



BSI Standards Publication

Framework for a specification on the avoidance of a damaging Alkali-Silica Reaction (ASR) in concrete

National foreword

This Published Document is the UK implementation of CEN/TR 16349:2012.

The UK participation in its preparation was entrusted to Technical Committee B/517, Concrete.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2012

Published by BSI Standards Limited 2012

ISBN 978 0 580 76676 3

ICS 91.100.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 June 2012.

Amendments issued since publication

Amd. No.	Date	Text affected
----------	------	---------------

TECHNICAL REPORT
RAPPORT TECHNIQUE
TECHNISCHER BERICHT

CEN/TR 16349

April 2012

ICS 91.100.30

English Version

**Framework for a specification on the avoidance of a damaging
Alkali-Silica Reaction (ASR) in concrete**

Cadre d'une spécification destinée à prévenir les
dégradations causées au béton par l'alcali-réaction

Anwendung von Qualitätsregelkarten bei der Herstellung
von Beton

This Technical Report was approved by CEN on 14 February 2012. It has been drawn up by the Technical Committee CEN/TC 104.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2012 CEN All rights of exploitation in any form and by any means reserved
worldwide for CEN national Members.

Ref. No. CEN/TR 16349:2012: E

AVA Documents
Document Sharing Hub

Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Alkali-Silica Reaction (ASR)	5
3 Elements of specifications	5
4 Characterisation of environment	5
5 Precautionary measures appropriate to concrete.....	6
5.1 General remarks.....	6
5.2 Use of cement with a low effective alkali content	7
5.3 Use of slag, fly ash, silica fume or other pozzolana (in cement or as an addition)	7
5.4 Limiting the effective alkali content of the concrete.....	7
5.5 Verification of the suitability of a concrete mix in a performance test	8
5.6 Use of a non-reactive aggregate combination.....	8
6 Summary.....	8
Bibliography	9

Foreword

This document (CEN/TR 16349:2012) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This Technical Report is partly based on the recommendation of RILEM TC ACS (Part 1 of AAR-7) [6].