IAPMO PLUMBING CODES & STANDARDS INDIA PRIVATE LIMITED
No. 22, 12th 'B' Main, Indira Nagar, HAL 2ND STAGE, Bengaluru 560008 India T- 080 3071 4500

APPLICATION FOR CERTIFICATION

1	**FOR APPLICATION TYPE PLEASE CHECK ONE OF THE FOLLOWING** ☐ NEW APPLICATION ☐ REVISION TO EXISTING CERTIFICATION ☐ TRANSFER OF CERTIFICATION FROM ANY OTHER CB AND DETAILS OF CB (Reasons for Transfer,) ☐ CANCELLATION/ TERMINATION FROM OTHER CB, IF ANY, WITH DETAILS
2	**CHECK ONE OR MORE OF THE FOLLOWING THAT APPLIES TO THIS APPLICATION** ☐ Renewal ☐ Technical Modifications ☐ Reinstatement Name ☐ Change/ Modification ☐ New Plant Additions Plant ☐ Number Change/ Modification ☐ Additional Company Names ☐ Manufacturing Plant or Importer Change Note : Separate Application to be submitted for each plant
3	**FOR APPLICATION TYPE** ☐ RMC Capability Certificate

Brief Plant Description (or Applicable Standard):_____

Contact Name:_____

Company:

Company Legal Status:_____Email Address:

Address:_____

City: _____ State:_____ PinCode:_____

Country:Website:_____Phone:_____Fax:

3. LOCATION OF RMC MANUFACTURING UNIT OTHER THAN PLANT LOCATION _____
4. Activities carried out at applied plant location (Tick as appropriate)

Manufacturing	Top Management
Testing	Purchase
Training	Maintenance
HR	Marketing
Finance	Or any other

5. Activities carried out at any other locations, if any (Tick as appropriate)

Manufacturing	Top Management
Testing	Purchase
Training	Maintenance
HR	Marketing
Finance	Or any other

6. Table 1 to 11 attached and any other supporting documents are to be sent along with filled application form.
7. **Is there a situation under which the product can lead to potential hazard** ☐ **Yes** ☐ **No**
8. **Is your company ISO 9000 certified?** **Yes** ☐ **No** ☐

Applicant	IAPMO INDIA
Company:_____	By:_____
Contact:_____	Title:_____
Title:_____	Signature:_____
Signature:_____	Date:
STAMP	STAMP

This Box is For IAPMO INDIA STAFFONLY

Application Number_____ Date Filed_____ Fee

_____ Received by_____ File Number_____

APPLICATION FOR CERTIFICATION - POLICIES

1. This is an application for certification
2. Applicant agrees to furnish all necessary drawings, test data, laboratory test reports, and product samples, if any, as required by IAPMO India technical staff. IAPMO India is not responsible for loss or damage to any materials submitted.
3. The applicant must pay the tariff for delivery to IAPMO India for all samples.
4. The application must be complete (including signatures) and all steps of Sheet 1 completed. If, after an application is first received, a period of three months elapses without the steps of Sheet 1 being completed, the application/file will be closed.
5. All fees are non-refundable.
6. This application will be accepted for processing only if accompanied by an executed copy of the IAPMO India License Agreement.
7. For marking purposes, the appropriate certification mark shall be displayed on the product to indicate that it has been listed by IAPMO India and the certification mark shall be visible on the product after installation. The only exception to this rule is for decorative or highly polished items, for items which are too small to accept the marking. In such cases, the certification mark and/or qualifying statements may be applied on the closest level of packaging to the product or other accompanying information. Applicant shall contact IAPMO India technical staff for consent to permit such deviation.

The undersigned certifies that he/she has read, understands, and, on behalf of applicant, approves and agrees to all the foregoing provisions of this application.

