

# Handbook

## **Guide to concrete repair and protection**



This Handbook was prepared by Committee BD-002, Concrete Structures. It was approved on behalf of the Council of Standards Australia on 6 April 2018. This Handbook was published on 6 June 2018.

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Handbook through their representation on the Committee.

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## PREFACE

This Handbook was prepared by Standards Australia Committee BD-002, Concrete Structures, to supersede HB 84—2006.

The original 1996 edition of this document was prepared by the CSIRO Division of Manufacturing and Infrastructure Technology at the request of the Australasian Concrete Repair Association (ACRA), who also provided the technical, editorial and funding input.

This Handbook is intended for those engaged in the maintenance, repair and production of concrete structures, and provides an overview of the typical methods and practices in the industry. It is not to be used as a Standard or as part of any contract relating to the repair of concrete.

This Handbook aims to provide guidance and information that can be read and understood by a diverse group of persons, ranging from professionals engaged in specifying or carrying out repairs to concrete structures, to those involved in the management of buildings and structures.

Previously available publications on investigatory and repair technologies for concrete are of overseas origin. The development and support of this document by ACRA was based on the perceived need for a document on local techniques and materials.

In the preparation of this Handbook, reference was made to RILEM Technical Recommendation 124-SRC, *Draft Recommendation for Repair Strategies for Concrete Structures Damaged by Reinforcement Corrosion*, 1994.

The 2018 edition of this document has now been updated and modified to reflect the advances in the industry as well as aligning more closely with International Standards.

### **AUSTRALASIAN CONCRETE REPAIR ASSOCIATION (ACRA)**

The Australasian Concrete Repair Association (ACRA) was incorporated in 1991 with the aim of providing a forum to promote excellence in all spheres of concrete repair and protection work.

The Association is fundamental to the ongoing nationwide development of a professional industry whose key objectives include providing the highest levels of expertise, experience, training and quality. ACRA demands a continuing commitment from its members to maintaining the quality standards it has set for the concrete repair industry.

Through its membership base, which includes manufacturers, specialist contractors, consultants and owners, ACRA provides stakeholders with confidence in the remedial concrete repair process. This insistence on quality and best practice underpins ACRA's role in the concrete repair market.

ACRA has established a scheme of awards for excellence in concrete repair which are open to Corporate Members of the Association. These awards, which have been run every two years since 1998, showcase the work of the member companies. ACRA is committed to ongoing training of its members in the latest developments in both the technology and practical application of concrete repair and protection. Training courses have been developed by ACRA including a One Day Course on Concrete Repair and Protection, which is based on SA HB 84.

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## **THE COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (CSIRO)**

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia's national science agency and one of the largest and most diverse scientific research organizations in the world. CSIRO has more than 6500 staff carrying out research in a wide range of areas including construction, materials, energy, minerals, agriculture and natural resources.

Materials and Infrastructure Services is a division of CSIRO that supports the building, construction and engineering industries with research, consulting and testing. The division's science spans building materials—including concretes, timbers, polymers and tiles—to heating and cooling, air quality, urban planning and infrastructure, IT applications for construction, fire testing, and water systems and products.

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