

JIS

JAPANESE INDUSTRIAL STANDARD

**Vocabulary for fibre
reinforced plastic**

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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Vocabulary for fibre reinforced plastic

K 7010-1995

1. Scope This Japanese Industrial Standard specifies terms relating to fibre reinforced plastic and their definitions.

Remarks: The following standard is cited in this Standard:

JIS K 6900 Plastics — Vocabulary

2. Classification Vocabulary for fibre reinforced plastic shall be classified as follows:

- (1) General
- (2) Materials
- (3) Moulding and processing
- (4) Property and performance

3. Terms and definitions Terms and definitions are as follows:

Further, the number is attached to the term, and English equivalent is shown for informative reference.

- Remarks
1. When two or more terms are jointly stated in one term column, the term is used preferentially in the stated order.
 2. The English indicated with a thick letter in the English equivalent indicates the English equivalent mentioned in JIS K 6900.

(1) General

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
1001	ガラス繊維強化プラスチック	GARASU SEN'I KYÔKA PURASUTIKKU	A composite material consisting of glass fibre as reinforcement and thermosetting resin or thermoplastic resin as a matrix. GFRP as abbreviation.	glass fibre reinforced plastic
1002	強化プラスチック	KYÔKA PURASUTIKKU	A plastic with high-strength fibres embedded in the composition, resulting in some strength properties greatly superior to those of the base resin. Informative reference: This definition is in accordance with JIS K 6900.	reinforced plastic
1003	積層品	SEKISÔ HIN	Product made by bonding together two or more layers of a material or plural materials. Informative reference: This definition is in accordance with JIS K 6900.	laminated product
1004	繊維強化熱可塑性プラスチック	SEN'I KYÔKA NETUKA- SOSEI PURASUTIKKU	Fibre reinforced plastic wherein thermoplastic resin is used as a matrix. FRTP as abbreviation.	fibre reinforced thermoplastic
1005	繊維強化プラスチック	SEN'I KYÔKA PURASUTIKKU	A composite material of various fibres as reinforcement and thermosetting resin or thermoplastic resin as a matrix. FRP as abbreviation.	fibre reinforced plastic
1006	繊維強化複合材料	SEN'I KYÔKA HUKUGÔ ZAIKYÔ	A composite material of various fibre reinforced materials and various matrixes.	fibre reinforced composite material
1007	層間ハイブリッド	SÔKAN HAIBURIDDO	A hybrid composite material wherein a fibre layer and another fibre layer are laminated.	interlayer hybrid, interply hybrid
1008	層内ハイブリッド	SÔNAI HAIBURIDDO	A hybrid composite material wherein a layer containing two or more kinds of fibres is laminated.	intrahybrid, intraply hybrid
1009	耐食FRP	TAISYOKU-FRP	A generic term of fibre reinforced plastic having a corrosion resistant layer. Remarks: See No. 4021.	corrosion resistant FRP

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
1010	炭素繊維強化プラスチック	TANSO SEN'I KYÔKA PURASUTIKKU	A composite material having carbon fibre as reinforcement and thermosetting resin or thermoplastic resin as a matrix. Remarks: The former is called CFRP and the latter is called CFRTP.	carbon fibre reinforced plastic
1011	ハイブリッド複合材料	HAIBURIDDO HUKUGÔ ZAIYÔ	A composite material having two or more kinds of fibre, particle, flake, etc. as reinforcement.	hybrid composite material
1012	複合材料	HUKUGÔ ZAIYÔ	(1) A solid product consisting of two or more distinct phases, including a binding material (matrix) and a particulate or fibrous material. Note – Example: Moulding material containing reinforcing fibres, particulate fillers or hollow spheres. (2) A solid product consisting of two or more layers (often in a symmetrical assembly) of plastic film or sheet, normal or syntactic cellular plastic, metal, wood, composite material according to definition (1), etc. with or without adhesive interlayers. Note – Examples: Film composite materials for packaging; sandwich cellular composite materials for structural applications, laminates made with paper, cloth, etc. Informative reference: This definition is in accordance with JIS K 6900.	composite , composite material
1013	分散強化複合材料	BUNSAN KYÔKA HUKUGÔ ZAIYÔ	A composite material wherein microware materials such as a particle, a flake, etc. are dispersed.	dispersion reinforced composite material

(2) Materials

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
2001	編物	AMIMONO	A planar or tubular structure made by the intermeshing of loops of textile glass yarns. Informative reference: This definition is in accordance with JIS K 6900.	knitted fabric
2002	あや(綾)織	AYAORI	A weaving, one of the weavings, wherein rises of a warp and a weft succeed obliquely to make obliquely intersecting lines.	twill weave
2003	アラミド繊維	ARAMIDO SEN'I	A fibre having aromatic polyamide as a component.	aramid fibre
2004	アルミナ繊維	ARUMINA SEN'I	A fibre having alumina (Al ₂ O ₃) as a main component.	alumina fibre
2005	Eガラス繊維	E-GARASU SEN'I	A glass fibre of at most 0.8 % content of alkali (Na ₂ O, K ₂ O).	E glass fibre
2006	イソフタル酸系樹脂	ISOHUTARUSAN-KEI ZYUSI	An unsaturated polyester resin wherein isophthalic acid is used as one component of the acid.	isophthalic resin
2007	ウイスカ	UISUKA	A short, fibrous, single-crystal, inorganic reinforcing material. Informative reference: This definition is in accordance with JIS K 6900.	whisker
2008	Sガラス繊維	S-GARASU SEN'I	A glass fibre of high intensity.	S glass fibre
2009	エポキシ樹脂	EPOKISI ZYUSI	A resin containing epoxy groups capable of crosslinking. Informative reference: This definition is in accordance with JIS K 6900.	epoxy [EP] resin
2010	塩素化パラフィン	ENSOKA PARAFIN	That which is obtained by chlorinating paraffin.	chlorinated paraffin

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
2011	織物	ORIMONO	A textile glass fabric made by interlacing two sets of threads (single, folded, or cabled yarns, rovings) perpendicular to each other or at some other specified angle, such interlacing being formed during weaving on a loom or weaving machine. Informative reference: This definition is in accordance with JIS K 6900.	woven fabric , fabric
2012	オルソフタル酸系樹脂	ORUSOHUTARUSAN-KEI ZYUSI	An unsaturated polyester resin wherein phthalic (orthophthalic) acid anhydride is used as one component of the acid.	orthophthalic resin
2013	カップリング剤	KAPPURINGU ZAI	A substance that promotes or establishes a stronger bond at the interface of the resin matrix (base material) and the reinforcement. Note – The coupling agent may be applied to the reinforcement, added to the resin, or both. Informative reference: This definition is in accordance with JIS K 6900.	coupling agent
2014	ガラス繊維	GARASU SEN'I	A glass which is melted to make yarn, and made fibrous. Remarks: There are long fibre used for reinforcement, electrical insulating material, etc., and short fibre used for thermal insulation and sound absorption. There are E glass, C glass, S glass, alkali resistant glass, quartz glass, etc. as composition.	glass fibre
2015	ガラステープ	GARASU TÊPU	A glass fibre of at most 100 mm woven width.	glass tape
2016	強化材	KYÔKAZAI	A fibrous substrate used for reinforcing organic substance such as plastics, rubber, etc., and inorganic substance such as metal, cement, etc. Remarks: See Nos. 2087 and 2090.	reinforcement

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
2017	空気硬化性樹脂	KŪKI KÔKASEI ZYUSI	A resin wherein a surface in contact with the air is thoroughly cured. Remarks: Air cure type resin is used especially as unsaturated polyester resin.	air cure type resin
2018	空気非硬化性樹脂	KŪKI HIKÔKASEI ZYUSI	A resin wherein its surface is prevented from curing when exposed to the air, and not thoroughly cured.	non-air-cure type resin
2019	組物	KUMIMONO	A planar or tubular fabric structure made by interlacing several textile glass yarns in such a manner that all yarns lie at angles other than 0° or 90° to the length direction of the fabric. Informative reference: This definition is in accordance with JIS K 6900.	braid
2020	クロム処理	KUROMU SYORI	One of surface treatments for glass fibre wherein the surface of the glass fibre is treated with chromate complex.	chrome finishing
2021	結合剤 (繊維物における)	KETUGÔ ZAI (ORIMONO NI OKERU)	Materials applied to staple fibres and to strands in order to hold them in a desired arrangement, for example, in chopped strand mat, continuous strand mat, and surfacing mat. Informative reference: This definition is in accordance with JIS K 6900.	binder (in textiles)
2022	ゲルコート用樹脂	GERUKÔTO YÔ ZYUSI	Resin used for improvement of chemical resistance, weather resistance, etc. as well as for improvement of a surface beauty sense, and smooth glossiness of a moulded product in contact pressure moulding of FRP. There are gel coat resin for a mould and gel coat resin for a product.	gel coat resin

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
2023	高強度炭素繊維	KÔKYÔDO TANSO SEN'I	Carbon fibre of at least about 3000 MPa tensile strength and 200 GPa to 250 GPa tensile elastic modulus. Remarks: The range of a characteristic value is not always strict.	high strength carbon fibre
2024	高弾性率炭素繊維	KÔDANSEIRITU TANSO SEN'I	Carbon fibre having at least about 350 GPa tensile elastic modulus. Remarks: Carbon fibre of at least 600 GPa is also occasionally called ultra-high modulus fibre.	high modulus carbon fibre
2025	黒鉛グレード繊維	KOKUEN GRÊDO SEN'I	Carbon fibre having a structure adjacent to graphite, which is treated at a temperature of at least 1700°C (or 2000°C).	graphite grade fibre
2026	サイズ, 一次サイズ, オイル	SAIZU, ITIZI-SAIZU, OIRU	Material applied to glass fibres or filaments during the course of their manufacture. Informative reference: This definition is in accordance with JIS K 6900.	size
2027	サイズ処理	SAIZU SYORI	A treating process wherein a surface of fibre is finished with a suitable treatment agent in order to improve treatability of fibre or affinity with base material.	sizing
2028	サーフェイシング マット	SÂFEISINGU MATTO	A thin compact sheet of bonded staple fibres or continuous filaments, used as the surface layer of composite materials. Informative reference: This definition is in accordance with JIS K 6900.	surfacing mat
2029	ジアリルフタレート 樹脂	ZIARIRU HUTARÊTO ZYUSI	Thermosetting resin having diallyl phthalate as a main component. DAP resin as abbreviation.	diallyl phthalate resin

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
2030	Cガラス繊維	C-GARASU SEN'I	Glass fibre of about 10 % alkali (Na ₂ O, K ₂ O) content.	C glass fibre
2031	シートモールディング コンパウンド	SITO MÔRUDINGU KONPAUNDO	Sheet like moulding material wherein roving is cut, the dispersed strand is impregnated with a compound in which unsaturated polyester resin, curing agent, thickener, filler, etc., are mixed, and its surface is made noncohesive. SMC as abbreviation.	sheet moulding compound
2032	集束剤	SYÛSOKUZAI	An agent used for raising workability of the next process by adding a binding property when a filament is converged to make strand in a spinning process of fibre. Remarks: There are yarn sizing agent and roving sizing agent.	sizing agent
2033	充てん材, ファイラー	ZYÛTENZAI, FIRÂ	A relatively inert solid material added to a plastic to modify its strength, permanence, working properties or other performance, or to lower costs. Informative reference: This definition is in accordance with JIS K 6900.	filler
2034	朱子織	SYUSUORI	One of weavings. Satin weave is a weaving of many floats wherein an apex of a warf and a weft is arranged at specific intervals.	satin weave
2035	処理ガラスクロス	SYORI GARASU KUROSU	Glass cloth finished for surface such as silane finishing or the like after cleaning finish in order to improve its bond with resin.	finished glass cloth
2036	シラン処理	SIRAN SYORI	Surface finishing for raising bonding effect among reinforcement, filler and matrix by using silane coupling agents such as vinyl silane, acrylic silane, epoxy silane, amino silane, etc.	silane finishing

No.	Term (Japanese character)	Reading	Definition	English equivalent (informative reference)
2037	ステープルファイバ	SUTĒPURU FAIBA	A single textile element of small diameter and short length. Note – This forms the basis for textile glass staple fibre products. Informative reference: This definition is in accordance with JIS K 6900.	staple fibre
2038	ステープルヤーン	SUTĒPURU YĀN	Yarn consisting of staple, which is only twisted yarn.	staple yarn
2039	ストランド	SUTORANDO	An assembly of simultaneously produced parallel filaments, slightly bonded and without intentional twist. Informative reference: This definition is in accordance with JIS K 6900.	strand
2040	スライバ	SURAIBA	A continuous assembly of slightly bonded staple fibres in a practically parallel arrangement. Informative reference: This definition is in accordance with JIS K 6900.	sliver
2041	スリーブ	SURĪBU	A tubular structure of textile glass yarns with a collapsed width not exceeding 100 mm. Informative reference: This definition is in accordance with JIS K 6900.	sleeving
2042	増粘剤	ZŌNENZAI	A substance that increases the viscosity of a liquid polymeric system. Informative reference: This definition is in accordance with JIS K 6900.	thickener
2043	束強度	SOKUKYŌDO	Fibres of reinforcement are frequently used in a form wherein many mono filaments are bonded with a sizing agent or the like. The bundle strength is the strength of the bundle of mono filaments.	bundle strength, strand integrity