

# ADOAIR PL

## Concrete Air Entraining and Plasticising Agent

The deliberate and controlled entrainment of air in concrete in the form of disconnected uniformly dispersed microscopic air bubbles is now an established practice which offers numerous benefits. When combined with the water reducing or plasticising properties of **ADOAIR PL** the benefits of two products are combined in one, thus simplifying procedures.

**ADOAIR PL** Concrete Air Entraining and Plasticising Agent is mainly used for precast concrete where superior finish to cast surfaces, arrises, etc., easier handling and placing of the mixed concrete, coupled with excellent durability in the hardened state is required.

Users can increase the strength of the concrete mix without loss of workability, maintain the specified strength with reduced cement content or improve the workability without increasing the water/cement ratio, whilst at the same time entraining controlled quantities of air into the mix.

### The addition of **ADOAIR PL** to a concrete mix:

- Increases workability with lower water/cement ratio.
- Increases workability of dry no-slump concrete.
- Increase resistance to passage of water through hardened concrete.
- Increase strength in suitably designed mixes.
- Increases resistance to aggressive soil chemicals.
- Improves cast detail on arrises and corners.
- Reduces breakages on concrete block production.
- Increases yield with lower costs.
- Produces frost resistant concrete.
- Improves surface finish and surface wearing properties.
- Reduces segregation and bleeding.
- Reduces placing and compaction time.

### Applications

#### Roads, Runways and Paving

To obtain low water/cement ratio consistent with good placing and compaction properties. To reduce segregation and bleeding thus improving wearing properties and durability. To produce concrete resistant to the effects of freeze-thaw cycles. To speed placing and compaction. **ADOAIR PL** complies with the requirements of D.o.T. Specification for Highway Work Clause 1001.

#### Mass Concrete Structures

To ease the placing of lean and under-sanded mixes and to reduce the excessive bleeding associated with these types of mixes. To provide improved water retention for curing throughout the mass.

#### Pneumatically Placed Concrete

To ease the placing of lean harsh mixes. To prevent segregation a double dosage is recommended for this type of application, the excess air resulting from this will be expended during passage through the pipeline.

#### Concrete Block Making

To ease de-moulding and reduce the number of breakages, and to improve surface texture and cast detail to arrises on the casting.

There are numerous other applications where the inclusion of **ADOAIR PL** will produce concrete with all the benefits mentioned above.



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### Use

**ADOAIR PL** is added to the gauging water or pre-wetted mix at a rate of 50-150 ml per 50Kg of Portland cement. It is suitable for use with all types of Portland cement.

The optimum quantity to add will depend upon such factors as mix proportions, grading and shape of the aggregates, water/cement ratio and the temperature. Trials should be carried out to ensure the production of concrete with the desired characteristics. Concretes incorporating **ADOAIR PL** have better moulding properties and in some instances this may give the appearance of an over sanded mix. An adjustment in the fine aggregate proportions of the mix can be made which will show further reductions in water content.

### Specification Clause

**ADOAIR PL** Concrete Air Entraining and Plasticising Agent manufactured by Adomast Ltd shall be used in accordance with the manufacturers recommendations.

### Health & Safety

**ADOAIR PL** is a liquid admixture of a non toxic nature .however prolonged contact should be avoided. Splashes should be washed with water, if eye contact should occur immediately flush with clean water and if irritation persists seek medical advice.

See separate Safety Data Sheet