

Master Specification Part ST-SC-S1

Normal Class Concrete

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ST-SC-S1 Normal Class Concrete

1 General

- a) This Master Specification Part specifies the requirements for the supply and placement of normal class concrete, including:
 - i) the documentation requirements, as set out in section 2;
 - ii) the concrete production requirements, as set out in section 3;
 - iii) the concrete placement requirements, as set out in section 4; and
 - iv) the verification requirements and records, as set out in section 5.
- b) For the purposes of this Master Specification Part, references to “normal class concrete” means normal class concrete N20, N25 and N32, unless specified otherwise.
- c) Grades of normal class concrete other than those specified in section 1b), and special class concrete must comply with the requirements of ST-SC-S7 “Supply of Concrete” and ST-SC-C7 “Placement of Concrete”.
- d) Reinforcing must comply with ST-SC-S6 “Steel Reinforcement”.
- e) The supply and placement of normal class concrete must comply with the Reference Documents, including:
 - i) AS 1379 Specification and supply of concrete;
 - ii) AS 3600 Concrete structures;
 - iii) AS/NZS ISO 9001 Quality management systems - Requirements;
 - iv) Austroads Technical Specification ATS-3050 Supply of Recycled Crushed Glass Sand; and
 - v) T41 Guide to Concrete Construction.

2 Documentation

2.1 Quality Management Records

In addition to the requirements of PC-QA1 “Quality Management Requirements” or PC-QA2 “Quality Management Requirements for Major Projects” (as applicable), the Quality Management Records must include:

- a) an identification certificate or each load of normal class concrete supplied, as required by section 3c);
- b) production assessment reports, as required by section 3d);
- c) a record of the volume of water added to the freshly mixed normal class concrete on Site, in accordance with section 4d); and
- d) the verification records required by Table ST-SC-S1 5-1.

3 Concrete production

- a) Normal class concrete and its constituent materials must be supplied and tested in accordance with AS 1379 Specification and supply of concrete. The concrete plant must operate under a quality system in accordance with AS/NZS ISO 9001 Quality management systems - Requirements.
- b) The production of normal class concrete must meet the following requirements:

- i) the concrete must be subject to production assessment in accordance with AS 1379 Specification and supply of concrete;
 - ii) the maximum slump at the point of acceptance must be 100 mm;
 - iii) the maximum aggregate size must be 20 mm; and
 - iv) air entrainment is not required.
- c) For each load of normal class concrete supplied, the Contractor must supply an identification certificate in accordance with AS 1379 Specification and supply of concrete, as part of the Quality Management Records.
 - d) The Contractor must ensure that production assessment reports are available in accordance with AS 1379 Specification and supply of concrete, as part of the Quality Management Records.
 - e) Recycled crushed glass (RCG) may be used as a fine aggregate in normal class concrete in accordance with Austroads Technical Specification ATS-3050 Supply of Recycled Crushed Glass Sand.

4 Concrete placement

- a) Normal class concrete must be transported, handled, placed, compacted, and cured in accordance with AS 3600 Concrete structures, using the recommended processes described in T41 Guide to Concrete Construction. Hand mixing is not permitted.
- b) Normal class concrete, when delivered at the acceptance point, must have a temperature not less than 5°C nor greater than 35°C (refer AS 1379 Specification and supply of concrete). Concreting in the open must not be carried out during adverse conditions, such as rain, wind, dust, or bushfires in the immediate vicinity of the Site.
- c) Concrete must not be placed if between the time of placement and the time curing is to be applied, the air temperature at the Site (including the forecast temperature) is below 5°C or the shade temperature (including the forecast temperature) at the Site is over 35°C.
- d) The volume of any water added on Site must be recorded and provided as part of the Quality Management Records.

5 Verification requirements and records

The Contractor must supply written verification as part of the Quality Management Records that the requirements listed in Table ST-SC-S1 5-1 been complied with.

Table ST-SC-S1 5-1 Verification requirements

Section reference	Subject	Record to be provided
3c)	Concrete identification certificates	Identification certificates in accordance with AS 1379 Specification and supply of concrete
3d)	Concrete production assessment reports	Concrete production assessment reports in accordance with AS 1379 Specification and supply of concrete