



2017 Ready Mixed Concrete prod.

**115 million m<sup>3</sup>**

Naphthalene Sulphonate Base Additive  
Used Ready Mixed Concrete

**27 million m<sup>3</sup>**

Naphthalene Sulphonate Consumption

**85.000** 

**DEVOLOPE BETA NSCL**

**DEVOLOPE BETA FULCA**

**DEVOLOPE BETA NS-Powder**

# DEVOLOPE BETA

DEVELOPE BETA products are used as water reducer and plasticizer in concrete production. Improves workability in combination with water reduction in concrete mixture. Reduces the amount of water to produce high-strength concrete.

## DEVELOPE BETA NSCL

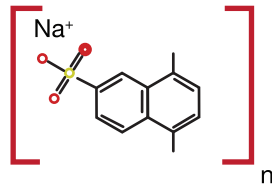
Naphthalene Sulphonate Sodium Salt

**Chemical Formula**

$C_{21}H_{14}Na_2O_6S_2$

**Cas No**

9084-06-4



## Application

- ▶ Ready-mixed concrete
- ▶ Underwater Concrete
- ▶ Self-compacting concrete
- ▶ High strength concrete for dam, bridge and high-rise buildings.
- ▶ Secondary products such as concrete and concrete paste
- ▶ Fly ash concrete, blast furnace slag concrete
- ▶ Light concrete

## DEVELOPE BETA FULCA

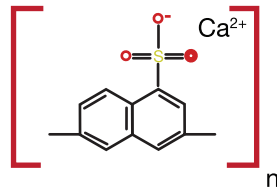
Naphthalene Sulphonate Calcium Salt

**Chemical Formula**

$C_{11}H_9CaO_4S^+$

**Cas No**

37293-74-6



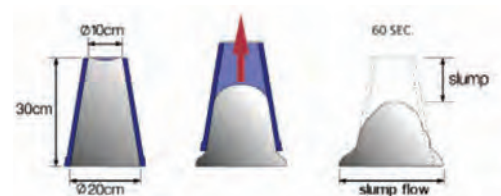
## DEVELOPE BETA NS POWDER

Naphthalene Sulphonate Sodium Salt

Total Solid	Chloride Content	Air content	Liquidity of Cement Paste (mm)	Water Reduction Ratio of Cement Mortar
≥ 92,0 %	as Cl <sup>-</sup> ≤ 0,30 %	≤ 2,50 %	≥ 240,0	≥ 17,0 %

## Concrete SlumpTest

The slump test is basically a measure of the consistency of fresh concrete or its workability. Fresh concrete is placed in to a hollow steel cone known as a slump cone or Abrams cone and using the following procedure, the final slump can be determined.



- ▶ The slump cone mould should be thoroughly cleaned and coated with a thin film of oil.
- ▶ The slump cone mould is then placed on a smooth, flat, rigid and non-absorbent surface.
- ▶ The slump cone mould is then filled with four layers of the concrete mix, with each layer being tamped with a standard tamping rod.
- ▶ Once the mould has been filled the concrete mixture is levelled with the top of the cone.
- ▶ The slump cone is carefully lifted upwards, taking care not to disturb the concrete contained within.
- ▶ Once the concrete subsides the difference in height to the original height of the slump cone is measured as the slump and slump flow.