Signature: _____ Date: _____

Print or type name and title: _____

Table 1: General Information of Ready Mixed Concrete Facility (refer 3.1.1 of Requirements for Production Control)

Company Name	
Company Address (Register office) Tel. Fax e-mail	
Location of Plant	
Address of Plant Tel. Fax e-mail	☐
Personnel information • Plant-in-charge/Manager • QC personnel • Liaison personnel	 Name Telephone Name Telephone Name Telephone
Material Testing Facilities	Location and address Name of lab in-charge Telephone
Statutory Permissions*	1.Certificate from Pollution Control Board Yes ☐ No ☐ N.A. ☐ Expiry date: 2. Approval from factory inspector Yes ☐ No ☐ N.A. ☐ Expiry date: 3.Approval from Local Authorities (Municipal/Corporation/other) Yes ☐ No ☐ N.A. ☐ Expiry date:

* It is essential to attach photocopies of all relevant statutory permissions and certificates.

Table 2: General Information on Concrete Production Facilities (3.1.1)

Name of Plant Manufacturer	
Type of Plant	
Plant's Rated capacity, m^3/hour	
Type of Mixer*	Rotating-drum type Power mixer Planetary Mixer Pan type Pan-type with agitator Single shaft Twin shaft
Mixer batch size, m^3	
Storage Capacity	
Cement, tonnes	
Fly ash, tonnes	
Slag, tonnes	
Other cementitous material, tonnes	
Coarse aggregates, tonnes or m^3 10-mm 20-mm 40-mm	
Fine aggregates, tonnes or m^3 River sand Manufactured sand	
Crusher fines, tonnes or m^3	
Water, litres	
Chemical admixtures, litres	
Plasticiser Superplasticiser	

Retarder Any other	
Others	
**Brief description of recycling facility, if any	
Number of trucks with rated capacities	
Name of drum and truck manufacturer	1 2 3
**Additional information on Plant & Trucks, if any	

* Tick (√) in appropriate box. **Add extra sheets if essential

Table 3: General Information on Material Handling (3.1.1)

Material	*Delivery to Plant*	*Storage*	*Storage to Weigher*
Cement	Bulk Bags	Silo Godown	Screw conveyor Air Slide _; Gravity
Coarse aggregates	Trucks	Star pattern In-line bins compartments Tall/pocket silos	Conveyor Skip bucket Bucket conveyor
Fine aggregates	Trucks	Star pattern In-line bins compartments Tall/pocket silos	Conveyor Skip bucket Bucket conveyor
Fly ash	Bulk Bags	Silo Bins	Screw conveyor Manual
Slag	Bulk Bags	Silo Bins	Screw conveyor Manual
Micro silica	Bags	Silo Godown	Screw conveyor Manual
Other cementitious material (specify)	Bags	Silo Godown	Screw conveyor Manual

Water	Mun. mains ☐ Wells ☐ Ponds ☐	Underground/over-ground tank ☐	Pumping ☐ Gravity flow through pipe network ☐
Chemical admixtures(Liquid)	Drums ☐ Tankers ☐	Drums ☐ Tanks ☐	Dispenser ☐
Chemical admixture or additives	Bags ☐	Godown ☐	Manual ☐
Special arrangement for supplying temperature-controlled concrete, if used	Occasional use ☐ Not used ☐ Arrangement 1. Addition of ice slabs in mixing water tank ☐ 2. Addition of ice flakes in mixing drum ☐ 3. Chilling Plant ☐ 4. Combination of above (1/2/3) ☐		☐

* Tick (√) in appropriate box. If materials/ provisions not used, keep the boxes blank.

Table 4: List of Minimum Testing Equipment for Laboratory attached to RMC Facility (3.3)

Sl. No.	*Relevant test and BIS Standard*	*Name of equipment*	*Minimum no. of units*	*Calibration frequency and relevant code*	*Whether calibration done as specified and records kept*	
1.	Slump test (IS 1199-1959)	Slump cone test apparatus with all accessories such as base plate, tamping rod, etc.	2 sets	Yearly IS 1199	Yes	No
2. *	Compressive strength of concrete *(IS 516)	Compression Testing Machine with minimum 2000 kN capacity, conforming to IS 14858 *	One no.	Yearly IS 516		

