KUT PLAST RNA

Superplasticising, Water Reducing, Retarding Admixture

ADM – 05 - 0104

DESCRIPTION

KUT PLAST RNA is based on a blend of polymers. It is a brown liquid instantly dispersible in water. **KUT PLAST RNA** will give flowing concrete or high strength concrete with extended workability.

USES

- **KUT PLAST RNA** can produce self-levelling concrete practically eliminating the need for vibration during placing.
- **KUT PLAST RNA** can provide 25% reduction in water reduced permeability and high early strength.
- **KUT PLAST RNA** gives extended workability which is useful when concrete is transported in ready mix trucks and for avoiding cold joints in concrete.

ADVANTAGES

Increased Workability : Reduces placing time, labour and equipment.

High Strength Concrete : Water reduction gives higher strengths without cement increase or workability loss.

Extended Workability : Some set retardation gives longer working times which are useful for truck transport and for avoiding cold joints between concrete pours.

Reduced Permeability : Reduction of water reduces porosity giving improved water impermeability.

Surface Finish : Better dispersion of cement particles and increased cohesion minimises segregation and bleeding and gives improved surface finish.

Improved Pumpability : Line friction is reduced by increasing workability and cohesion.

Chloride Free : Safe in reinforced concrete.

STANDARDS

KUT PLAST RNA complies with **BS 5075, 1982,** and **ASTM C-494 Type G.**

PROPERTIES

Calcium Chloride Content : Nil.

Specific Gravity : 1.17 at 20° C.

Air Entrainment : Less than 1% additional air is entrained.

Setting Time : 1 - 4 hour retardation dependant upon dosage.

Cement Compatibility : Compatible with sulphate resisting and other Portland cements and high alumina cements.

Durability : Water reduction gives increase in density and water impermeability which improves durability.

Compressive Strength : Reduction in water/cement ratio will result in upto 50% increase in early age compressive strength. See table 2 for typical trial mix results.

Table 1: Effect of **KUT PLAST RNA** on workability

Portland cement	320 kg/m^3
Sand (washed)	630 kg/m^3
20 mm gravel	1200 kg/m^3
Ambient temperature	20° C

KUT PLAST RNA

Dosage Litres /150 kg Cement	Total W/C Ratio	Slump (mm)	Flow Table (cm)	Comp. Strength N/mm^2 1 Day	7 Days	28 Days	Density (kg/m^3)
Nil	0.58	60	-	16	38	49	2355
0.25	0.57	110	40	17	37	48	2340
0.50	0.58	collapse	60	16	39	50	2340

Table 2 : Effect of **KUT PLAST RNA** on compressive strength at a slump of 50 mm

Ordinary Portland cement	310 kg/m^3
Sand (washed)	530 kg/m^3
20-5 mm gravel	1310 kg/m^3
Ambient temperature	20° C

Dosage Litres /50kg Cement	Total W/C Ratio	Water Red'n (%)	Air Content (%)	Comp. Strength N/mm^2 1 Day	7 Days	28 Days	Density (kg/M^3)
Nil	0.60	-	1.6	20	40	48	2360
0.30	0.51	15	1.9	29	49	59	2380
0.60	0.46	23	2.3	28	62	69	2400

Specialities Construction Chemicals Factory

ASPEC

Amghara Industrial Area, P.O.Box: 23595 Safat, 13096 Kuwait, Tel: +965 4565165 - 4565145 Fax: +965 4565135
Email: technical@aspeckuwait.com

INSTRUCTION FOR USE

Dosage : The optimum dosage for **KUT PLAST RNA** should be determined by site trials with the particular concrete mix under prevailing ambient condition.

As a guide. the dosage is normally:

0.15-0.40 litres/50 kg cement, for flowing concrete.
0.30-0.60 litre/50 kg cement for high strength concrete.
Dosage can be from 0.10 litres / 50 kg up to 1.0 litres/50 kg, dependent on the requirements of the concrete involved.

Overdosing : An over dose of double the maximum recommended dose of **KUT PLAST RNA** will result in very high workability, possible severe retardation and segregation. Otherwise the ultimate compressive strength of the concrete will not be impaired, if properly cured. The overdosing effect will be exaggerated when used with sulphate resisting cement.

TECHNICAL SUPPORT

"**ASPEC**" provides technical support service on mix design, admixture selection, evaluation of trials, dispensing equipment etc. Please contact the Technical department in these cases.

Curing : As with all structural concrete, normal curing methods apply.

Cleaning : Spillages of **KUT PLAST RNA** can be removed with water.

PACKAGING

KUT PLAST RNA is supplied in 210 litres drums and in bulk.

Storage : **KUT PLAST RNA** should be protected from extremes of temperature. Should the material become frozen, it must be completely thawed and thoroughly mixed before use. **KUT PLAST RNA** has a minimum shelf life of 12 month provided temperature is kept within the range 5^{o} C to 30^{o} C

PRECAUTIONS

HEALTH AND SAFETY

KUT PLAST RNA is non-toxic. Any Splashes to the skin should be washed immediately with water. Splashes to the eyes should be washed immediately with water and medical advice should be sought.

Fire : KUT PLAST RNA is non-flammable.

Distributor: