INTERNATIONAL STANDARD



First edition 1997-01-15

Abrasive grains and crude — Chemical analysis of silicon carbide

Abrasifs en grains ou en roche — Analyse chimique du carbure de silicium



Reference number ISO 9286:1997(E)

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International Organization for Standardization

Case Postale 56 • CH-1211 Genève 20 • Switzerland

Foreword

ISU federation of preparing Internation technical committees. Each which a technical committee has we represented on that committee. International and non-governmental, in liaison with ISO, also take collaborates closely with the International Electrotec (IEC) on all matters of electrotechnical standardization. Maft International Standards adopted by the technic interd to the member bodies for voting. Publication interd to the member bodies ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission

part International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting

International Standard ISO 9286 was prepared by Technical Committee ISO/TC 29, whall tools, Subcommittee SC 5, Grinding wheels and abrasives.

abrasives. Annexes A and Bouthis International Standard are for information only.

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Abrasive grains and crude — Chemical analysis of silicon carbide

1 Scope

This International Standard cove the chemical analysis of silicon carbide based abrasive grains and crudes. It is applicable for the determination of the surface impurities of abrasives grains and determining the SiC content of crushed crude when the silicon carbion carbion content is greater than 95 % (m/m).

When the grain size of the silicon carbide is greater than or equal to 15 µm, the determination of the loss on acid treatment is carried out according to the residual SiC content (SiC_R) according to the method given in 3.7. ${\bf O}$

When the grain size of the silicon carbide is smaller than 15 µm, the determination of the SiC content shall be $\mathbf{2}$.1 or 4.4.2.3 and 4.5 because the methods given in 4.2 and carried out by the methods described in 4.3 and 4.4 3.7 inevitably give false results due to oxidation.

When the surface carbon content [w (C_{surf})] is greater than 2 % (m/m), a coulometric determination according to the method described in 3.4.2.3 will give correct results. The gravimetric method described in 3.4.2.1 is only applicable to surface carbon contents which are greater than 2 % (m/m) if ignition is continued to a constant weight or a weight increase. The coulometric method described in 3.4.20 annot be applied in cases where w(C_{surf}) is more than 2 %.

2 Normative reference

refate The following standard contains provisions which, through reference in the text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9138:1993, Abrasive grains — Sampling and splitting.

Analysis of surface impurities 3

This clause applies to the determination of the surface impurities of abrasive grains in their original particle size state.

3.1 Sampling

The sample shall be taken from the batch of SiC grains to be analysed by according to the method described in ISO 9138.