3.	Preparing concrete test specimens (IS 1199)	Cube moulds of size: • 150 mm x 150 mm x 150 mm • 100 mm x 100 mm x 100 mm	30 nos.	Yearly IS 10086	☐	☐
4.	Sieve analysis of fine and coarse aggregates (IS 2386- Part I)	IS Test sieves for fine and coarse aggregates • 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3mm, 4.75 mm, and lid+pan • 10 mm, 4.75 mm, 2.36 mm, 1.18 mm, 600 µm, 300 µm, 150 µm, 75 µm, 45 µm and lid+pan	one set for coarse and fine agg. each	Yearly IS 2386 – Part I	☐ ☐	☐ ☐
5.#	Sampling of aggregates # (IS 2430)	Sieve shaker for fine aggregates #	One	Yearly	☐	☐
		Sample divider for sampling of aggregates #	One	Yearly		
6.	Unit weight of concrete (IS 1199)	Bulk density pot for fresh concrete (10 lit)	one no.	Yearly IS 2386–Part III	☐ ☐ ☐	☐ ☐ ☐
7.	Aggregates Bulk density(IS 2386- Part III)	Bulk density pot for fine (3 or 5 lit) and coarse aggregates (7 or 10 lit)	one no each for coarse & fine agg.	Yearly IS 2386 – Part III	☐	☐
8.	Silt content of sand	Graduated glass cylinder (500 ml) for determining silt content	one no.	-	☐	☐
9.	Specific gravity of aggregates	Pyknometer and density basket or Gas Jar for determining specific gravity of aggregates (P.T.O)	one no.	Yearly IS 2386–Part III	☐	☐
10.	Other accessories	Electronic weighing balance of adequate capacity with accuracy of 1	One	Yearly		

		g.				
		Laboratory mixer (min 50 lit)	One	Man. specified	☐	☐
		Electric microwave oven (IS 11332)	One	Yearly IS 6365		
		Concrete compaction equipments (Table vibrator / needle vibrator, tamping rods)	One	Yearly	☐ ☐	☐ ☐
		Curing tank with provision to maintain 27 ± 2^0 C temperature of water	One	-	☐	☐
		Shovels, trowels, flexible spatulas, meter, etc.	Sufficient nos.	-	☐	☐

Notes:
Alternatively, shaking of sieves done manually and sampling of aggregates done by quartering technique shall be permitted.
* In case the CTM lab is not available in the lab, concrete cubes shall be tested in the RMC Company/Organization's other lab in the same city, provided due care is taken to transfer the cubes with proper precaution and identification for standard curing for 28 days.
Wherever flexural strength is specified in addition to compressive strength, it is essential have nine nos. of beam moulds of 150x150x700mm size. It is also essential to have the facility of additional attachment for the CTM to carry out this test.

Table 5: List of Sources of Incoming Approved Materials (4.2)

(Valid as on date: DD/MM/YY)

Sr No.	Type of Ingredient	Source and brand name (if any)	Supplier' name and address	Acceptance criteria followed for approval	Remarks

Table 6-A: Verification and Testing Frequency of Cement, SCMs, Water and Chemical Admixtures (4.3.8)

Sl. No	*Material*	*Verification*	*Scope*	*Frequency*
1.	Cement	• Delivery Documents • Manufacturer's test certificate for physical and chemical properties	• Verify that the goods delivered match the purchase order (type, wee brand name, k of manufacture). • In case the supply is by bulker, verify lock seal nos. and ensure that they tally with the nos. on Challan • Manufacturer's test certificate traceable to each consignment	• Each consignment
2.	Supplementary Cementitious Materials (SCMs) 1. Fly ash (IS 3812 (Part1) 2. Ground Granulated Blast Furnace Slag (IS 12089 and BS 6699)	• Delivery Documents • Manufacturer's test certificate on physical and chemical properties • Uniformity requirements as per relevant IS codes	• Verify that the goods delivered match the purchase order (type, wee brand name, k of manufacture) • Verify that each consignment has a manufacturer's test certificate confirming all physical and chemical properties and performance conform to requirements of relevant IS codes traceable to each	• All tests on physical and chemical requirements and performance specified by I S code essential before finalizing source • All Uniformity tests as per relevant IS code performed once in six months from NABL-accredited lab

