

5. Glass ID List

5.1 ID List for Property Database

State

Glass General	G	Glass
	X	Glass-Ceramics
	C	Composite
	M	Modified
	T	Thin Film
Melt	F	
Non-Vitrified	N	
Not Specified	(Z)	

Glass System

Oxide Glass	01	Silica
	02	Alkali Silicate
	03	Alkaline-earth Silicate (include MgO)
	04	Lead-Silicate
	05	Boro-Silicate
	06	Alumino-Silicate
	07	Zinc-Silicate
	08	Fluoro-Silicate
	09	Other Silicate
	10	Borate
	20	Phosphate
	25	Fluoro-Phosphate
	27	Lead
	28	Tellurite
	30	Aluminate
	35	Germanate
	38	Oxynitride
	40	Other Oxide
Other Glass	50	Chalcogenide
	60	Fluoride
	70	Halide (Except Fluoride)
	80	Other Non-Oxide (Except Amorphous Metal)
	81	Amorphous Metal
	90	Others
	98	Non-Vitrified
	99	Unidentified

9 April, 2018

Appearance, Feature, Process

Appearance

Shape

Grain

- 011 Powder, Frit
- 012 Bead
- 013 Balloon
- 041 Flake

Linear

- 021 Fiber
- 022 Whisker
- 023 Rod
- 024 Tube
- 025 Hollow Fiber

Film, Coating

- 030 Film, Coating
- 031 Thin Film, Deposited
- 033 Thick Film
- 042 Enamel, Glaze
- 043 Lining

Flat

- 032 Film, Sheet
- 044 Flat Glass
- 045 Plate Glass
- 046 Sheet Glass
- 047 Disk

Other Shape

- 063 Block
- 064 Slab
- 090 Other Shape

Structure

- 210 Porous
- 211 Cellular
- 212 Nano Structure
- 324 Anisotropic
- 330 Graded Index
- 327 Inhomogeneity

Forming

- 061 Blown, Bottle, Bulb
- 220 Sintered
- 062 Pressed
- 221 Hot Pressed
- 222 Molded
- 223 Cast

Color, Transparency

- 310 Colored
- 321 Opal
- 322 Opaque
- 323 Translucent
- 325 Transparent
- 326 Yellowphase

Feature

Chemical

- 411 Water Resistant
- 412 Alkali Resistant
- 413 Acid Resistant
- 414 Water Soluble Glass
- 421 Low Melting
- 431 Hard Glass
- 511 Non Alkali
- 512 Non Lead
- 514 Non Pb, As, Sb
- 513 Non Phosphate
- 521 Non Actinic (Non Radioactive)
- 522 Actinic (Radioactive)
- 531 Low Alkali
- 532 Mixed Alkali
- 611 Other Modified

Heat-treated

- 440 Strengthened (Tempered)
- 630 Ion Exchanged
- 621 Glass Ceramics
- 622 Phase Separated

Composite

- 640 Hybrid Material
- 710 Composite
- 711 Composite with Ceramics
- 712 Composite with Organic Material
- 713 Composite with Metal

Other Feature

- 631 Leached
- 650 Doped (Stuffed)
- 441 Machinable
- 660 Photochromic
- 790 Ancient Glass

Process

- 801 Melting
- 810 Rapid Quenching
- 820 Micro Gravity
- 830 Sol-Gel
- 840 CVD
- 850 PVD
- 860 Natural Glass
- 890 Other Process

Others

- 999 Others

Usage

General

001 General

Energy, Nuclear, Radiation

Energy

110 Energy
111 Battery
114 Fuel Cell
112 Solar
113 Solar Cell

Radiation

140 Radiation
141 Radiation Shield
142 Scintillator
143 Cherenkov Counter
144 High Energy Particle
Detector

Nuclear

160 Nuclear
161 Radio Active Waste
Solidification

Radiation Dosimetry

170 Radiation Dosimetry

Optics, Optoelectronics

Optical Use

200 Optics, Optoelectronics
205 Optical Use

Lens & Prism

210 Lens & Prism
211 Ophthalmic Lens
212 Molded Lens

Mirror

220 Mirror

Wavelength Selector

230 Wavelength Selector
231 Color Filter
232 Non-glare Filter
233 IR-Transmitting Material
234 UV-Transmitting Material
235 IR-Absorbing Material
236 UV-Absorbing Material

Laser

240 Laser

Optical Transmission

250 Optical Transmission

251 Optical Fiber
252 Optical Waveguide
253 Optical Connector
254 Optical Isolator
255 Optical Demulti-Multi Plexer
256 Optical Divider
257 Polarization Relat Fiber
258 Fiber Bundle
259 Fiber Array

