

**ADI-CON CSF(R) modified concrete
Industrial Floor Slab, General Chemicals, Brandon, Manitoba**

PROBLEM

The client required an improved chemical resistance of the new concrete floor slab. The chemical manufacturing contains chemicals such as nitrites, chlorides, sulphates and caustic materials. In addition an impermeability of the concrete was required to reduce a danger of below ground water contamination. Even though a heavy duty vapour barrier and waterproofing membrane was installed underneath the slab, the concrete impermeability was required as the primary "line of defence" to soil and water contamination.

SOLUTION

Adi-Con CSF(R) modified, fly ash concrete was used to provide high chemical resistance to the new concrete slab, and waterproofing to prevent ground water contamination.

Gemite Products Inc. would like to thank Powell Construction Ltd. of Brandon Manitoba, the contractor on this project, for providing the above data and information.

Attached are compressive strength data for concrete modified with Adi-Con CSF(R), used in the construction of the concrete slab in the General Chemicals plant, Brandon Manitoba. The concrete was modified using one unit of Adi-Con CSF(R) per one cubic meter of concrete.

The concrete mix design:

Fine Aggregate	884 kg
Coarse Aggregate	1060 kg
Portland Cement Type I	300 kg
Fly Ash	75 kg
Water	140 kg
Modifier:	One unit of Adi-Con CSF(R) per cubic meter.

The average compressive strength of unmodified (control) concrete at 28 days was 31.23 MPa. The compressive strength of Adi-Con CSF(R) modified concrete was 48.54 MPa.

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