

ECONEX® ESP-395/ESP-395S

Introduction

ECONEX® ESP-395/395S is high performance polycarboxylate ether copolymer for high early strength concrete. ESP-395/395S can improve the early strength of the concrete without affecting the overall compressive strength of the concrete.

Physical Properties

Product	ECONEX® ESP-395/395S
Appearance	Brown Liquid
Total Solid(%)	50.0 ± 1.0
Specific Gravity(20°C)	1.11 ± 0.05
Viscosity(cPs at 20°C)	100 ~ 750
Chloride Content(%)	Nil
pH(20°C)	5.5 ± 2.0

Features

- Higher Early Strength Application
- High Flowing Concrete Application
- Higher Water Reducibility Application
- Economical Design at Low Dosage

Dosage

- 0.2 ~ 4.0 wt.% of total binder
- The actual dosage can be varied due to mix design, material used, and other conditions

Packaging

- 200L drum
- 1m³ IBC drum
- Flexitank

Test Results I

Concrete Mix Design

Mix Design	W/C(%)	S/a(%)	Unit Weight(kg/m ³)				AD (B x wt%)
			W	C	S	G	
25-40-600	35.0	46.0	165	471	784	931	1.0

Density : C:3.15(OPC), S:2.60(Washed Sand), G:2.63(Crushed Gravel)

AD : ECONEX® ESP-395 (20% Solution)

Results

Item	Slump(mm)				Air Content(%)	Compressive Strength(Mpa)			
	Initial	30min	60min	90min		Initial	1day	3days	7days
ESP-395	650	600	530	450	3.0	15.6	29.5	42.1	51.2

Test Results II

Concrete Mix Design

Mix Design	W/C(%)	S/a(%)	Unit Weight(kg/m ³)				AD (B x wt%)
			W	C	S	G	
25-40-600	35.0	46.0	165	471	784	931	1.0

Density : C:3.15(OPC), S:2.60(Washed Sand), G:2.63(Crushed Gravel)

AD : ECONEX® ESP-395 + ECONEX® ESKA-30(50:50 20% Solution)

Results

Item	Slump(mm)				Air Content(%)	Compressive Strength(Mpa)			
	Initial	30min	60min	90min		Initial	1day	3days	7days
ESP-395 + ESKA-30	620	620	600	590	3.1	14.8	27.8	42.3	52.2

Cautions

- Extended exposure to ultraviolet light may cause changes in the color of ESP-395/395S
- Do not allow product to be frozen or be stored in temperature below freezing point
- Do not mix with concrete admixtures containing poly naphthalene sulfonate formaldehyde condensate. Erratic behaviors may be experienced

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