Optical Information Processing

260 Optical Information Processing
261 Optical Modulator
262 Optical Switch

Optical Memory

270 Optical Memory
271 Magneto-Optical Memory
272 Erasable Optical Memory

Electronics, Electrical

Display

300 Electronics, Electrical
310 Display
311 Cathode Ray Tube
312 Plasma Display
313 Liquid Crystal Display
314 Electro Luminescence
315 Vacuum Tube
316 Video Camera

Solder Glass, Sealing Glass

320 Solder Glass, Sealing Glass
321 Solder Glass for Semiconductor
Passivation
322 Solder Glass for Semiconductor
Package
323 Solder Glass for Magnetic Head
324 Solder Glass for Cathode Ray Tube
325 Solder Glass for Hermetic Seal

Substrate

330 Substrate
331 Substrate for Photolithography Mask
332 Substrate for Display

Ultrasonic Delay Line

340 Ultrasonic Delay Line

Microelectronics

350 Microelectronics

Electric Circuit

351 Electric Insulator
352 Electric Capacitor
353 Electric Resistor

	354	Electric Circuit, Circuit Board	Heat Exchanger	
	355	Electric Conductor	580	Heat Exchanger
Semiconductor	360	Semiconductor		
	365	IC, LSI		
	366	IC Package		
Dielectrics	370	Dielectrics		
Sensor	375	Sensor		
Magnetic Recording	390	Magnetic Recording Head		
	391	Magnetic Memory Disk		
Illumination				
	400	Illumination		
	410	Lamp		
	401	LED Illumination		
	411	Incandescent Lamp		
	412	Fluorescent Lamp		
	413	Halogen Lamp		
	414	Mercury Lamp		
	415	Sodium Lamp		
	416	Head Lamp		
	420	Shade		
	421	Reflector		
Architecture, Traffic, Industry				
	500	Architecture, Traffic, Industry		
Architecture	510	Window		
	511	Wall		
	512	Roof		
	513	Thermal Insulator		
	514	Reinforcement of Cement		
	515	Tile		
Traffic	540	Traffic		
	541	Traffic Marker, Retroreflective Glass		
	550	Vehicle Window		
	551	Ship		
	552	Airplane		
Space	553	Space		
Engine	560	Engine		
Machinery	570	Machinery		
Living, Consumer Products, Arts				
	600	Living, Consumer Products, Arts		
	601	Consumer Products		
	610	Container		
	611	Cooking Ware, Culinary		
	612	Table Ware		
	613	Sanitary Ware		
	614	Bottle		
	620	Stove		
	630	Sporting Goods		
	640	Art		
	641	Jewelry		
Chemical, Biotechnology, Medical				
	700	Chemical, Biotechnology, Medical		
Chemical	710	Chemical		
	711	Laboratory Ware		
	712	Chemical Plant		
	713	Ion Electrode, Glass Electrode		
	714	Filtration		
	715	Catalyst Carrier		
	716	Gas Separation		
Medical	720	Medical		
	721	Artificial Bone		
	728	Pharmacy		
Dental	730	Dental		
	731	Artificial Tooth		
	732	Dental Crown		
	733	Dental Cement		
Biotechnology	740	Biotechnology		
Sterilizer	745	Sterilizer		
Agriculture	750	Agriculture		
Material				
	800	Material		
	805	Binder		
	806	Ceramic Binder		
	810	Metal		
	820	Lubricant		

830 Coating
831 Coating on Ceramics
832 Coating on Metal
835 Painting
840 Composite
841 Filler
845 Fiber
850 Paper
860 Ceramics
870 Plastics, FRP
880 Waste Disposal
881 Chemical Strengthen
839 Glass-Ceramics
842 Photocatalyst