	3. Microsilica (IS 15388) 4. Metakaolin		consignment. • Verify all uniformity requirement tests as per relevant IS code done from NABL-accredited lab at specified frequencies.	
3	Water	• Delivery documents	• Shall be tested for suitability for concrete making as per IS 456-2000 at frequencies specified by IS 4926 for mains and non-mains water.	• For non-mains water: Initially every week for first six weeks and then at 3-monthly internal • For mains water: Annual basis once all tests for source are satisfactory

Sl. No	*Material*	*Verification*	*Scope*	*Frequency*
4.	Chemical admixtures	• Delivery Documents • Manufacturer's test certificate for physical and chemical properties, uniformity requirements and compatibility	• Verify that the goods delivered match the purchase order (type, brand name, week of manufacture) • Verify that each consignment has a manufacturer's test certificate confirming all physical and chemical properties, performance, and	• All tests specified by IS 9103 essential before finalizing source • All Uniformity tests as per IS 4926 performed once in six months from NABL-accredited lab. • Compatibility tests shall be conducted

			compatibility with the cement conforming to requirements of IS 9103 and is traceable to each consignment • Verify all Uniformity test requirements as per IS 4926 done from NABL-accredited lab at specified frequencies	whenever there is change in combination of cement and admixture.

TABLE 6-B: Verification and Testing Frequency for Aggregates (4.3.8)

Delivery documents

Delivery document shall be verified to check delivered aggregates match the purchase order and that their source is correct. Visual inspection shall be done to check normal appearance, shape, presence of excessive fines, impurities etc.

Testing frequencies

Aggregates shall be tested at a minimum frequency indicated below. The specified frequencies are in conformity
with provisions in IS 4926 or stringent from the same.

Sl. No.	*Aggregate property/parameter*	*Type of aggregate*	*Frequency of Testing*	*Relevant IS Standard*
1.	Gradin g	Fine aggregate • Uncrushed • Crushed Coarse aggregate • Uncrushed • Crushed	Weekly	IS 383-1970
2.	Particle density • Oven dry • Saturated surface dry • Apparent	Both fine and coarse aggregates	3 monthly	IS 2386 (Part 3)
3.	Water absorption	Both fine and coarse aggregates	3 monthly	IS 2386 (Part 3)
4.	Bulk density • Loose • Compacted	Both fine and coarse aggregates	6 Monthly	IS 2386 (Part 3)
5.	Particles finer than 75 µm	Fine aggregate- • Uncrushed • Crushed	Weekly	IS 2386 (Part 1)
6.	Flakiness and Elongation indices	Coarse aggregates	6 monthly	IS 2386 (Part)
7.	Impact value	Coarse aggregate	Yearly or change in source	IS 2386 (Part 4)

8.	Crushing value	Coarse aggregate	Yearly or change in source	IS 2386 (Part 4)
9.	Abrasion value	Coarse aggregate	Yearly or change in source	IS 2386 (Part 4)
10.	10% Fines	Coarse aggregate	Yearly or change in source	IS 2386 (Part 4)
11.	Petrographic examination	Both fine and coarse aggregates	Once in 5 years or change in source	IS 2386 (Part 8)
12.	Alkali-aggregate reactivity	Both fine and coarse aggregates	Yearly or change in source	IS 2386 (Part 7)
13	Soundness	Both fine and coarse aggregates	Yearly or change in source	IS 2386 (Part 5)
14	Chloride content	Both fine and coarse aggregates	Yearly or change in source	
15	Deleterious materials	Both fine and coarse aggregates	Yearly or change in source	IS 2386 (Part 2)

Table 7: Concrete mix information to be supplied by the purchaser (5.4)
Name of RMC Producer: _____
Name of Client/Contractor:_____
Site: _____

