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**Abrasives, bonded abrasive
products and coated abrasives—
Terms and marks**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Grinding Wheel Association (GIS)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS R 6004:2005** has been replaced with this Standard.

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Abrasives, bonded abrasive products and coated abrasives—Terms and marks

Introduction

This Japanese Industrial Standard was established in 1961 and has gone through 4 revisions to this day. Since the last revision was made in 2005, there has been revisions of related standards; additions and revisions of related terms, and also a need for clearer definitions of terms has been recognized. The revision at this time is made for updating the contents to correspond to these matters.

No International Standard corresponding to this Standard has been established at this point.

1 Scope

This Standard specifies the main terms and symbols (hereafter referred to as “terms and symbols”) of abrasives, bonded abrasive products and coated abrasives.

2 Classification

The terms and symbols are classified according to the following headings:

- a) Abrasives
- b) Bonded abrasive products
- c) Coated abrasives

3 Terms and symbols, and their definitions

For the purposes of this Standard, the terms and symbols and their definitions in the following apply.

NOTE : The numbers shown in the column of “Definition” indicate that the term has plural definitions.

a) **Abrasives**1) **Terms and their definitions**

Number	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1001	研削材	KENSAKUZAI	generic term for substances having greater hardness to be used for scraping off metals, woods, etc. It generally refers to those of coarse grain size. (see JIS R 6111)	abrasives
1002	研磨材	KENMAZAI	generic term for substances having greater hardness to be used for wearing away or polishing metals, woods, etc. It generally refers to those of fine grain size. (see JIS R 6111)	abrasives
1003	人造研削材	ZINZÔ KENSAKUZAI	abrasives that are made artificially (see JIS R 6111)	artificial abrasives
1004	天然研削材	TENNEN KENSAKUZAI	abrasives which have been obtained from natural resources	natural abrasives
1005	アルミナ質研削材	ARUMINASITU KENSAKUZAI	generic term for abrasives mainly composed of alumina; brown fused alumina, white fused alumina, ruby fused alumina, mono-crystalline fused alumina, artificial emery, and fused alumina zirconia (see JIS R 6111)	alumina abrasives
1006	褐色アルミナ研削材	KASSYOKU ARUMINA KENSAKUZAI	abrasives prepared by melting, reducing, solidifying alumina raw material mainly composed of bauxite in an arc type electric furnace, then by pulverizing the lumps which are mainly composed of alumina and containing adequate amount of titanium oxide and regulating its grain size They are mainly composed of corundum crystals making solid solution with titanium oxide, and have brownish colour as a whole. (see JIS R 6111)	brown fused alumina abrasives

Number	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1007	白色アルミナ研削材	HAKUSYOKU ARUMINA KENSAKUZAI	abrasives prepared by melting of the alumina purified by Bayer method in an arc type electric furnace, followed by solidification and pulverization of the lump composed of corundum crystals, which have whitish colour as a whole (see JIS R 6111)	white fused alumina abrasives
1008	淡紅色アルミナ研削材	TANKÔSYOKU ARUMINA KENSAKUZAI	abrasives prepared by addition of adequate amount of chromium oxide and further addition of, if needed, a raw material composed of titanium oxide to the alumina purified by Bayer method, followed by melting in an arc type electric furnace, solidification, pulverization and regulation of its grain size They are composed of corundum crystals, and have light pinkish colour as a whole. (see JIS R 6111)	ruby fused alumina abrasives
1009	解砕形アルミナ研削材	KAISAIGATA ARUMINA KENSAKUZAI	abrasives prepared by melting of bauxite or alumina raw material composed of alumina purified by Bayer method in an arc type electric furnace, then by solidifying, pulverizing, and regulating its grain size They are mainly composed of single crystal of corundum. (see JIS R 6111)	mono-crystalline fused alumina abrasives
1010	人造エメリー研削材	ZINZÔ EMERÎ KENSAKUZAI	abrasives prepared by melting and reducing of alumina raw material composed mainly of bauxite in an arc type electric furnace, followed by solidification and pulverization of the lump and regulation of its grain size They are mainly composed of corundum crystals and mullite crystals and have grayish black colour as a whole. (see JIS R 6111)	artificial emery abrasives

Number	Term (Japanese character)	Reading	Definition	English equivalent (informative)
1011	アルミナジルコニア研削材	ARUMINA ZIRUKONIA KENSAKUZAI	abrasives prepared by melting of alumina which has been purified by Bayer method, and to which zirconia raw material is added, in an arc type electric furnace, followed by pulverization of the lump solidified and regulation of its grain size There are AZ(25) and AZ(40), each with different zirconia content. (see JIS R 6111)	fused alumina zirconia abrasives
1012	炭化けい素質研削材	TANKAKEISOSITU KENSAKUZAI	generic term for black silicon carbide abrasives and green silicon carbide abrasives (see JIS R 6111)	silicon carbide abrasives
1013	黒色炭化けい素研削材	KOKUSYOKU TANKAKEISO KENSAKUZAI	abrasives prepared by allowing silicon oxide raw material composed mainly of silica stone and silica sand, with addition of cokes, to react chemically in an electric resistance furnace, and by pulverization of the lumps and regulation of its grain size They are composed of α -type silicon carbide, and have blackish colour as a whole. (see JIS R 6111)	black silicon carbide abrasives
1014	緑色炭化けい素研削材	RYOKUSYOKU TANKAKEISO KENSAKUZAI	abrasives prepared by chemical reaction of silicon oxide raw material composed mainly of silica stone and silica sand, with cokes in an electric resistance furnace, followed by pulverization of the lumps and regulation of its grain size They are composed of α -type silicon carbide, higher in purity than black silicon carbide abrasives, and have greenish colour as a whole. (see JIS R 6111)	green silicon carbide abrasives
1015	粗粒	SORYŪ	abrasive grains of grain size F4 to F220 and P12 to P220 (see JIS R 6001 and JIS R 6010)	macrogrits
1016	微粉	BIHUN	abrasive grains of grains size F230 to F1200, #240 to #8000, and P240 to P2500 (see JIS R 6001 and JIS R 6010)	microgrits