Others

900 Others
999 Not Specified

Data Source

Book

(J): japanese language

- 101 Bansal N. P. and Dremus R. H., Handbook of Glass Properties, (Academic Press), 1986.
- 102 Mazurin O. V., et al., Handbook of Glass Data, (Elsevier), **A**, 1983; **B**, 1985; **C**, 1987; **D**, 1991; **E**, 1993.
- 103 Edited by Boyd D. C., MacDowell J. F., Commercial Glasses, (Am. Ceram. Soc.), 1986.
- 105 Volf M. B., Technical Glasses, (Sir Isaac Pitman and Sons), 1961.
- 106 Morey G. W., Properties of Glass, (Reinhold Publishing Corp.), 1954.
- 107 Varshneya A. K., Fundamentals of Inorganic Glasses, (Academic Press), 1994.
- 108 Edited by GMAJ, Data Book of Glass Composition, (Giho-do), 1991 (J)
- 109 Ed. by Stebbins F. J., et al., Structure, Dynamics and Properties of Silicate Melts, (Mineral. Soc. Amer.), 1995.
- 110 Frischat G. H., Ionic Diffusion in Oxide Glass, (Trans. Tech. Publications), 1975.
- 111 Mechanical Behavior of Materials, (Soc. Materials Science, Japan), 1972.
- 112 Manghnani M. H. & Akimoto S., High-Pressure Research: Applications in Geophysics, (Academic Press), 1977.
- 113 Edited by Timmerhaus K. D. and Barber M. S., High-Pressure Science and Technology, (Plenum Press).
- 114 Edited by Bickford D. F. et al., Advances in Fusion of Glass, (Am. Ceram. Soc.), 1988.
- 115 Edited by Shelby J. E., Rare Elements in Glass, (Trans. Tech. Publications), 1994.
- 116 Edited by Seward III T. P., Vascot T., High Temperature Glass Melt Property Database for Process Modeling, (Am. Ceram. Soc.), 2005.
- 117 Edited by Fanderlik I., Vlastnosti Skel, (Informatorium, Praha), 1996.
- 121 Sakka S. et al., Glass Handbook, (Asakura Publishing), 1975 (J)
- 122 Morinaga K. et al., Physical Properties of PbO-B₂O₃-SiO₂ Glass Melts, 2000 (J)

Scientific Journal

(): language or previous name

- | | |
|--|--|
| 201 American Ceramic Soc. Bull. | 206 J. American Ceramic Soc. |
| 212 American Mineralogist | 275 J. Applied Crystallography |
| 223 Applied Optics | 221 J. Applied Physics |
| 235 Applied Physics Letters | 282 J. Asian Ceramic Soc. |
| 255 Armyanskii Khimicheskii Zhurnal (R) | 232 J. Australian Ceramic Soc. |
| 270 Biomaterials | 228 J. Canadian Ceramic Soc. |
| 280 Bull. Ceramic Soc. Japan (J) | 215 J. Chemical Physics |
| 248 Bull. Gov. Ind. Res. Osaka | 241 J. Ceramic Soc. Japan |
| 253 Bull. Inst. Chemical Res. Kyoto Univ. | 246 J. Chemical Soc. Japan |
| 256 Bull. Materials Science | 259 J. Electrochemical Soc. |
| 234 Ceramic Industry | 267 J. European Ceramic Soc. |
| 219 Ceramics - Silikaty | 249 J. Japan Inst. Metals and Materials (J) |
| 281 Chemical Physics Letters | 244 J. Japan Soc. Powder and Powder Metallurgy (J) |
| 254 Chemistry Express (J) | 271 J. Luminescence |
| 262 Chemistry Letters | 279 J. Magnetic Resonance |
| 257 Contributions to Mineralogy and Petrology | 216 J. Materials Research |
| 258 Geochim. Cosmochim. Acta | 226 J. Materials Science |
| 230 Glass | 227 J. Materials Science Letters |
| 203 Glass & Ceramics (Glass & Ceramics-USSR) | 263 J. Mater. Sci.: Materials in Electronics |
| 233 Glass and Ceramics Bull. | 207 J. Non-Crystalline Solids |
| 231 Glass Industry | 222 J. Optical Soc. America |
| 209 Glass Physics & Chemistry (Glass Phys. & Chem.-USSR) | 217 J. Physics: Condensed Matter |
| 204 Glass Technology | 272 J. Physical Chemistry B |
| 205 Glass Science and Technology (Glastech. Ber.) | 225 J. Physics and Chemistry of Solids |
| 283 Int. J. Applied Glass Science | 202 J. Res. National Bureau of Standards |
| 237 J. Alloys & Compounds | 242 J. Soc. Materials Science Japan (J) |

211 J. Sol-Gel Science and Technology
 220 J. Solid State Chemistry
 245 Japanese J. Applied Physics
 264 Keikinzoku (J)
 265 Kyudai-Kougakushuhou (J)
 268 Materials Chemistry and Physics
 214 Materials Res. Bull.
 273 Materials Science Forum
 243 Materials Science Res. International
 278 Materials Transactions JIM
 251 Molten Salt (J)
 277 Nature
 260 Neorganicheskie Materialy (R)
 250 New Glass (J)
 276 NSG Foundation Mater. Sci. Eng. Rep. (J)
 240 Optical Letters
 239 Optical Materials
 247 Oyo Buturi (J)
 274 Physica B
 208 Physics and Chemistry of Glasses
 224 Physical Review B
 252 Rep. Inst. Ind. Sci. Univ. Tokyo (J)
 261 Rev. Int. Hautes. Temp. Refract. (F)
 218 Silikattechnik (G)
 238 Solid State Communications
 213 Solid State Ionics
 266 Steklo Keram. (R)
 229 Trans. Indian Ceramic Soc.
 236 Thin Solid Film
 210 Verres et Refractaires
 269 Zeitschrift Naturforsch. A
 299 Others

