



# Audit Application

Name of RMC plant to be audited	
Activities covered	
Activities covered at Head Office	
Activities covered at other location alongwith their address	
Type of certification	<input type="checkbox"/> RMC Capability Certification <input type="checkbox"/> RMC 9001+ Capability Certification (Submit Application separately for ISO 9001 Questionnaire)
Type of location:	<input type="checkbox"/> Single Plant (All the processes carried out by the plant) <input type="checkbox"/> Cluster (Group of plants sharing common facilities or processes) <input type="checkbox"/> Company (Entire company/All Plants) <i>Note; In case of cluster / company to be covered under scope, submit individual audit application</i>
Note This application is submitted for each plant and plant specific application to be filled by respective plants representative only. During quotation stage Table 1 to 3 min and during agreement stage all tables i.e., Table 1 to 11	

Declaration that [Tick (v) in appropriate box];

- Not Certified under this Scheme
- Certified under this Scheme with or by other certification body, and hence agreed to provide the previous evaluation reports to TUV SUD South Asia Pvt. Ltd
- No judicial proceedings relating to operations, any proceedings by any Regulatory body or suspension / cancellation / withdrawal of any certification / approvals under any Regulations or otherwise.
- We do not have any other service relationship with TÜV SÜD South Asia Pvt Ltd other than this assessment (e.g. TUV SUD has not provided any of these services - RMC specific training services, Internal audits, RM & Sample testing, any other services related to RMC processes)

**Signature & stamp:**

**Name of Applicant:** \_\_\_\_\_ (authorized signatory)

**Title:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Date:** \_\_\_\_\_



South Asia

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**Table 1: General Information of Ready Mixed Concrete Facility**

Company Name	
Company Address (Register office) Tel. Fax e-mail	
Location of Plant	
Address of Plant Tel. Fax e-mail	
Personnel information <ul style="list-style-type: none"> <li>Plant-in-charge/Manager</li> <li>QC personnel</li> <li>Liaison personnel</li> </ul>	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 <input type="checkbox"/> NO <input type="checkbox"/> NA <input type="checkbox"/>
	Expiry Date:
	2. Approval from factory inspector
	YES <input type="checkbox"/> NO <input type="checkbox"/> NA <input type="checkbox"/>
	Expiry Date:
	3. Approval from Local Authorities (Municipal/Corporation/other)
	YES <input type="checkbox"/> NO <input type="checkbox"/> NA <input type="checkbox"/>
	Expiry Date:

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



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**Table 2: General Information on Concrete Production Facilities**

Name of Plant Manufacturer	
Type of Plant	
Plant's Rated capacity, m <sup>3</sup> /hour	
Type of Mixer*	Rotating-drum type <input type="checkbox"/> Power mixer <input type="checkbox"/> Planetary Mixer <input type="checkbox"/> Pan type <input type="checkbox"/> Pan-type with agitator <input type="checkbox"/> Single shaft <input type="checkbox"/> Twin shaft <input type="checkbox"/>
Mixer batch size, m <sup>3</sup>	
Storage Capacity	
Cement, Tonnes	
Fly ash, Tonnes	
Slag, Tonnes	
Other cementitious material, Tonnes	
Coarse aggregates, Tonnes or m <sup>3</sup> 10-mm 20-mm 40-mm	
Fine aggregates, Tonnes or m <sup>3</sup> River sand Manufactured sand	
Crusher fines, Tonnes or m <sup>3</sup>	
Water, liters	



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Chemical admixtures, liters	
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 (v) in appropriate box. \*\*Add extra sheets if essential

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**Table 3: General Information on Material Handling**

