



DAROTopp® Synthetic Floor Systems

DATA SHEET

Description

DAROTopp® is a **redi-mix, flowable self-leveling** synthetic topping or underlayment for interior floors.

DAROTopp® economically provides a **long-term** flooring underlayment or slab topping solution while improving **acoustical** or **thermal** properties and **guaranteeing** large **crack-free** flooring areas.

DAROTopp® resolves a number of on-site issues while ultimately providing **cost/time savings** and **long-term** floor slab **performance**. Higher technical performance and mechanics provide **superior** flatness and dimensional **stability**, while improved on-site working conditions and logistics provide **time savings** in the project **critical path**.

Applications

DAROTopp® can be economically installed for both new construction or renovations of commercial, residential or institutional projects. **DAROTopp®** can be applied on all types of existing surfaces such as concrete, wood, insulation, ceramic tiles, carpet or hardwood.

- suited for leveling uneven existing concrete or flooring surfaces including on polystyrene insulation
- guaranteed level, crack-free underlayment for new floor coverings without shrinking or curling
- superior thermal transfer and use as un-reinforced topping on insulation for radiant flooring over large floor areas without control joints or saw cutting required
- crack-free finish on various thermal or acoustic insulation on **LEED** projects for example where higher performing, energy efficient floors are required

Benefits and Advantages

- delivered **just-in-time** on site as a **redi-mix** through Lafarge with in-house/on-site **DARO Quality Assurance**
- **LEED** credits available under “**Materials & Resources**”: local/regional materials, recycled content and under “**Indoor Environmental Quality**”: low emitting materials. The manufacturing process of this **synthetic** binder is a **by-product** of the cleaning process of smoke produced by brown coal plants. The installation of **DAROTopp®** in structures **does not produce** any **off-gassing**
- classified as a **semi-lightweight** material; approximately **15 - 18% lighter** than conventional concrete
- having **3x** the **flexibility** of normal concrete, **DAROTopp®** provides the unique ability to be used on top of thermal or acoustic insulation **without** any **reinforcement** required, which ultimately will then provide the most **economical and efficient** method for **leveling** of depressions or uneven surfaces using a Type 1 insulation as an example
- **cost & time savings** in renovations can be realized as **existing floor** coverings including vinyl flooring, ceramics, carpet or terrazzo **do not** need to be removed. A **separation layer** (polyethylene sheet) and **edging strips** around all perimeter walls/structures ensure topping is **completely separated** from base slab to prevent any **cracks or control joints** from transferring through topping while at the same time **prevents any sound transfer** between walls and floors
- this **self-leveling** material can be installed in areas up to **10,000 sq.ft.** with **NO** joints, **NO** cracking or **NO** curling, allowing for **greater flexibility** for architects and designers with various coverings or tile patterns. This flexibility allows **DARO** to provide **multi-year guarantees** against any cracking, including **control joints** or any **existing cracks** in the base slab from **transferring** through the topping into floor coverings
- synthetic binder is **not affected by moisture** issues typical to gypsum based toppings, and if topping becomes wet, it simply **dries** (re-wet, dries again) allowing for use in **washroom/kitchen** areas. Less water is initially used, and of this, **96%** is used to **crystallize** binder which drastically **reduces** moisture that affects building materials.

TECHNICAL DATA

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| Flexural Strength | 4 - 10 Mpa (ASTM C348, CSA-A23.2-8C) |
| Compressive Strength | 20 - 40 Mpa (ASTM C109, CSA-A5) |
| • 4 - 5 days: 50%, 8 days: 85% and 21 - 28 days to achieve full strength | |
| PH | > 10 |
| Suitable for Load Carrying | 4 - 5 days |
| Thermal Conductivity | 2.2 W/MegaKelvin |
| Thermal Expansion | 0.012 mm/meter x °k |
| Cover Ready: EPOXY coatings..... | < 0.5% |
| Cover Ready: PVC, carpet, ceramic tiles, natural stone, etc.. | 2 - 2.5% |
| Dry Weight | app. 1,850 kg/m ³ |
| Initial Set | > 300 Min |
| Non Combustible | |

RELATED DATA

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| Mixing | Provided as Redi-Mix |
| Truck life | 4 hrs and up to 8 hrs with additive |
| Installation | Special DARO pump/registered applicators |
| Approx Coverage for 1"..... | 400 sq. ft./m ³ |
| DAROTopp weight per 10mm/m ² | 18 kg |

Note: Please refer to complete DAROTopp Specifications for various applications

General Site/Environmental Conditions

- .1 Prior to, during and following installation of **DAROTopp®**, building interior of the project shall be enclosed and maintained at temperatures no lower than 5°C and no higher than 30°C
- .2 Windows and doors to be kept closed to avoid drafts during initial 48hr period after pumping
- .3 Avoid "Chimney Effect" ie. stairwell to prevent accelerated drying and no exposure to direct sunlight
- .4 Examine substrate to ensure sub-floor is structurally sound with adequate bearing strength, removing any unsound concrete and filling voids, large cracks and holes
- .5 Separation layer - prevents transfer of base layer cracks, control joints or movement from transferring through topping. Ensure no creases and overlap properly with joints to be taped
- .6 8mm Edging Strips - installed at all perimeter walls, columns and structures to avoid tension and cracks

Preparation for Flooring

- .1 Floor Usage: normal foot traffic within 24hrs or 48hrs depending on temperature/humidity conditions
- .2 **DAROTopp®** typically requires light sanding 10 days after installation, prior to covering installation
- .3 With ideal conditions of 18°C and a RH less than 50% for example, floor ready to accept tiles or carpet in 12 - 18 days, again depending on conditions.
- .4 Prior to covering installation, **DARO** to confirm **moisture content** of **2% - 2.5%**, (.5% for epoxy) which is also less than typical requirement of 3lbs/1000ft² per 24hrs using calcium chloride test.