

# Schedule of Accreditation



Organisation Name	MTS Ltd
Trading As	MTS Limited
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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	Biological and veterinary testing
Services available to the public <sup>1</sup>	Yes

<sup>1</sup> 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 - Environmental water, Waters - Industrial, Waters - Potable water, Waters - swimming pools & spas, Waters - Trade Wastes, Waters - Waste Water Treatment Plant effluent (WWTP effluent)	Membrane Filtration Unit Incubator	ISO 7899-2 2000	
	Water Quality - Enumeration of Clostridium perfringens	Method using Membrane Filtration	Waters - Environmental water, Waters - Industrial, Waters - Potable water, Waters - swimming pools & spas, Waters - Trade Wastes, Waters - Waste Water Treatment Plant effluent (WWTP effluent)	Membrane Filtration Unit Incubator	ISO 14189 2013	
	Water Quality -	Membrane filtration	Waters -	Membrane	ISO 9308-1 2014 +A1:	

	Enumeration of Escherichia coli (E.Coli) and Coliform bacteria	method for waters with low bacterial background flora	Environmental water, Waters - Industrial, Waters - Potable water, Waters - swimming pools & spas, Waters - Trade Wastes, Waters - Waste Water Treatment Plant effluent (WWTP effluent)	Filtration Unit Incubator	2016	
820 Miscellaneous	Drinking Water Sample Collection	Sampling for biological contaminants: Total coliforms; E.Coli; Enterococci	Waters - Environmental water, Waters - Industrial, Waters - Potable water, Waters - swimming pools & spas, Waters - Waste water treatment plant effluent (WWTP effluent)	N/A	EPA Quick Guide to drinking water sample collection, 2nd Edition Sept 2016	
	Water Quality - Sampling for microbiological analysis	Potable water from a tap	Waters - Environmental water, Waters - Industrial, Waters - Potable water, Waters - Waste water treatment plant effluent (WWTP effluent)	N/A	ISO 19458 2006 Clause 4.4.1	
	Water Quality - Sampling.	Sampling Faucets	Waters - Environmental water, Waters - Industrial, Waters - Potable water, Waters - Waste water treatment plant effluent (WWTP effluent)	N/A	ISO 5667-5 2006 Guidance on sampling of drinking water from treatment works and piped distribution systems	

# Head Office

## 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		
212 Concrete - 212.11 Compressive Strength Tests (Cubes and Cylinders)		Compressive strength of Moulded Specimens	Loads from 50 - 2000kN	EN12390-3 : 2019		
		Determination of Compressive strength of hardened concrete cores	(Loads from 50-2000kN)	IS EN 12504-1: 2019 +AC2020		
212 Concrete - 212.13 Density		Mass per Unit Volume of Hardened Concrete, Determination of Density		IS EN 12390-7 : 2019		
216 Aggregates - .03 Sample reduction		Methods for reducing laboratory samples		EN932-2:1999		
216 Aggregates - .04 Particle size distribution		Dry Sieving		IS EN 933 -1:2012		
		Washing & Sieving		IS EN 933-1: 2012		
216 Aggregates - .05 Flakiness index		Flakiness Index		IS EN 933-3 : 2012		
216 Aggregates - .06 Shape index		Particle Length (Railway Ballast)		Documented In House Procedure: CD004/IHT001.06.1 (based on 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			

216 Aggregates - .09 Assessment of fines	Methylene Blue Test	0 to 2 mm fraction in fine aggregate	IS EN 933-9 + A1: 2013		
		All-in aggregates	IS EN 933-9 + A1: 2013		
216 Aggregates - .11 Microdeval co-efficient	Determination of Resistance to Wear		IS EN 1097-1 : 2011		
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		
216 Aggregates - .13 Resistance to fragmentation	Determination of Resistance to Fragmentation (Los Angeles Abrasion Value)		IS EN 1097-2 : 2020		
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		
216 Aggregates - .17 Water content	Determination of Water Content		IS EN1097-5: 2008		
216 Aggregates - .18 Particle density and water absorption	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 1097-6:2013		
216 Aggregates - .20 Polished stone value	Determination of Polished Stone Value		IS EN 1097-8 : 2020		
216 Aggregates - .23 Magnesium sulphate	Magnesium Sulfate Test		IS EN 1367 -2:2009		
216 Aggregates - .99 Other tests	Determination of Average Least Dimension (ALD) by calculation.		In-House Method CD004 / IHT001.09.1 based on South Africa test standard TMH1 Method B18(b)T (Dumas Method)		
	Laboratory reference		IS EN13286-4:		

		density and water content using vibrating hammer (Optimum Water Content)		2003		
217 Bituminous materials - .02 Preparation of samples		Preparation of samples for determining Binder Content, Water Content & Grading		IS EN 12697-28: 2020		
217 Bituminous materials - .03 Determination of dimension		Determination of Dimensions of a bituminous specimen		IS EN12697-29: 2020		
217 Bituminous materials - .09 Hot Sand test for adhesivity		Hot Sand Test		IS EN 12697-37: 2003		
217 Bituminous materials - .15 Binder content		Determination of Binder Content By Ignition Method		IS EN 12697 -39: 2020		
217 Bituminous materials - .16 Binder content - difference		Determination of Binder Content by Pressure Filter method		IS EN 12697 -1: 2020		
217 Bituminous materials - .17 Binder content - Recovery		Determination of Binder content by Rolling Bottle Method - Volume Calculation		IS EN 12697-1: 2020		
217 Bituminous materials - .18 Particle Size distribution		Determination of Particle Size Distribution		IS EN 12697-2: 2015+A1:2019		
217 Bituminous materials - .19 Maximum density		Determination of Maximum Density		IS EN 12697-5: 2018		
217 Bituminous materials - .20 Affinity between aggregate and bitumen		Determination of the Affinity between Aggregate and Bitumen		IS EN12697-11: 2020: Clause 6		
217 Bituminous materials - .28 Bulk density		Determination of Bulk density of Bituminous Specimens		IS EN 12697-6: 2020		
217 Bituminous materials - .31 Voids content		Determination of Voids Characteristics of Bituminous Specimens		IS EN 12697-8: 2018		
217 Bituminous materials - .33 Percentage refusal		Percentage Refusal Density (PRD),		EN 12697-32: 2019		

density (PRD)		Vibratory Compaction				
				EN 12697-9 : 2002		
217 Bituminous materials - .40 Softening point		Softening Point	25 to 200°C	EN 1427: 2015		
217 Bituminous materials - .49 Distillation		Determination of Residual Binder & Oil Distillate from Bitumen Emulsions by Distillation	Oil distillate % by mass	IS EN 1431: 2018		
			Residue % by mass	IS EN 1431: 2018		
217 Bituminous materials - .50 Needle penetration		Determination of Needle Penetration	0 to 350 x 0.1 mm @ 25°C	EN 1426: 2015		
217 Bituminous materials - .51 Sieve test		Determination of residue on Sieving of bituminous emulsions	Residue on 0.500mm sieve	IS EN 1429: 2013		
217 Bituminous materials - .56 Water content		Water Content		IS EN 1428: 2012		
217 Bituminous materials - .57 Breaking value		Determination of Breaking Value of cationic bituminous emulsions		IS EN 13075-1: 2016		
217 Bituminous materials - .58 Efflux time		Determination of Efflux Time using Redwood No.2 Viscometer		IS EN16345: 2012		
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		
219 Soils for civil engineering purposes - .02 Moisture content		Determination of the Moisture Content		BS 1377 Part 2: 1990 Clause 3.2		
219 Soils for civil engineering purposes - .04 Liquid limit		Determination of the Liquid Limit - Definitive method		BS1377 Part 2: 1990 Clause 4.3		
		Determination of the Liquid Limit - One point method		BS 1377 Part 2: 1990 Clause 4.4		
219 Soils for civil engineering purposes - .05		Determination of the Plastic Limit		BS 1377 Part 2: 1990 Clause 5		