<i>Material</i>	<i>Delivery to Plant</i>	<i>Storage</i>	<i>Storage to Weigher</i>
Cement	Bulk <input type="checkbox"/> Bags <input type="checkbox"/>	Silo <input type="checkbox"/> Godown <input type="checkbox"/>	Screw conveyor <input type="checkbox"/> Air Slide <input checked="" type="checkbox"/> ; Gravity <input type="checkbox"/>
Coarse aggregates	Trucks <input type="checkbox"/>	Star pattern In-line <input type="checkbox"/> Bins <input type="checkbox"/> Compartments <input type="checkbox"/> Tall/pocket silos <input type="checkbox"/>	Conveyor <input type="checkbox"/> Skip bucket <input type="checkbox"/> Bucket conveyor <input type="checkbox"/>
Fine aggregates	Trucks <input type="checkbox"/>	Star pattern <input type="checkbox"/> In-line bins <input type="checkbox"/> compartments <input type="checkbox"/> Tall/pocket silos <input type="checkbox"/>	Conveyor <input type="checkbox"/> Skip bucket <input type="checkbox"/> Bucket conveyor <input type="checkbox"/>
Fly ash	Bulk <input type="checkbox"/> Bags <input type="checkbox"/>	Silo <input type="checkbox"/> Bins <input type="checkbox"/>	Screw conveyor <input type="checkbox"/> Manual <input type="checkbox"/>
Slag	Bulk <input type="checkbox"/> Bags <input type="checkbox"/>	Silo <input type="checkbox"/> Bins <input type="checkbox"/>	Screw conveyor <input type="checkbox"/> Manual <input type="checkbox"/>
Micro silica	Bags <input type="checkbox"/>	Silo <input type="checkbox"/> Godown <input type="checkbox"/>	Screw conveyor <input type="checkbox"/> Manual <input type="checkbox"/>
Other cementitious material (specify)	Bags <input type="checkbox"/>	Silo <input type="checkbox"/> Godown <input type="checkbox"/>	Screw conveyor <input type="checkbox"/> Manual <input type="checkbox"/>
Water	Mun. mains <input type="checkbox"/> Wells <input type="checkbox"/> Ponds <input type="checkbox"/>	Underground / over-ground tank <input type="checkbox"/>	Pumping <input type="checkbox"/> Gravity flow through pipe network <input type="checkbox"/>
Chemical admixtures(Liquid)	Drums <input type="checkbox"/> Tankers <input type="checkbox"/>	Drums <input type="checkbox"/> Tanks <input type="checkbox"/>	Dispenser <input type="checkbox"/>
Chemical admixture or additives	Bags <input type="checkbox"/>	Godown <input type="checkbox"/>	Manual <input type="checkbox"/>
Special arrangement for supplying temperature controlled concrete, if used	Occasional use <input type="checkbox"/> Not used <input type="checkbox"/> Arrangement 1. Addition of ice slabs in mixing water tank <input type="checkbox"/> 2. Addition of ice flakes in mixing drum <input type="checkbox"/> 3. Chilling Plant <input type="checkbox"/> 4. Combination of above (1/2/3) <input type="checkbox"/>		

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

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**Table 4: List of Minimum Testing Equipment for Laboratory attached to RMC Facility**

Kindly submit the master list of testing equipment as per below list.

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	
					Yes	No
1.	Slump test (IS 1199-1959)	Slump cone test apparatus with all accessories such as base plate, tamping rod, etc.	2 sets Id no: Id no:	Yearly IS 1199	<input type="checkbox"/>	<input type="checkbox"/>
2. *	Compressive strength of concrete *(IS 516)	Compression Testing Machine with minimum 2000 kN capacity, conforming to IS 14858 *	One no. Id no:	Yearly IS 516	<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>
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 id no: id no:	Yearly IS 2386 – Part I	<input type="checkbox"/>	<input type="checkbox"/>
5.#	Sampling of aggregates # (IS 2430)	Sieve shaker for fine aggregates #	One Id no:	Yearly	<input type="checkbox"/>	<input type="checkbox"/>
		Sample divider for sampling of aggregates #	One Id no:	Yearly	<input type="checkbox"/>	<input type="checkbox"/>
6.	Unit weight of concrete (IS 1199)	Bulk density pot for fresh concrete (10 lit)	one no. id no:	Yearly IS 2386–Part III	<input type="checkbox"/>	<input type="checkbox"/>
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 each for coarse & fine agg. Id no: Id no:	Yearly IS 2386 – Part III	<input type="checkbox"/>	<input type="checkbox"/>
8.	Silt content of sand	Graduated glass cylinder (500 ml) for determining silt content	one no. id no:	-	<input type="checkbox"/>	<input type="checkbox"/>



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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	
9.	Specific gravity of aggregates	Pyknometer and density basket or Gas Jar for determining specific gravity of aggregates (P.T.O)	one no. id no:	Yearly IS 2386–Part III	<input type="checkbox"/>	<input type="checkbox"/>
10.	Other accessories	Electronic weighing balance of adequate capacity with accuracy of 1 g.	One Id no:	Yearly	<input type="checkbox"/>	<input type="checkbox"/>
		Laboratory mixer (min 50 lit)	One Id no:	Man. specified	<input type="checkbox"/>	<input type="checkbox"/>
		Electric microwave oven (IS 11332)	One Id no:	Yearly IS 6365	<input type="checkbox"/>	<input type="checkbox"/>
		Concrete compaction equipments (Table vibrator / needle vibrator, tamping rods)	One Id no:	Yearly	<input type="checkbox"/>	<input type="checkbox"/>
		Curing tank with provision to maintain 27±2° C temperature of water	One Id no:	-	<input type="checkbox"/>	<input type="checkbox"/>
		Shovels, trowels, flexible spatulas, meter, etc.	Sufficient nos.	-	<input type="checkbox"/>	<input type="checkbox"/>

**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 6-A: Verification and Testing Frequency of Cement, SCMs, Water and Chemical Admixtures**

Sl. No	Material	Verification	Scope	Frequency
1.	Cement	<ul style="list-style-type: none"> <li>• Delivery Documents</li> <li>• Manufacturer's test certificate for physical and chemical properties</li> </ul>	<ul style="list-style-type: none"> <li>• Verify that the goods delivered match the purchase order (type, brand name, week of manufacture).</li> <li>• In case the supply is by bulker, verify lock seal nos. and ensure that they tally with the nos. on Challan</li> <li>• Manufacturer's test certificate traceable to each consignment</li> </ul>	<ul style="list-style-type: none"> <li>• Each consignment</li> </ul>
2.	Supplementary Cementitious Materials (SCMs) <ol style="list-style-type: none"> <li>1. Fly ash (IS 3812 (Part1))</li> <li>2. Ground Granulated Blast Furnace Slag (IS 12089 and BS 6699)</li> <li>3. Microsilica (IS 15388)</li> <li>4. Metakaolin</li> </ol>	<ul style="list-style-type: none"> <li>• Delivery Documents and</li> <li>• Manufacturer's test certificate on physical chemical properties as per IS Uniformity requirements per relevant codes</li> </ul>	<ul style="list-style-type: none"> <li>• Verify that the goods delivered match the purchase order (type, brand name, week of manufacture)</li> <li>• 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 consignment.</li> <li>• Verify all uniformity requirement tests as per relevant IS code done from NABL accredited lab at specified frequencies.</li> </ul>	<ul style="list-style-type: none"> <li>• All tests on physical and chemical requirements and performance specified by relevant IS code essential before finalizing source</li> <li>• All Uniformity tests as per relevant IS code performed once in six months from NABL-accredited lab</li> </ul>

<i>Sl. No</i>	<i>Material</i>	<i>Verification</i>	<i>Scope</i>	<i>Frequency</i>
3	Water	<ul style="list-style-type: none"> <li>• Delivery documents</li> </ul>	<ul style="list-style-type: none"> <li>• Shall be tested for suitability for concrete making as per IS 4562000 at frequencies specified by IS 4926 for mains and non-mains water.</li> </ul>	<ul style="list-style-type: none"> <li>• For non-mains water: Initially every week for first six weeks and then at 3-monthly internal</li> <li>• For mains water: Annual basis once all tests for source are satisfactory</li> </ul>
4.	Chemical admixtures	<ul style="list-style-type: none"> <li>• Delivery Documents</li> <li>• Manufacturer's test certificate for physical and chemical properties, uniformity requirements and compatibility</li> </ul>	<ul style="list-style-type: none"> <li>• Verify that the goods delivered match the purchase order (type, brand name, week of manufacture)</li> <li>• Verify that each consignment has a manufacturer's test certificate confirming all physical and chemical properties, performance, and compatibility with the cement conforming to requirements of IS 9103 and is traceable to each consignment</li> <li>• Verify all Uniformity requirement tests as per IS 4926 done from NABL-accredited lab at specified frequencies</li> </ul>	<ul style="list-style-type: none"> <li>• All tests specified by IS 9103 essential before finalizing source</li> <li>• All Uniformity tests as per IS 4926 performed once in six months from NABL-accredited lab.</li> <li>• Compatibility tests shall be conducted whenever there is change in combination of cement and admixture.</li> </ul>

**TABLE 6-B: Verification and Testing Frequency for Aggregates**

**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.

<i>Sl. No.</i>	<i>Aggregate property/parameter</i>	<i>Type of aggregate</i>	<i>Frequency of Testing</i>	<i>Relevant IS Standard</i>
1.	Grading	Fine aggregate <ul style="list-style-type: none"> <li>• Uncrushed</li> <li>• Crushed Coarse aggregate</li> <li>• Uncrushed</li> <li>• Crushed</li> </ul>	Weekly	IS 383-1970
2.	Particle density <ul style="list-style-type: none"> <li>• Oven dry</li> <li>• Saturated surface dry</li> <li>• Apparent</li> </ul>	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 <ul style="list-style-type: none"> <li>• Loose</li> <li>• Compacted</li> </ul>	Both fine and coarse aggregates	6 Monthly	IS 2386 (Part 3)
5.	Particles finer than 75 µm	Fine aggregate- <ul style="list-style-type: none"> <li>• Uncrushed</li> <li>• Crushed</li> </ul>	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)
<i>Sl. No.</i>	<i>Aggregate property/parameter</i>	<i>Type of aggregate</i>	<i>Frequency of Testing</i>	<i>Relevant IS Standard</i>

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**

Name of RMC Producer: \_\_\_\_\_

Name of Client/Contractor: \_\_\_\_\_

Site: \_\_\_\_\_

Mix code					
Grade (Characteristic strength), N/mm <sup>2</sup>					
Minimum cement content, kg/m <sup>3</sup> specified) (If Specified)					
Mineral additives, kg/m <sup>3</sup> (if specified) <ul style="list-style-type: none"> <li>• Pulverized fuel ash</li> <li>• Slag</li> <li>• Silica fume</li> <li>• Others (mention type)</li> </ul>					
Maximum free water-binder ratio specified (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 <sub>3</sub> in Concrete (if specified)					
Mix application					

Mix code					
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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 <sup>3</sup> )					

Source: Adapted from IS 4926

**Table 8: Format for Mix Design**

1. Name of customer
2. Mix designed in RMC lab/NABL accredited lab
3. Date of mix design
4. Mix code, if any
5. Details of ingredients
  - a. Grade of concrete:
  - b. Specified workability at pour site:
  - c. Maximum size of aggregate:
  - d. Exposure class of IS 456, if specified:
  - e. Minimum cementitious content, if specified:

**TABLE 9: Production and Control of Final Product**

<i>Sl. No.</i>	<i>Name of Material/Test</i>	<i>Frequency of testing</i>	<i>Relevant IS Standard</i>
1.	Fine Aggregate: a) Determination of Moisture content b) Water absorption	a) Moisture content on daily basis; twice in day during monsoon. b) Weekly or change in source	IS 2386 (Part 3)
2.	Coarse aggregate a) Determination of Moisture content b) Water absorption	a) Moisture content on daily basis; twice in 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 <sup>3</sup> of production or every 50 batches whichever is of greater frequency b) At least one sample for every 50 m <sup>3</sup> 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 <sup>3</sup> 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 <sup>3</sup> b) Production or every 50 batches whichever is 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**

<i>Items</i>	<i>Check for</i>	<i>Frequency</i>
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	Monthly
	2. Electrical/ load cell systems	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**

<i>Constituent materials</i>	<i>Tolerances (% of the quantity of the constituent material being measured)</i>	<i>Indian Standard</i>
Cement	$\pm 2\%$	IS 4926:2003
Water	$\pm 3\%$	IS 4926:2003
Aggregates	$\pm 3\%$	IS 4926:2003
Mineral admixtures	$\pm 2\%$	IS 4926:2003
Chemical admixtures	$\pm 3\%$	IS 4926:2003
Moisture		IS 2386