



TECHNICAL DATA

PHILMIX G501 – HIGH RANGE, WATER REDUCING & SET RETARDING

PHILMIX G501

Superplasticizer Concrete Admixture ASTM Type G

PHILMIX G501 is a chloride free workability retention admixture based on selected synthetic polymers. It is supplied as a brown solution which instantly disperses in water. **PHILMIX G501** disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The increased workability, cohesion and retardation minimize loss of workability.

PHILMIX G501 is supplied as a Brown color liquid ready for direct application and on site use.

USES and ADVANTAGE

- Gives increased working life to fresh concrete.
- Increases workability without extra water, reducing placing time and costs.
- Improves cohesion, minimizing segregation and improving surface finish.
- Aids pumping by improving cohesion and reducing workability loss.
- Chloride free, safe for use in pre stressed and reinforced concrete.
- Can be used with concrete containing micro silica and other cement replacements



TECHNICAL SUPPORT

PATS PINOY Representative provides a technical advisory service for on-site assistance, advise on mix- design, application, dispensing equipment.

DOSAGE

PHILMIX G501 had optimum dosage to meet specific requirements, should always be determined by trials using the materials and conditions that will be experienced in use. The normal dosage range is 0.6 to 1.5 litres / 100 kg of cementitious material, including PFA, GGBFS and microsilica.

Dosages outside the typical range quoted above may be used if necessary and suitable to meet particular mix requirements.

EFFECTS OF OVERDOSAGING

An overdose of double the amount of **PHILMIX G501** will result in a significant increase in retardation as compared to that normally obtained. Provided that adequate curing is maintained, the ultimate strength of the concrete will not be impaired by increased retardation and will generally be increased. The effects of overdosing will be further increased if sulphate resisting cement or cement replacement materials are used.

Overdosage is also likely to cause increased air entrainment, which will tend to reduce strength. The degree of this effect will depend on the particular mix design and overdose.

MIX DESIGN FOR WORKABILITY RETENTION

The mix design should be one suitable for use as a pump mix. To obtain the best results for workability retention, the initial workability should be above 150 mm slump. The retardation and improved cohesion provided by **PHILMIX G501** then act to enhance the workability retention characteristics. Advice on mix design for flowing concrete is available from PATS PINOY. In correctly designed flowing concrete, the improved dispersion of the cement particles and the more efficient use of mixing water will improve mix cohesion. The improved cohesion obtained with **PHILMIX G501** will also



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help to minimise bleed and segregation. After initial trials, minor modifications to the mix design may be made to optimize performance.

PROPERTIES

Appearance	Brown Liquid
Specific gravity	Typically 1.185 at 25°C
Chloride content	Nil to BS 5075
Alkali content	Typically less than 50.0 g. Na ₂ O equivalent / litre of admixture. A fact sheet on this subject is available.

DISPENSING

PHILMIX G501 should be measured by means of a recommended dispenser. Normally, the admixture should then be added to the concrete with the mixing water to obtain the best results. Contact PATS PINOY Representative for advice regarding suitable equipment and its installation.

ESTIMATING and PACKAGING

PHILMIX G501 is available in 200 liters – drum, 20 liters - container, 4 liters - container and 1 liter - container



STORAGE

PHILMIX G501 has minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C. If the temperature of the product fall outside this range. Contact PATS PINOY Representative for advice.

HEALTH and SAFETY

PHILMIX G501 does not fall into the hazard classifications of current regulations (see notes 1 and 2 below). However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately - **do not** induce vomiting. For further information consult the Material Safety Data Sheet available for this product.

FIRE

PHILMIX G501 is water based and non-flammable.

CLEANING and DISPOSAL

Spillages of **PHILMIX G501** should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water. The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance.

IMPORTANT NOTE

PATS PINOY products are guaranteed against defective materials and manufacturing, and are sold subject to its standard terms and conditions of sale. Copies of which may be obtained on request. Whilst PATS PINOY endeavors to ensure that the technical information on this data sheet is correct at the time of printing, it is the customer's responsibility to satisfy himself by checking with the company if this information is still current at the time of use,; that the product is suitable for the intended application; and that the actual conditions of use are in accordance with those recommended because PATS PINOY has no control over the conditions of use of its products. All recommendations or suggestions regarding the use of these products are made without guarantee.