Sulphonated Naphthalene Formaldehyde Powder

Sprea Superplasticiser Powder (SPP1, SPP2, SPP3)

SPP is a sodium salt of polynaphthalene sulphonic acid. It is used as a highly effective water soluble superplasticiser for concrete.

It possesses a powerful water reducing and dispersing ability whereby high strength, flowing & self leveling concrete can be produced.

Sprea plasticiser is practically chloride free so it doesn't pose any corrosion hazards to steel reinforcement.

Benefits

Incorporation of SPP is used to achieve the following:

- Improves flow properties of concrete by dispersing cement particles and preventing floc formation for extended workability.
- Improves higher early & ultimate compressive flexural strength by lowering water cement ratio. Up to 30% water reduction can be achieved by using optimum dosage of SPP.
- Assures higher resistance of concrete by improving the rheological properties such as compressive flexural strength and modulus elasticity.
- Strong plasticising effect without any tendency to segregation.
- Environment friendly and non hazardous product for application.
- Cost efficient as it supports increased use of cementitious supplementary material such as silica, fly ash and slag.
- Excellent product formulators, versatile for formulations, compatible with most of the additives used in admixture formulations which helps in producing versatile applications.
- Improves workability by maintaining same water cement ratio.

Physical &Chemical specification

Parameter	Value			Unit
	(1) Low	(2) Medium	(3) High	
Sodium sulphate content	5.5 max	11 max	20 max	%
Appearance and form	Beige to brownish free flowing powder			
Ionic nature	Anionic			
Solid content	93±1			%
pH 10% solution	7-9			
Bulk density	0.65±0.02			gm/cm^3
Solubility	Soluble in water in all proportions			
Moisture content	6 - 8			%
Chlorides	500 max			ppm
Insolubles	0.5 max			%
Free formaldehyde	0.1 max			%

Major application areas

- Ready mix concrete.
- Pre-cast and pre-stressed concrete.
- Marine concrete.
- Gunite concrete.(shotcrete)
- Flowable and pumpable concrete.
- High performance concrete.
- High fluidity concrete.
- High strength concrete for dams bridges and high buildings.
- Self compacting concrete.
- High durable concrete.

Dosage

Field trials should be conducted to determine optimum dose of SPP. Generally 0.2 – 1 % of SPP is used based on weight of cement.

Mixing

SPP should be added to concrete at the end of mixing cycle.

Packing , Handling &Storage

Packing : SPP is supplied in 25 kg HDPE bags, 500 kg &1000 kg bigbags

Handling : SPP is an alkaline material which may cause irritation to eyes and skin on direct and prolonged contact. Hands should be thoroughly washed with soap & water before meals & at the end of the working day.
Use safety goggles and hand gloves while handling the product.

Storage : It is recommended to store SPP at 25 – 30 ^{0}C in original packing protected from direct sunlight to give shelf life not less than one year.