SIDHYA ASIA
CHEMICAL PRIVATE LIMITED

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# PRODUCT DATA SHEET

## Sidhya® Flow RC 400

***High range PCE Superplasticizer for Concrete***

### Description

Sidhya® Flow RC 400 is a specially designed PCE based product for high slump and flowing concrete. The product is engineered to provide high quality and long slump flow retention without the usage of additional retarders. Sidhya® Flow RC 400 is based on new generations of polymers which have low viscosity and enable high water reducing capacity. The unique technology of the product makes it exceptional for production of Self compacting concrete, high flowable and high strength concrete.

### Applications

Sidhya® Flow RC 400 is a high range water reducer designed for high retention and flowable concrete in foundations, self-compacting concrete slabs, slender components with tight reinforcement such as walls, columns and other structural elements. The product is mainly used for the following applications:

- Production of high-quality Self Compacting Concrete.
- Ready-mix concrete with high fresh concrete properties requirements.
- Used in production high grade concrete.
- Concrete requires long retention and workability time.
- Concrete with high durability requirements.
- Low viscosity concrete with high pumping concrete requirements.
- Production of high strength and pre-stressed concrete.

### Mixing

Sidhya® Flow RC 400 is not recommended to be added along with dry aggregates and cementitious materials. Sidhya® Flow RC 400 should be added to the concrete mixer post 70% of the mixing water has been added. To achieve the optimum performance, the product is recommended to have minimum wet mixing period of 60 seconds depending on the mixing conditions.

## Technical Specifications

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| **Chemical Base** | Aqueous solution of modified Polycarboxylate acids |
| **Color** | Amber to Light Brown |
| **Appearance** | Homogenous |
| **State** | Liquid |
| **Specific Gravity** | 1.09 ± 0.02 @ $20^0$C |
| **pH** | Minimum 5.0 |
| **Chloride Ion Content** | <0.10% |
| **Alkali content** | <1.5 g $Na^2O$ equivalent / liter of admixture. |
| **Shell Life** | 12 months from the date of manufacturing if stored as per recommendations and original sealed packing. |

## Advantages

Sidhya® Flow RC 400 improves the cohesive of the concrete and stabilizes the rheology of the concrete. Sidhya® Flow RC 400 improves the dispersion of cementitious materials and provides the following advantages:

- Low viscosity of concrete suitable for different grades and pumping requirements.
- Higher water reduction produces high strength concrete.
- Increase in early strength of concrete.
- Improvement in workability and retention time.
- Improvement in durability properties of concrete.
- Increase in flowability and cohesion properties.
- Increase in Modulus of elasticity.

## Dosage

The recommended dosage of Sidhya® Flow RC 400 should be between 0.2% to 2.0% by weight of cementitious. Effects of over dosage can delay the setting time and lead to bleeding and segregation in fresh concrete properties.

The optimum dosage of the Sidhya® Flow RC 400 should be determined by preliminary trials at site. The dosages above recommendations can be used if agreed by the client and consultant for special applications along with consultation of Sidhya® technical team.

## Compatibility

Sidhya® Flow RC 400 is compatible with all types of cement and binders such as GGBS, Ultra Fine GGBS, Micro silica, Fly ash and Metakaolin. Sidhya® Flow RC 400 when using along with other Sidhya® products should be added separately and must not be blended prior to addition.

Important: It is important to conduct preliminary trials when using more than one admixture. Do not combine Sidhya® Flow RC 400 with any Naphthalene based admixtures.

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## Technical Compliances

Sidhya® Flow RC 400 conforms to the requirements of IS 9103: 2007, ASTM C494 Type F & G & BS EN 934-2.

## Storage

Sidhya® Flow RC 400 has a shell life of 12 months provided the temperature is kept between +1.0$^0$C to +50.0$^0$C. Please contact Sidhya® technical team if the product falls outside the temperature range.

## Packaging

Sidhya® Flow RC 400 is available in 200 liters drums, 1000 litres IBC and bulk tanker. Please contact our Sales Representative for customized packing and more details

## Legal Notice

The recommendations related to the application and recommendations are given in good faith based on Sidhya's current experience and knowledge of the products. The benefits stated about the product are only applicable if guidelines provided by Sidhya for storing, handling and mixing are followed under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product is always advised to test the product's compatibility and suitability for the intended requirements and application. Sidhya reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned copies of which will be supplied on request.

## Sustainability, Health and Safety

End use of the product must read the Material Safety Data Sheet (MSDS) of the product. The MSDS provides information and advice on storage, handling and disposal of the product and instructions related to physical ecological, toxicological and other safety related data.



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