

1350251X11 – Concrete AEA 25 Mpa

29 mars 2024

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MAIN USE

USAGE PRINCIPAL

The 25 MPa air-entrained pre-mixed concrete mix is a construction concrete based on GUL type portland cement and optimized aggregates. The nominal diameter of the aggregates is 10 mm. For interior and exterior use, it is of superior quality, ideal for all types of work requiring a layer of concrete more than 5 cm (2 in) thick such as slabs, patios, sidewalks, fences, foundation walls, garage floor, retaining slabs etc.

ADVANTAGES

The use of 25 MPa air-entrained pre-mixed concrete is intended for protected and unprotected environments from freezing-thawing offering increased durability.

APPLICATION

CONDITIONS OF USE

Ensure that the ambient, surface and product temperatures are between 5°C (40°F) and 35°C (95°F) during application and for a period of 48 hours following application. Saturate the surface to be covered with potable water for 12 hours to 24 hours before applying the product. Remove excess water before application. Solidify the shape to avoid any movement and caulk it to prevent any loss of humidity.

If necessary, construct a form to support the concrete.

SURFACE PREPARATION

The surfaces to be covered must be structurally sound, clean and free of any material that could affect adhesion such as grease, dust, oil, paint or any other harmful substance. Smooth surfaces must be scarified mechanically.

MIX

SMALL QUANTITY MIXTURE (1 BAG MINIMUM)

Pour 2.7 liters of drinking water per 30 kg (66 lb) bag into a clean container (i.e. 20.0 liter boiler). Gradually add the dry ingredients while mixing at low speed using an industrial-sized drill equipped with a Jiffler type agitator. Mix for 3 to 4 minutes. Water demand is a function of several factors, if necessary, add a little water at a time while respecting the slump specification. Avoid over-lightening.

Note: Never mix less than one bag and always mix full bags.

LARGE QUANTITY MIXING

Use a concrete mixer of appropriate capacity (the mixer should be 3/4 full maximum). Start the blender. Pour the required quantity of drinking water, i.e. 2.7 liters of water per 30 kg (66 lb) of dry material or 99 liters of water per 1100 kg (2425 lb) of dry material. Gradually add the dry material. Mix for 3 to 4 minutes. Water demand depends on several factors, if necessary, add a little water at a time and validate the subsidence.

APPLICATION

Mix the concrete in sufficient quantity to have a regular and continuous flow during placement. Pour the mixture and pack it well using a stick. Level using a squeegee or a board with a back and forth movement.

Note: Concrete must be applied within 1-1/2 hours after mixing, when ambient temperature is 25°C (77°F) or higher, and within 2-1/2 hours, if the temperature is below 25°C (77°F). Concrete not used after this period of time must be discarded. The higher the temperature, the longer the initial setting will be.



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FINISHING

Wait until the product has set initially (approximately 3½ hours at 23°C, 73°F) before finishing. If finishing is done too early, the water in the mixture rises to the surface and tends to evaporate too quickly, leaving a surface that is crumbly and has a lot of efflorescence (whitish deposits). This situation is also encountered when the surface is too flattered. To obtain a rough effect, finish with a broom or a wooden trowel. For a smooth finish, use a steel finishing trowel. For a textured finish, use a steel trowel and then brush or broom.

PROTECTION AND CURING

Curing is essential for optimizing the physical properties of concrete and reducing plastic shrinkage. Ideally, keep the surface wet for 3 days following the end of the work. Use a curing agent or burlap sprinkled lightly with water to retain humidity. All curing products used must comply with current standards. Protect the completed works using tarpaulins. Temperature is an important factor to respect to obtain an adequate cure. Temperatures greater than or equal to 10°C must be maintained. When the ambient temperature is below 5°C, insulating blankets or other insulating materials may be sufficient to protect the concrete.

CLEANING

Clean equipment with water before the mix has hardened. Once the mixture has hardened, only mechanical cleaning will be effective. Throughout the work, carefully remove concrete splashes and stains using jute and/or a wooden pallet. Avoid using high pressure cleaning or abrasive techniques, such as sandblasting, glass beads or others.

PACKAGING

This product is packaged in a 30 kg (66 lb) paper bag and a 1100 kg (2425 lb) superbag. A 30 kg (66 lb) bag pallet contains 63 bags and a superbag pallet contains 2 superbags.

- Bag of 30 kg (66 lb.) gives approximately 0.014 m³ (0.5 ft³).
- Superbag of 1100 kg (2425 lb.) gives approximately 0.5 m³ (17.7 ft³).

STORAGE

INDOOR STORAGE

Store in a cool, dry place. Avoid placing the bags directly on the floor.

OUTDOOR STORAGE

Cover bags with waterproof wrap. Do not store directly on the ground.

LIFETIME

Storage time is 12 months in unopened, well-protected bags.

FIRST AID

WEAR IMPERVIOUS GLOVES, such as nitrile,

eye protection, protective clothing and rubber boots. Do not breathe dust or swallow it. Wear a NIOSH-approved respirator (mask) such as N95 in poorly ventilated areas, during prolonged or repeated use, or when maximum exposure limits may be exceeded. Do not eat, drink or smoke when this product is in use. Before handling, read and understand the safety information on this label and on the safety data sheet (SDS) available online at www.daubois.com.

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IF EXPOSED :

Wash exposed body part and contaminated clothing thoroughly and immediately. In case of eye contact: Rinse cautiously with water for several minutes; remove contact lenses if possible; continue rinsing. In case of inhalation: move the person to fresh air and make him comfortable so that he can breathe. If swallowed: rinse your mouth; do NOT induce vomiting. In case of burns, irritation or rash: consult a doctor immediately.

TECHNICAL SERVICE

Contact Les Produits Daubois Inc. for further information on the methods or conditions of application as well as to obtain the most recent version of the technical documents.

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GUARANTEE

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TECHNICAL DATA TABLE

Characteristics	Time	Results
Compressive Strength, ASTM C-39	7 Days	20 MPa (2900 Psi)
	28 Days	25 MPa (3626 Psi)
Slump, ASTM C-143	—	80 ± 30 mm (3 ± 1 po)
Volumic mass, ASTM C-138	—	2200 Kg/m ³ (137 lb/pi ³)
Air content , ASTM C-231	—	5.0% à 9.0%
Setting time, ASTM C-191	Initial	± 3 hours 30 min
	Final	± 6 hours 30 min

Note : The results were obtained in the laboratory under controlled conditions (23°C, 50% R.H.) for a standard sample mixed with the quantity of water prescribed. These results may vary slightly from sample to sample and are indicative of concrete performance. They cannot be used for product acceptance or rejection.