Proceedings, etc. (): japanese language

302 Annual Meeting Ceramic Soc. Japan (J)
 303 Fall Meeting Ceramic Soc. Japan (J)
 323 NEDO Project Reprint of NGF (J)
 322 NGF's Additional New Data (J)
 324 Nikkiren Report of NGF (J)
 301 Proc. ICG
 304 Proc. Japan Cong. Materials Research (J)
 305 Symp. Glasses and Photonic Materials (J)
 399 Others

Patent

4EP European Patent
 4JA Japanese Patent
 4US US Patent

Patent Company

(): nation, location or *previous name

669 3B (BE)
 583 3M (US)
 663 AFO Research Inc. (US)
 575 AGC Glass Europe (BE) (Glaverbel*)
 520 AGC Techno Glass (J) (Asahi Techno Glass*<Iwaki Glass*)
 682 AGY Holding Corp. (US)
 586 American Biomaterials (US)
 562 Annaka Special Glass (J)
 628 ANVAR (FR)
 511 Asahi Fiber Glass* (J)
 510 Asahi Glass (J)
 617 Asahi Kasei Corp. (J) (Asahi Chemical Industry*)
 634 AT & T Bell Lab. (US)
 638 Atlantic Richfield (US)
 527 AvanStrate (J) (NH Techno Glass*)
 632 Battelle Memorial Inst. (US)
 651 Bayer (DE)
 639 British Telecom (GB)
 512 Canon Inc. (J)
 657 Carl Zeiss (DE)
 672 CDGM Glass (CN)
 513 Central Glass (J)
 683 Chongqing Polycomp Int'l Corp. (CN)
 627 Citizen Watch (J)
 623 CNRS (FR)
 542 CoorsTek (J) (Covalent Materials*<Toshiba Ceramics*)
 571 Corning Inc. (US)
 594 Covina-Co Vidreira Nac. (PT)
 648 Degussa (DE)
 572 Du Pont de Nemours (US)
 641 English Electric (GB)
 629 Ernst Leitz Wetzlar (DE)
 573 ESL (US)
 655 Eurival Industrie (IT)
 671 Eurokera (FR)
 537 FDK (J)
 646 Ferro Corp. (US)
 659 Ferro GmbH (DE)
 595 Flachglas (DE)
 678 Fraunhofer-G. (DE)
 622 Fuji Electric (J)
 601 Fujifilm Corp. (J) (Fuji Photo Film)
 515 Fujikura (J) (Fujikura Cable Works*)
 605 Fujitsu (J)
 516 Furukawa Electric (J)
 696 GC Corp. (J)
 591 GEC ALSTHOM (GB)
 574 General Electric (US)
 674 Gerresheimer Pisa S.P.A. (IT)
 662 Glass Inc. (US)
 673 Guardian Industries Corp. (US)

- | | |
|--|---|
| 670 Hamamatsu Photonics (J) | 559 NGK Insulators (J) |
| 535 HARIO (J) (Shibata Glass*<Shibata Hario Glass*) | 614 NGK Spark Plug (J) |
| 588 Hankuk Glass Industries (KR) | 694 NICHIAS Corp. (J) |
| 680 Heraeus Precious Metals North America (US) | 569 Nihon Klingage (J) |
| 660 Heraeus Quarzglas (DE) | 545 Nihon Yamamura Glass (J) (Yamamura Glass*) |
| 609 Hitachi (J) | 528 Nikon Corp (J) |
| 517 Hitachi Cable (J) | 564 Nippon Amorphous Metals (J) |
| 675 Hitachi Chemical (J) | 524 Nippon Electric Glass (J) |
| 625 Hitachi Metals (J) | 553 Nippon Frit (J) |
| 681 Hitachi Powdered Metals* (J) | 529 Nippon Sheet Glass (J) |
| 518 Hoya Corp. (J) | 686 Nippon Steel & Sumitomo Metal Corp. (J) |
| 589 IBM Corp. (US) | 547 Nitto Boseki (J) |
| 549 Idemitsu Kosan (J) | 525 Nitto Chemical Industry (J) |
| 658 Ikebukuro Horo Kogyo (J) | 695 Noritake (J) |
| 647 Int'l Std. Electric (US) | 610 NTT (J) |
| 519 Ishizuka Glass (J) | 676 Ocean's King Lighting Sci & Tech (CN) |
| 554 Isuzu Seiko (J) | 684 OCV Intellectual Capital (US) |
| 620 ITT Corp. (US) (ITT Industries*) | 531 Ohara Inc. (J) |
| 661 Ivoclar Vivadent AG (LI) | 650 Ohara Quarz (J) (Sumikin Ceramics & Quarz*) |
| 626 Iwasaki Electric (J) | 596 OI-NEG TV Products (US) |
| 636 Japan Fillite (J) | 534 Okamoto Glass (J) |
| 585 Johns Manville (US) | 551 Okuno Chemical Industries (J) |
| 704 Johnson Matthey (GB) | 631 Olin (US) |
| 702 Jushi Group (CN) | 532 Olympus Optical (J) |
| 604 Kanebo (J) | 563 Ota Glass (J) |
| 568 Kanto Horo Yuyaku (J) | 576 Owens Corning (US) (Owens-Corning Fiber G.*) |
| 621 KDD (J) | 577 Owens Illinois Inc. (US) |
| 692 KCC Corp. (KR) | 593 Owens Illinois (Kimble) (US) |
| 548 Kinmon Manufacturing (J) | 522 Panasonic Corp. (J) (Matsushita Electric Industrial*) |
| 697 Koa Glass (J) | 668 Pemco Brugge BVBA (BE) |
| 606 Kobe Steel (J) | 644 Pfizer Hospital Products (US) |
| 539 Kodak (US) | 578 Philips (NL) |
| 523 Konica Minolta (J) (Minolta Camera*) | 567 Photon Ceramics (J) |
| 693 Korea Inst. Sci. and Tech. (KIST) (KR) | 579 Pilkington* (GB) |
| 633 Kyocera (J) | 643 Post Office (GB) |
| 649 Le Verre Fluore (FR) | 580 PPG Industries (US) |
| 691 LG Chem (KR) | 503 Res. Dev. Corp. Japan (JRDC)* (J) |
| 677 LG Electronics Inc. (KR) | 699 Rockwool International (DK) |
| 584 Libbey Owens Ford (US) | 582 Saint-Gobain (FR) |
| 654 Mashpriborintorg (SU) | 618 Sanyo Electric* (J) |
| 521 Matsunami Glass (J) | 581 Schott AG (DE) (Schott Glaswerke*) |
| 611 Matsushita Electric Works* (J) | 653 Schott Glas* (Jena) (DE) |
| 565 Mitsubishi Cable Industries (J) | 590 Schott Corp. (US) (Schott Glass Tech.*) |
| 608 Mitsubishi Electric (J) | 613 Seiko Epson (J) (Suwa Seikosya*) |
| 546 Mitsubishi Materials (J) | 506 Shiga Pref. (J) |
| 557 Mitsui Mining (J) | 703 Shimadzu Corp. (J) |
| 505 Miyazaki Pref. (J) | 612 Shin-Etsu Chemical (J) |
| 550 Murata Manufacturing (J) | 558 Shin-Etsu Quartz Products (J) |
| 560 Narumi China Corp. (J) | 698 SHOEI CHEMICAL Inc. (J) |
| 500 Nat. Inst. Advanced Ind. Sci. & Tech. (AIST) (J)
(Agency of Ind. Sci. & Tech.*) | 624 Sony Corp. (J) |
| 502 Nat. Insti. Mat. Sci. (J) (Nat. Insti. Res. Inorg. Mat.*) | 640 Std. Telephones & Cables Pub.* (GB) |
| 656 Nat. Inst. Standards and Technology (US) | 540 Sumita Optical Glass (J) |
| 615 NEC Corp. (J) (Nippon Electric*) | 541 Sumitomo Electric Industries (J) |
| 689 NEC TOKIN Corp. (J) | 619 Sumitomo Metal Mining (J) |
| | 607 Sumitomo Special Metals* (J) |