Plastic limit					
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		
		4 point Fall Cone method	IS EN ISO 17892-12:2018		
	Determination of the Plasticity Index		BS 1377 Part 2: 1990 Clause 5.4		
219 Soils for civil engineering purposes - .10 Particle density	Determination of Particle Density - Gas Jar Method		BS 1377 Part 2: 1990 Clause 8.2		
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		
	Determination of the Particle Size Distribution - Wet sieving method		BS 1377 Part 2: 1990 Clause 9.2		
219 Soils for civil engineering purposes - .12 Uniformity coefficient	Uniformity Coefficient		BS 6100: 1992 Clause 2.2.1		
219 Soils for civil engineering purposes - .13 Dry density/moisture content relationship	Optimum Moisture Content 4.5 kg rammer		BS 1377 Part 4: 1990 Section 3		
	Optimum Moisture Content 2.5kg rammer		BS 1377 Part 4: 1990 Section 3		
	Optimum Moisture Content Vibrating hammer		BS 1377 Part 4: 1990 Section 3		
219 Soils for civil engineering purposes - .15 Moisture condition value (MCV)	Determination of the Moisture Condition Value (MCV)		BS 1377 Part 4: 1990 Clause 5		
219 Soils for civil engineering purposes - .17 California bearing ratio	Determination of the CBR - 2.5kg Rammer		BS1377 Part 4: 1990 Section 7		
	Determination of the CBR - 4.5kg Rammer		BS1377 Part 4: 1990 Section 7		
	Determination of the	Loads 0.4 to 50 kN	BS1377 Part 4:		



		CBR - Static compaction		1990 Section 7		
		Determination of the CBR - Vibrating Hammer		BS1377 Part 4: 1990 Section 7		
220 Highways/roads and other paved surfaces including airfields - .10 Slid/skid resistance - pendulum test		Method for Measurement of Slip/skid resistance of surface		IS EN 13036-4: 2011		
223 Pedestrian Surfaces - .02 Slip Resistance- Pendulum Test-Wet & Dry surfaces		Dry Pedestrian surface	Dry	BS 7976-2: 2002 (+A1: 2013)		
		Wet Pedestrian surface	Wet	BS 7976-2: 2002 (+A1: 2013)		
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		
229 Construction Products - .01 Dimensions		Determination of Dimensions of Masonry unit		EN 772-16:2011		
229 Construction Products - .02 Compressive Strength		Determination of Compressive strength of Masonry Unit		EN 772-1: 2011		
				IS 20 Part 1: 1987 Appendix D		
				IS EN 772-1: 2011 +A1: 2015		
229 Construction Products - .10 Dry Bulk Density		Determination of net and gross Dry Density of Masonry Unit		EN 772-13: 2000		
229 Construction Products - .21 Slip Resistance - pendulum tester		Natural Stone Test Methods - Determination of the Slip Resistance		IS EN 14231: 2003		

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		
212 Concrete - 212.04 Workability		Testing Fresh Concrete - Slump Test		IS EN 12350-2: 2019		
212 Concrete - 212.09 Making Specimens for Strength Tests		Making specimens for strength tests		IS EN 12390-2:2019		
212 Concrete - 212.10 Curing Specimens for Strength Tests		Curing specimens for strength tests		IS EN 12390-2:2019		
214 Soils (Site Tests) - .03 Moisture Condition Value		Determination of the Moisture Condition Value (MCV)		BS 1377: Part 4: 1990 Clause 5		
214 Soils (Site Tests) - .04 In-situ Density Tests		Determination of In-situ density by Sand Replacement method		BS 1377: Part 9: 1990 Clause 2.2		
		Determination of In-situ density using Nuclear Density Gauge (NDG)		BS 1377: Part 9:1990 Section 2.5		
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: CD004/IHT001.01.2 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 &				Documented In House Procedure: CD004/IHT001.01.2		

DCP Data				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		
217 Bituminous materials - .01 Sampling		Sampling of Bituminous Mixtures		IS EN 12697-27: 2017		
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)		
219 Soils for civil engineering purposes - .01 Sampling		Sampling of soils		Documented In House Procedure: CD004/IHT001.02.1		
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		
220 Highways/roads and other paved surfaces including airfields - .07 Surface regularity		Surface Regularity by Rolling Straight Edge		Documented In House Procedure: CD004/IHT003.03.1 based on TRL SR 290		
220 Highways/roads and other paved surfaces including airfields - .10 Slid/skid resistance - pendulum test		Method for Measurement of Slip/skid resistance of surface		IS EN 13036-4: 2011		
223 Pedestrian Surfaces - .02 Slip Resistance- Pendulum Test-Wet & Dry surfaces		Pendulum Test - Dry Pedestrian surface	Dry	BS 7976-2: 2002 (+A1: 2013)		
		Pendulum Test - Wet Pedestrian surface	Wet	BS 7976-2: 2002 (+A1: 2013)		
229 Construction Products - .21 Slip Resistance - pendulum tester		Natural Stone Test Methods - Determination of the Slip Resistance		IS EN 14231: 2003		

