Elkem Microsilica®
CONCRETE

Raftsundet Bridge

C4-24 Reference Project

OWNER/CLIENT: Norwegian Road Authorities, Nordland
CONSULTANT: Dr. Ing Aas-Jakobsen
CONTRACTOR: AS Anlegg
ARCHITECT: Boarch Arkitekter A/S
MAIN SPANS: 202 + 298 m
SIDE SPANS: 86 + 125 m
CONCRETE VOLUME: LC60: 2400 m³ / C45: 1600 m³ / C65: 10700 m³
Built 1998

The Raftsundet bridge, with a main span of 298 m and a total length of 711 m, was the longest concrete cantilevered span in the world when the cantilevers were joined on June 24th, 1998. The structure is exposed to a severe wind climate with a designated gust wind speed of nearly 60 m/s. The surrounding alpine topography with high mountains rising up to 1000 m above sea level, creates fluctuating wind forces of large magnitude against the bridge. The dynamic wind climate severely affects the slender columns and the bridge beam. The main span is built in high-strength lightweight aggregate (LWA) concrete LC60, and the side spans and piers in normal density (ND) concrete C65. The bridge is high level, providing a ship channel of 45 x 180 m.

Kg pr. m³ LC60
Cement 430
Microsilica 25
Water 175
Sand 745
Stalite LWA 2-16 550
Super, SP40 4.0
Plastiziser 2.5
Air, LM 0.5

Elkem Microsilica® is a registered trademark and belongs to Elkem Materials
Elkem ASA, Materials
P.O.Box 8126, Vaagsbygd
N-4875 Kristiansand
Norway

Telephone: +47 38 01 75 00
Telefax: +47 38 01 49 70
Internet: www.elkem.com
e-mail: microsilica.materials@elkem.no