667	Sumsung Mobile Display (KR)	511	Asahi Fiber Glass* (J)
538	SWCC Showa (J) (Showa Elec. Wire & Cable*)	510	Asahi Glass (J)
687	Takara Standard (J)	513	Central Glass (J)
637	Tatsumori (J)	542	CoorsTek (J) (Covalent Materials*<Toshiba Ceramics*)
616	TDK Corp. (J) (TDK Electronics*)	571	Corning Inc. (US)
700	Tohoku Univ. (J)	594	Covina-Co. Vidreira Nac. (PT)
552	Tokan Material Technology (J) (Nippon Ferro*)	655	Eurival Industrie (IT)
666	Tokyo Denshi Zairyo (J)	659	Ferro GmbH (DE)
508	Tokyo Inst. of Technology (J)	595	Flachglas (DE)
701	Tokyo Univ. of Science (J)	515	Fujikura (J) (Fujikura Cable Works*)
679	Toray Industries Inc. (J)	516	Furukawa Electric (J)
602	Toshiba Corp. (J)	591	GEC ALSTHOM (GB)
603	Toshiba Kasei* (J)	574	General Electric (US)
690	Tosoh Corp. (J)	588	Hankuk Glass Industries (KR)
530	Tosoh Quartz (J) (Nippon Sekiei Glass*)	535	HARIO (J) (Shibata Glass*<Shibata Hario Glass*)
566	Tosoh Silica Corp. (J) (Nippon Silica Industries*)	517	Hitachi Cable (J)
685	TOTO (J)	518	Hoya Corp. (J)
536	Toyo Glass (J)	549	Idemitsu Kosan (J)
533	Toyo-Sasaki Glass (J) (Sasaki Glass*)	658	Ikebukuro Horo Kogyo (J)
665	Toyota Motor Corp. (J)	519	Ishizuka Glass (J)
597	U.S. Philips (US)	554	Isuzu Seiko (J)
664	Ube Industries (J)	661	Ivoclar Vivadent AG (LI)
556	Union (J)	636	Japan Fillite (J)
555	Unitika (J)	568	Kanto Horo Yuyaku (J)
501	Univ. of Kyoto (J)	606	Kobe Steel (J)
635	Univ. of Rochester (US)	523	Konica Minolta (J) (Minolta Camera*)
504	Univ. of Saitama (J)	584	Libbey Owens Ford (US)
642	Univ. of Stratchelyde (GB)	654	Mashpriborintorg (SU)
507	Univ. of Tokyo (J)	521	Matsunami Glass (J)
630	USA Gov. (US)	565	Mitsubishi Cable Industries (J)
592	VIOX Corp. (US)	546	Mitsubishi Materials (J)
652	WC Heraeus (DE)	557	Mitsui Mining (J)
645	Westinghouse Electric* (US)	560	Narumi China Corp. (J)
587	Xomed Inc. (US)	656	Nat. Inst. Standards and Technology (US)
688	Yamamura Photonics (J)	559	NGK Insulators (J)
800	Others	569	Nihon Klingage (J)
		545	Nihon Yamamura Glass (J) (Yamamura Glass*)
		528	Nikon Corp. (J)
		564	Nippon Amorphous Metals (J)
		524	Nippon Electric Glass (J)
		553	Nippon Frit (J)
		529	Nippon Sheet Glass (J)
		547	Nitto Boseki (J)
		525	Nitto Chemical Industry (J)
		531	Ohara Inc. (J)
		650	Ohara Quarz (J) (Sumikin Ceramics & Quarz*)
		596	OI-NEG TV Products (US)
		534	Okamoto Glass (J)
		551	Okuno Chemical Industries (J)
		563	Ota Glass (J)
		576	Owens Corning (US) (Owens-Corning Fiber G.*)
		593	Owens Illinois (Kimble) (US)
		578	Philips (NL)
		567	Photon Ceramics (J)
		579	Pilkington (GB)

Company Catalogue

(): nation, location or *previous name

583	3M (US)
575	AGC Glass Europe (BE) (Glaverbel*)
520	AGC Techno Glass (J) (Asahi Techno Glass*<Iwaki Glass*)
586	American Biomaterials (US)
562	Annaka Special Glass (J)

580 PPG Industries (US)
582 Saint-Gobain (FR)
581 Schott AG (DE) (Schott Glaswerke)
653 Schott Glas (Jena) (DE)
558 Shin-Etsu Quartz Products (J)
540 Sumita Optical Glass (J)
541 Sumitomo Electric Industries (J)
538 SWCC Showa (J) (Showa Elec. Wire & Cable*)
637 Tatsumori (J)
552 Tokan Material Technology (J) (Nippon Ferro*)
543 Toshiba Glass* (J)
530 Tosoh Quartz (J) (Nippon Sekiei Glass*)
566 Tosoh Silica Corp. (J) (Nippon Silica Industries*)
556 Union (J)
555 Unitika (J)
592 VIOX Corp. (US)
800 Others

User Data

900 User Data

In INTERGLAD system, * does not appear for previous names.