Mix code					
Grade (Characteristic strength), N/mm^2					
Minimum cement content, kg/m^3 (if specified)					
Mineral additives, kg/m^3 (if specified) • Pulverized fuel ash • Slag • Silica fume • Others (mention type)					
Maximum free water-binder ratio (if specified)					
Nominal maximum aggregate size, mm					
Cement type and grade (if specified)					
Target workability at plant, (Slump, mm)					
Target workability at site, (Slump, mm)					
Maximum temperature of concrete at the time of placing (if specified)					
Class of sulphate resistance (if applicable)					
Exposure condition (if specified)					
Class of finish (if applicable)					
Total SO_3 in Concrete (if specified)					
Mix application					
Method of placing					
Any other requirements (if applicable) [early strength, workability retention, permeability testing, chloride content restriction, etc.)					
Concrete testing frequency					
Material testing (any non-routine requirement)					
Method of curing to be used					
Quantity (m^3)					
Source: Adapted from IS 4926					

Table 8: Format for Mix Design (5.5)

5.5.1	Name of customer
5.5.2	Mix designed in RMC lab/NABL accredited lab
5.5.3	Date of mix design
5.5.4	Mix code, if any
5.5.5	Details of ingredients
	Grade of concrete :
	Specified workability at pour site :
	Maximum size of aggregate :
	Exposure class of IS 456, if specified :
	Minimum cementitious content, if specified :

TABLE 9: Production and Control of Final Product (6.4)

Sl. No.	*Name of Material/Test*	*Frequency of testing*	*Relevant IS Standard*
1.	Fine Aggregate: a) Determination of Moisture content b) Water absorption	Moisture content on daily basis; twice in a) day during monsoon b) Weekly or change in source	IS 2386 (Part 3)
2.	Coarse aggregate a) Determination of Moisture content b) Water absorption	Moisture content on daily basis; twice in a) day during monsoon b) Weekly or change in source	IS 2386 (Part 3)
3.	Fresh Concrete a) Sampling (IS 4926 procedure) b) Slump test c) Density of fresh concrete d) Placing Temperature of the concrete #	a) Sampling: At least one sample for every 50 m^3 of production or every 50 batches whichever is of greater frequency b) At least one sample for every 50 m^3 of production or every 50 batches whichever is of greater frequency c) At least once in a day d) At least one sample for every 50 m^3 of production or every 50 batches whichever is of greater frequency	a) IS 4926 b) IS 1199 c) IS 1199 d) IS 1199
4	Hardened concrete a) Compressive strength * b) Density c) Flexural Strength#	a) At least one sample for every 50 m^3 Production or every 50 batches whichever is b) of greater frequency * c) When asked for	IS 516

Optional test

* One sample involves casting of 3 specimens of 150x150x150mm size, to be tested at 28 days.

Additionally, samples shall be cast for testing at earlier or later ages (3, 7, 56, 90 days), depending upon the agreement between the producer and the customer.

Table 10: Control on Process Control Equipments and Frequency of Inspection and Calibration (7.3)

Items	*Check for*	*Frequency*
Cementitious materials	Visual Inspection for weather-tightness and leaks	Weekly
Aggregate stockpile	Visual Inspection for segregation and contamination	Daily
Conveyor belts and rollers	Visual Inspection for wear and alignment	Weekly
Central mixer	Visual Inspection of blades and built up	Daily
Trucks	Visual Inspection of blades and built up	Weekly
Scale calibration for all weighing and measuring equipment	1.Mechanical/knife edge systems 2.Electrical/ load cell systems	Monthly Monthly
Water meters	Calibration	Monthly
Admixture dispensers	Calibration	Monthly
Gear boxes and oil baths	Oil change	Quarterly

Table 11 Tolerances in Measurement of different Constituent Materials (7.3)

Constituent materials	*Tolerances (% of the quantity of the constituent material being measured)*	*Indian Standard*
Cement	± 2%	IS 4926:2003
Water	± 3%	IS 4926:2003
Aggregates	± 3%	IS 4926:2003
Mineral admixtures	± 2%	IS 4926:2003
Chemical admixtures	± 3%	IS 4926:2003
Moisture		IS 2386