



EUCLID CHEMICAL

PROJECT PROFILE

RESIDENTIAL CONSTRUCTION WITH SELF CONSOLIDATING CONCRETE



PROJECT DATA

Location – Santa Paula, CA
Application – Self-Consolidating Concrete
Contractor – TEAM Construction
Concrete Producer – State Ready Mix

PRODUCTS FEATURED

PLASTOL™ SPC
 High Range Water Reducing Admixture

EUCON™ DS
 Set Retarding and Stabilizing

PLASTOL™ AMP-X³
 Extended Workability Admixture

SCOPE OF PROJECT

- Mix Design Development and Implementation of Self-Consolidating Concrete



PROJECT SUMMARY

This custom residential home was designed to be built using reinforced concrete. The walls of the home measure 13 ft (4 m) tall and 10-12 inch (25-30 cm) thick with large window openings. Located in a seismic area of southern California, structural support was crucial. However the weight of steel reinforcement and the placement for the tall walls created difficulty and congestion on the site. The solution was to use self-consolidating concrete (SCC) to reduce the need for vibration, allow for faster construction, and eliminate the potential for internal pocket voids and surface bug holes. Euclid Chemical's admixtures, PLASTOL SPC, EUCON DS, PLASTOL AMP-X3, were used to develop an SCC mix design with a spread of 25 inch (62.5 cm) while allowing for a 30 minute haul from the concrete plant to the job site. Euclid Chemical personnel provided their expertise in developing the mix and ensuring proper implementation of SCC for this project. The result was a beautiful concrete home without any cold joints or pocket voids, satisfying both structural and architectural aspects of the project. The design strength was 5,000 psi and the measured strength for this concrete was above 6,000 psi.