Composition

Category	ID	Component	Category	ID	Component	Category	ID	Component
Oxide				062	Co2O3		001	SiO2
				051	Cr2O3		077	SnO2
Main Oxide	002	B2O3		115	Dy2O3		094	SO2
	074	GeO2		117	Er2O3		079	TeO2
	081	P2O5		112	Eu2O3		130	ThO2
	001	SiO2		052	Fe2O3		071	TiO2
	079	TeO2		053	Ga2O3		132	UO2
				060	Gd2O3		085	V2O4
				116	Ho2O3		075	ZrO2
M(1+)Oxide	023	Ag2O		056	In2O3			
	024	Cs2O		058	La2O3			
	021	Cu2O		120	Lu2O3	M(5+)Oxide	067	As2O5
	102	D2O		125	Mn2O3		086	Mo2O5
	101	H2O		090	Nb2O3		105	N2O5
	026	Hg2O		059	Nd2O3		083	Nb2O5
	009	K2O		138	Ni2O3		081	P2O5
	007	Li2O		110	Pm2O3		185	R2O5
	008	Na2O		121	Pr2O3		185	R2O5
	103	OH		183	R2O3		065	Sb2O5
	181	R2O		183	R2O3		084	Ta2O5
	181	R2O		106	Rb2O3		082	V2O5
	022	Rb2O		107	Re2O3			
	025	Tl2O		191	RE2O3			
				191	RE2O3	M(6+)Oxide	126	CrO3
				175	Rh2O3		092	MoO3
M(2+)Oxide	043	AgO		108	Ru2O3		186	RO3
	044	AmO		57	Sb2O3		186	RO3
	006	BaO		63	Sc2O3		091	SO3
	031	BeO		111	Sm2O3		143	TcO3
	005	CaO		109	Ta2O3		144	TeO3
	039	CdO		114	Tb2O3		136	UO3
	034	CoO		129	Tc2O3		093	WO3
	036	CuO		137	Ti2O3			
	127	EuO		118	Tm2O3			
	033	FeO		131	U2O3	M(7+)Oxide	145	Re2O7
	041	HgO		87	V2O3		177	Tc2O7
	004	MgO		55	Y2O3			
	032	MnO		119	Yb2O3			
	035	NiO				M(2+)M(3+) Oxide		
	040	PbO					064	Co3O4
	122	PdO	M(4+)Oxide	133	AmO2		069	Fe3O4
	182	RO		192	AnO2		068	Mn3O4
	182	RO		192	AnO2		070	Pb3O4
	045	RhO		076	CeO2			
	042	SnO		139	CmO2			
	038	SrO		073	CoO2	M(3+)M(4+) Oxide		
	046	TeO		074	GeO2		123	Pr6O11
	920	TiO		089	HfO2			
	037	ZnO		072	MnO2			
				128	MoO2	M(4+)M(6+) Oxide		
				176	NpO2		135	U3O8
M(3+)Oxide	047	Ag2O3		416	PbO2			
	003	Al2O3		124	PrO2			
	173	Am2O3		134	PuO2			
	054	As2O3		193	ReO2			
	002	B2O3		184	RO2			
	061	Bi2O3		184	RO2			
	066	Ce2O3		080	RuO2			
	174	Cm2O3		078	SeO2			

Category	ID	Component
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Fluoride

394	AgF
222	AlF3
211	BaF2
250	BaFCl
207	BeF2
393	BF3
225	BiF3
209	CaF2
216	CdF2
227	CeF3
241	CoF2
221	CrF3
205	CsF
214	CuF2
239	DyF3
397	ErF3
249	EuF3
213	FeF2
242	FeF3
223	GaF3
229	GdF3
234	HfF4
391	HgF2
240	HoF3
224	InF3
203	KF
238	KHF2
226	LaF3
201	LiF
231	LuF3
208	MgF2
212	MnF2
202	NaF
399	NbF5
228	NdF3
402	NbO2F
246	NiF2
218	PbF2
418	PdF2
392	PF5
398	PrF3
204	RbF
244	SbF3
219	ScF3
237	SiF4
245	SmF3
217	SnF2
210	SrF2
297	SrFCl
401	TaO2F
248	TbF3
235	ThF4
887	TiF3
232	TiF4
395	TiOF2
206	TiF
396	TmF3
247	UF4
236	VF3

Category	ID	Component
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Chloride

243	VF4
230	YbF3
220	YF3
215	ZnF2
233	ZrF4

286	AgCl
272	AlCl3
261	BaCl2
257	BeCl2
275	BiCl3
259	CaCl2
288	CCl4
266	CdCl2
277	CeCl3
417	CoCl2
271	CrCl3
255	CsCl
287	CuCl
264	CuCl2
293	ErCl3
263	FeCl2
273	GaCl3
279	GdCl3
284	HfCl4
415	HgCl2
298	HoCl3
274	InCl3
253	KCl
276	LaCl3
251	LiCl
281	LuCl3
258	MgCl2
262	MnCl2
252	NaCl
278	NdCl3
268	PbCl2
292	PrCl3
254	RbCl
294	SbCl3
269	ScCl3
267	SnCl2
289	SOCl2
260	SrCl2
290	TbCl3
295	TeCl4
285	ThCl4
282	TiCl4
256	TlCl
291	VCl3
296	WCl6
280	YbCl3
270	YCl3
265	ZnCl2
283	ZrCl4

Category	ID	Component
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Bromide

336	AgBr
322	AlBr3
311	BaBr2
307	BeBr2
325	BiBr3
309	CaBr2
316	CdBr2
327	CeBr3
321	CrBr3
305	CsBr
337	CuBr
314	CuBr2
338	ErBr3
313	FeBr2
323	GaBr3
329	GdBr3
334	HfBr4
339	HgBr2
324	InBr3
303	KBr
326	LaBr3
301	LiBr
331	LuBr3
308	MgBr2
312	MnBr2
302	NaBr
328	NdBr3
299	NiBr2
318	PbBr2
304	RbBr
319	ScBr3
317	SnBr2
310	SrBr2
335	ThBr4
332	TiBr4
306	TlBr
330	YbBr3
320	YBr3
315	ZnBr2
333	ZrBr4

Iodide

386	AgI
372	AlI3
361	BaI2
357	BeI2
375	BiI3
359	CaI2
366	CdI2
377	CeI3
371	CrI3
355	CsI
387	CuI
364	CuI2
388	ErI3
363	FeI2

Chapter 6 Appendix (5. Glass ID List)

Category	ID	Component	Category	ID	Component	Category	ID	Component
	373	GaI3		935	InP		566	Dy
	379	GdI3		890	In2S3		568	Er
	384	HfI4		859	La2S3		599	Es
	389	HgI2		876	Li3N		563	Eu
	374	InI3		96	Li2S		509	F
	353	KI		877	Li2Se		526	Fe
	376	LaI3		860	Lu2S3		600	Fm
	351	LiI		870	K2S		587	Fr
	381	LuI3		410	Na2S		531	Ga
	358	MgI2		419	Na2Se		564	Gd
	362	MnI2		104	NH3		532	Ge
	352	NaI		861	Nd2S3		501	H
	378	NdI3		891	P2S3		502	He
	368	PbI2		413	P2S5		572	Hf
	354	RbI		848	PbS		580	Hg
	888	SbSI		862	Pr2S3		567	Ho
	369	ScI3		411	Rb2S		553	I
	367	SnI2		863	Sb2S3		549	In
	360	SrI2		888	SbSI		577	Ir
	385	ThI4		873	Sb2Se3		519	K
	382	TiI4		412	SiS2		536	Kr
	356	TII		878	SiSe2		557	La
	380	YbI3		874	SnSe		503	Li
	370	YI3		879	Tl2S		603	Lr
	365	ZnI2		885	Tl2Se		571	Lu
				886	Tl2Te		601	Md
				867	Tm2S3		512	Mg
				098	ZnS		525	Mn
				099	ZnSe		542	Mo
				871	ZrS2		507	N
							511	Na
	843	Ag2S					541	Nb
	852	Ag2Se					560	Nd
	849	As2S3					510	Ne
	853	As4S4					528	Ni
	875	As Se					602	No
	850	As2Se3		589	Ac		593	Np
	854	As2Se5		547	Ag		508	O
	881	As2Te3		513	Al		576	Os
	922	BP		595	Am		515	P
	865	B2S3		518	Ar		591	Pa
	855	BaS		533	As		582	Pb
	856	Bi2S3		585	At		546	Pd
	95	CdS		579	Au		561	Pm
	141	CdSe		505	B		584	Po
	142	CdTe		556	Ba		559	Pr
	866	Cs2S		504	Be		578	Pt
	921	CuP		583	Bi		594	Pu
	884	Cu2Se		597	Bk		588	Ra
	857	Dy2S3		535	Br		537	Rb
	882	Er2S3		506	C		575	Re
	883	EuS		520	Ca		545	Rh
	936	GaAs		548	Cd		586	Rn
	858	Ga2S3		558	Ce		544	Ru
	864	Ga2Se3		598	Cf		516	S
	880	GeS		517	Cl		551	Sb
	97	GeS2		596	Cm		521	Sc
	872	GeSe2		527	Co		534	Se
	869	GeSe3		524	Cr		514	Si
	868	HgS		555	Cs		562	Sm
	937	InGaAs		529	Cu		550	Sn
	938	InGaAsP		604	D			
Sulfide etc.			Element					

Category	ID	Component
	932	Ca ₃ N ₂
	925	CaO·SiO ₂
	755	CaZrO ₃
	941	CeB ₆
	923	Clay
	889	Filler Glass
	942	LaB ₆
	907	Li ₂ O·Al ₂ O ₃ ·2SiO ₂
	900	Matrix Glass
	929	Mg ₃ N ₂
	904	MgO·SiO ₂
	943	Mg ₂ Si
	919	Mica
	944	MoSi ₂
	945	NbB ₂
	906	Organic Compound
	910	PbO·TiO ₂
	917	PbRh ₇ O ₁₅
	913	Pigment
	931	SiAlON
	902	SiC
	940	Silicide
	924	Spinel
	756	SrZrO ₃
	947	TaSi ₂
	918	Teniolite
	948	TiB ₂
	915	Ti ₃ B ₄
	927	TiN
	949	VB ₂
	928	Zeolite
	926	ZrB ₂
	905	ZrO ₂ ·SiO ