

# MasterRheobuild<sup>®</sup> SP11

(formerly Rheobuild SP1i)

High range water reducing, set retarding, superplasticiser for rheoplastic concretes

## DESCRIPTION

**MasterRheobuild SP11** is composed of synthetic polymers specially designed to impart rheoplastic qualities to concrete.

A rheoplastic concrete is a fluid concrete with a slump of at least 200 mm, easily flowing, but at the same time free from segregation and having the same water/cement ratio as that of a no-slump concrete (25 mm) with admixture.

**MasterRheobuild SP11** is chloride free.

## RECOMMENDED USES

- Ready mixed concrete
- Long-distance transporting
- Pumped concrete
- Concrete containing Slag/ Pozzolans
- Mass concrete
- Casting in hot climates

## FEATURES AND BENEFITS

- Reduced thermal peaks
- High workability for longer periods
- Lower pumping pressure
- Resistance to segregation even at high workability
- Extended setting with longer workability
- Reduced water content for a given workability
- Higher ultimate strengths
- Reduced permeability
- Improved durability
- Reduced shrinkage and creep
- Increased ease in finishing concrete
- Provides lower in-place cost

## PERFORMANCE TEST DATA

Aspect	:Dark brown free flowing liquid
Relative Density	: 1.18 ± 0.02 at 25°C
pH	: ≥ 6
Chloride ion content	: < 0.2%

## TEST CERTIFICATION/APPROVALS

- ASTM C-494 Type B, D & G
- EN 934-2: T11.1/11.2

- IS 9103: 1999

## DOSAGE

Optimum dosage of **MasterRheobuild SP11** should be determined with trial mixes. As a guide, a dosage range of 600ml to 2000ml per 100kg of cementitious material is recommended as a starting point. In high performance concrete, a dosage up to 2000ml per 100kg of cementitious material can be added subject to prior site trials. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local BASF representative.

For addition information on **MasterRheobuild SP11** admixture or on its use in developing concrete mixes with special performance characteristics, contact your local BASF representative.

## Effects of over dosage

A severe over-dosage of **MasterRheobuild SP11** can result in the following:

- Long extension of initial and final set
- Increase in air entrainment
- Bleed/segregation of mix, quick loss of workability
- Increased plastic shrinkage

A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored.

In the event of over dosage, consult your local BASF representative immediately.

## APPLICATION

**MasterRheobuild SP11** is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of **MasterRheobuild SP11** to dry aggregate or cement is not recommended.

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## COMPATIBILITY

**MasterRheobuild SP11** is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers.

**MasterRheobuild SP11** is also compatible with slag and pozzolans such as fly ash and silica fume.

## CORROSIVITY – NON CORROSIVE

**MasterRheobuild SP11** admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of **MasterRheobuild SP11** admixture. In all concrete application, **MasterRheobuild SP11** admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

## WORKABILITY

**MasterRheobuild SP11** ensures that rheoplastic concrete remains workable in excess of 3 hours at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability.

It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

## PACKAGING

**MasterRheobuild SP11** is supplied in 235kg drums or in bulk on request.

## STORAGE /SHELF LIFE

**MasterRheobuild SP11** must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local BASF representative.

## PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

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