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# Data Sheet

## Precast Concrete Water Tanks

AUG 2023

V 0.0



# Product Data Sheet

## Precast concrete water tank 15 m<sup>3</sup>



### ➤ Data:

| NO. | MEASURE          | UNIT            | READING      |
|-----|------------------|-----------------|--------------|
| 1   | Outer height     | mm              | 2450         |
| 2   | Inner height     | mm              | 2150         |
| 3   | Diameter         | mm              | 3000         |
| 4   | Wall thickness   | mm              | 100          |
| 5   | Slab thickness   | mm              | 150          |
| 6   | Ground thickness | mm              | 150          |
| 7   | Total volume     | m <sup>3</sup>  | 15.20        |
| 8   | Weight           | T               | 10           |
| 9   | Manhole Opening  | cm <sup>2</sup> | 3600 (60*60) |

### ➤ Materials:

1- Concrete:

| NO. | Item          | Description                               |
|-----|---------------|-------------------------------------------|
| 1   | Cement type   | Sulphates Resisting Portland Cement (SRC) |
| 2   | Concrete type | 35 MPa                                    |

• **Concrete mix design:**

| NO. | Item                        | Quantity per m <sup>3</sup> | Unit   |
|-----|-----------------------------|-----------------------------|--------|
| 1   | Cement                      | 450                         | Kg     |
| 2   | 3/8" Aggregate              | 600                         | Kg     |
| 3   | Washed Sand                 | 300                         | Kg     |
| 4   | Silica(White) Sand          | 800                         | Kg     |
| 5   | Plasticizer & Waterproofing | 2.6-2.7                     | Liters |
| 6   | Water (Total)               | 190                         | Liters |

- Note: Ice adds in summertime to the mix design.

• **Plasticizer & Waterproofing:**

- Product information:

|                                   |                                                                                                                                                    |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Name</b>               | <b>Sika® Plastocrete® N SA</b>                                                                                                                     |
| <b>Chemical base</b>              | Surface active agent and polymer                                                                                                                   |
| <b>Packaging</b>                  | 200L drum, 1000 L flowbin                                                                                                                          |
| <b>Appearance/Color</b>           | Dark brown liquid                                                                                                                                  |
| <b>Shelf life</b>                 | 12 months from date of production                                                                                                                  |
| <b>Store condition</b>            | Store in undamaged, unopened, original sealed packaging in dry conditions at temperature +5 °C and +45 °C. Protect from direct sunlight and forst. |
| <b>Density</b>                    | 1.11 kg/l (+25 °C)                                                                                                                                 |
| <b>Total Chloride Ion Content</b> | Nil (EN 934-2)                                                                                                                                     |

**2- Reinforced Steel Bars:**

• **Mechanical Proprieties:**

| Standard                      | SASO ASTM A615M | SASO ASTM A706M |
|-------------------------------|-----------------|-----------------|
| Grade                         | 420 (60)        | 420 (60)        |
| Nominal diameter mm           | 12-20           | 12-20           |
| Yield Strength MPa (min.)     | 420             | 420-540         |
| Tensile Strength MPa (min.)   | 620             | 550             |
| Tensile to yield Ratio (min.) | N/A             | 1.25            |
| Elongation in 200 mm (min.)   | 9               | 14              |
| Elongation (A5) (min.)        | N/A             | N/A             |
| A <sub>gt</sub> % (min.)      | N/A             | N/A             |

- Chemical Composition of Steel bars:

| Standard        | Grade    | Chemical Composition % (Maximum). |     |     |       |       |   |    |       |
|-----------------|----------|-----------------------------------|-----|-----|-------|-------|---|----|-------|
|                 |          | C                                 | Si  | Mn  | S     | P     | N | Cu | C.E.V |
| SASO ASTM A615M | 420 (60) | -                                 | -   | -   | -     | 0.06  | - | -  | -     |
| SASO ASTM A706M | 420 (60) | 0.3                               | 0.5 | 1.5 | 0.045 | 0.035 | - | -  | 0.55  |

### 3- Bitumen (External Coating):

|                  |                                            |
|------------------|--------------------------------------------|
| Product Name     | SABIT PRIMER D-41                          |
| Composition      | is an asphaltic primer                     |
| Packaging        | Supplied in 200 liters drums & 20 L cans.. |
| Appearance/Color | Dark brown                                 |

### 4- Cement based waterproof coating (Internal Coating) :

|                   |                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name      | Weberdry 110FX                                                                                                                                                                    |
| Chemical base     | Polymer modified cementitious coating                                                                                                                                             |
| Packaging         | 30 kg units                                                                                                                                                                       |
| Appearance/Color  | White or Grey color .                                                                                                                                                             |
| Store condition   | Powder part can be stored 12 months while the liquid part can be stored up to 6 months, after manufacturing date in its original packing non open, protected from frost and heat. |
| Density           | 1600 +/- 100 kg m <sup>3</sup>                                                                                                                                                    |
| Water absorption  | Reduction in water absorption is 90 ± 5% (ASTM D 870)                                                                                                                             |
| Pull off Strength | 1 ± 0.2 MPa @ 28 days on concrete substrate (ASTM D 4541:2002)                                                                                                                    |



➤ Dimension:

