# UNIVER WS-HWA

## High performance new generation superplasticizer

Univer WS-HWA has excellent water reduction performance and good flow-ability. It is designed as 55% solid contents for the economic transportation cost saving.

Univer WS-HWA has unique design as neutral - weak acidic value for the safety & stability in the process of operation without crystallization of sodium sulphate under cold temperature.

### **Physical Properties**

Physical Properties of WS-HWA	
Appearance	Light brown liquid
Odour	Characteristic
Total Solid Contents, %	55%(w/w), approx
pH(undiluted)	4.0 - 5.0
Specific Gravity	1.12 (25°C)
Viscosity, Brookfield Viscometer, cps	650 (25°C)

Features

- $\cdot$  Excellent water reduction by powerful dispersing effect
- · Excellent fluidity
- · Low stickiness concrete
- $\cdot$  Neutral weak acidic value without crystallization under cold termperature

#### Advantages

- · Self-compacting (High Fluidity) concrete
- · Applicable for pre-cast concrete
- · Higher durability from improved strength
- $\cdot$  High compressive strength by low W/C ratio
- $\cdot$  Cost-effective

#### Typical dosage

The recommended dosage range of UNIVER WS-HWA is 0.3~1.0 liters/100 kg of binders on a basis of undiluted solution. It is well-soluble in water and we recommended to dilute it as your application..

The optimum dosage of UNIVER WS-HWA may depend on specific requirements of concrete properties and materials. The optimum dosage of UNIVER WS-HWA should be determined by trials using the materials and conditions.

To achieve long retention with higher water reduction, you may blend with other retention type of PCE.

#### Storage and Handling

UNIVER WS-HWA should be stored at room temperature and it should be avoided from direct sunlight. If stored in original unopened containers it will have a shelf life of 12 months. If product is frozen, please agitate it slowly until melting again.

Packaging

UNIVER WS-HWA is available in bulk supply, 1,100Kg/IBC or 230kg/drum