

# MasterEase<sup>®</sup> HES 3941

**Poly Aryl Ether based superplasticizer for the production of high-quality precast concrete**

## DESCRIPTION

**MasterEase HES 3941** is an innovative latest generation superplasticizer based on Poly Aryl Ether (PAE) polymers and is specially engineered for precast concrete.

**MasterEase HES 3941** is formulated from unique polymers produced in-house by Master Builders Solutions. The objective of the development of the PAE polymer was to take the characteristics of traditional poly carboxylic ether (PCE) admixtures but to modify the structure of the polymer to give enhanced rheology and robustness to the concrete. The PAE polymers contained in the formulation of **MasterEase HES 3941** ensure that enhanced

rheology is maintained from time of mixing to time of placing and finishing. The polymer structure of **MasterEase HES 3941** is specially designed to improve the rheology of precast concrete, making it very flowable and low viscous even at very low water/cement ratios, without increasing stickiness. Robustness is a distinctive feature of the precast concrete produced with **MasterEase HES 3941**.

## TYPICAL APPLICATIONS

**MasterEase HES 3941** is used for the production of high-quality precast concrete.

## ADVANTAGES

**MasterEase HES 3941** offer the following benefits for the precast concrete industry:

- Production of highly flowable, robust selfcompacting concrete having a low water cement ratio along with an optimal rheology
- Enhanced robustness and consistency in concrete quality with low stickiness
- Environmentally friendly, CO2 reduced mix design optimization
- Elimination/reduction of heat curing
- Improved surface appearance
- Exceptionally high early strength

## PACKAGING

**MasterEase HES 3941** is supplied in bulk.

## STANDARDS

ASTM C-494 Type F

BS EN 934-2

## TYPICAL PROPERTIES\*

Appearance	Brown coloured liquid
Specific gravity @ 25°C	1.150-1.180
pH value	2.0 - 6.0
Chloride content	"chloride-free" to EN 934

## APPLICATION GUIDELINES

The normally recommended dosage rate of **MasterEase HES 3941** is 0.8 - 2.5 L/100kg of total cementitious material.

Other dosages may be recommended in special cases according to the specific site conditions. In this case please consult our Technical Services Department for advice.

## MIXING

**MasterEase HES 3941** is a ready-to-use admixture to be added to the concrete as a separate component.

Optimal result is obtained if **MasterEase HES 3941** is poured into the concrete mix right after the addition of the first 80% of the mixing water, i.e. when all solids are wetted. Avoid adding the admixture to the dry aggregates.

**MasterEase HES 3941** is suitable for mixes containing:

- **MasterLife SF 100** (Silica Fume)
- Fly Ash (PFA)
- GGBS (ground granulated blast furnace slag)

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## STORAGE AND SHELF LIFE

**MasterEase HES 3941** should be stored in closed containers or storage tanks to protect from evaporation. The shelf life is 12 months when stored as above.

## HEALTH AND SAFETY

No special requirements must be observed during use. Protection gloves and glasses are however, recommended.

**MasterEase HES3941** is non-flammable, non-toxic or irritant and is not subject to special transport requirements.

**MasterEase HES 3941** contains no hazardous substances requiring labelling. For further information refer to the Material Safety Data Sheet.

## QUALITY AND CARE

All products manufactured by Master Builders Solutions Egypt, or imported from Master Builders Solutions affiliate companies world-wide, are manufactured to procedures certified to conform to the quality, environment, health & safety management systems described in the ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 standards.

\* Properties listed are based on laboratory controlled tests.

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