .01 sampling		Sampling of Aggregates		EN 932 -1: 1997 / CSOP077

217 Bituminous materials - .01 Sampling		Sampling of Bituminous Mixtures		IS EN 12697-27: 2017 / CSOP058
217 Bituminous materials - .37 In situ density		Determination of In-situ density using Nuclear Density Gauge (NDG)		Documented In House Procedure: CD004/IHT003.01.3 (based on BS594987:2015) / CSOP007.1
219 Soils for civil engineering purposes - .01 Sampling		Sampling of soils		Documented In House Procedure: CSOP149
220 Highways/roads and other paved surfaces including airfields - .06 Pavement surface macrotexture depth		Measurement of Pavement Surface Macrotexture by Volumetric Patch method	Using Glass beads	IS EN 13036-1: 2010 / CSOP070
220 Highways/roads and other paved surfaces including airfields - .07 Surface regularity		Surface Regularity by Rolling Straight Edge		Documented In House Procedure: CSOP048 based on TRL SR 290
220 Highways/roads and other paved surfaces including airfields - .10 Slid/skid resistence - pendulum test		Method for Measurement of Slip/skid resistance of surface		IS EN 13036-4: 2011 / CSOP087
223 Pedestrian Surfaces - .02 Slip Resistance-Pendulum Test-Wet & Dry surfaces		Pendulum Test - Dry Pedestrian surface	Dry	BS 7976-2: 2002 (+A1: 2013) / CSOP086
		Pendulum Test - Wet Pedestrian surface	Wet	BS 7976-2: 2002 (+A1: 2013) / CSOP086

Head Office

Mechanical Testing

Category: A

Product categories - Tests	Test detail	Product detail	Range of Measurement	Equipment/Technique	Std. Ref & SOP
1129 Plastic and related products - .11 Tension tests	Determination of tensile strength and failure mode of test pieces from butt-fused joint	Plastics pipes and fittings	1-50kN	Proline Tensile / Compression testing machine	ISO 13953: 2001 +A1: 2020 / MSOP002
1129 Plastic and related products - .12 Tear tests	Decohesion tear test of polyethylene (PE) saddle fusion joints		1-50kN	Proline Tensile / Compression testing machine	ISO 13956: 2010 / MSOP005
	Peel decohesion test for Polyethylene (PE) electrofusion assemblies		1-50kN	Proline Tensile / Compression testing machine	ISO 13954: 1997 +A1: 2020 / MSOP003
1129 Plastic and related products - .20 Compression tests	Crushing decohesion test for polyethylene (PE) electrofusion assemblies	Plastics pipes and fitting	1-50kN	Proline Tensile / Compression testing machine	ISO 13955: 1997 / MSOP004