AS 1141.34:2018

Australian STANDARD

Methods for sampling and testing aggregates

Method 34: Organic impurities other than sugar

STANDARDS Australia

AS 1141.34:2018

This Australian Standard® was prepared by CE-012, Aggregates and Rock for Engineering Purposes. It was approved on behalf of the Council of Standards Australia on 7 December 2018.

This Standard was published on 21 December 2018.

The following are represented on Committee CE-012:

ARRB (Australian Road Research Board)
Ash Development Association of Australia
Australasian (iron and steel) Slag Association
Australian Asphalt Pavement Association
Australian Geomechanics Society
AUSTROADS
Cement Concrete and Aggregates Australia - Aggregates
Cement Concrete and Aggregates Australia - Cement
Cement Concrete and Aggregates Australia - Concrete
Engineering and Construction Laboratories Association
National Association of Testing Authorities Australia
University of Technology Sydney

This Standard was issued in draft form for comment as DR AS 1141.34:2018.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:
www.standards.org.au

www.saiglobal.com (sales and distribution)

ISBN 978 1 76072 339 2

Australian STANDARD

Methods for sampling and testing aggregates

Method 34: Organic impurities other than sugar

Originated as part of AS 1141—1974.
Revised and redesignated in part as AS 1141.34—1997.
Fourth Edition 2007.
This edition 2018.

Preface

This Standard was prepared by the Standards Australia Committee CE-012, Aggregates and Rock for Engineering Purposes, to supersede AS 1141.34—2007.

This edition of the Standard has improved the requirements for standardization of the light path to be used in comparing the test solution with the reference colour Standard. This revision of the Standard has included an explanation of the principle supporting the test and a safety warning.

Contents

Australian Standard®

Methods for sampling and testing aggregates

Method 34: Organic impurities other than sugar

1 Scope

This Standard sets out a method for an approximate determination of the presence of organic materials, other than sugar, present in fine aggregate.

2 Principle

The test relies on the reaction of humus material with a sodium hydroxide solution to produce a dark colour in the liquid the intensity of which is approximately proportionate with the mass content of humus in the fine aggregate. Based on 1917 research, fine aggregate with humus contents that have a resultant solution colour lighter than, or equal to, the Standard colour are expected to have no detrimental effects when used in concrete or mortar products. A darker coloured solution may be the result of humus content and/or reactions from other contaminents and may require further investigation to determine the extent of possible effects to concrete or mortar properties.

3 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

AS 1141.2, *Methods for sampling and testing aggregates, Part 1: Definitions*

AS 1141.2, *Methods for sampling and testing aggregates, Method 2: Basic testing equipment*

AS 1141.3.1, *Methods for sampling and testing aggregates, Method 3.1: Sampling Aggregates*

4 Definitions

For the purpose of this Standard the definitions in AS 1141.1 apply.

5 Safety precautions

Procedures using strong alkalis, including the preparation of dilute solutions of these chemicals, should be carried out with care.

WARNING — STRONG ALKALIS ARE HAZARDOUS AND CAN RESULT IN OFTEN IRREVERSIBLE DAMAGE TO THE SKIN OR EYES. INGESTION OF THE CHEMICAL, INHALATION OF THE FUMES, OR SKIN CONTACT CONSTITUTES A SERIOUS HEALTH HAZARD.

Appropriate documentation should be consulted as to safety precautions.

6 Apparatus

The following apparatus, conforming to the relevant provisions of AS 1141.2, is required:

(a) *Stoppered rectangular clear glass bottles* — of approximately 350 mL or greater capacity.

NOTE Suitable bottles were known as graduated prescription bottles. Other containers may be used provided the light path for the comparison test is the same for the test solution and the standard solution [see Clause 10(c)]. European Standard EN 1744-1:2009 specifies a clear, cylindrical stoppered glass bottle approximately 450 mL with an external diameter of 70 mm.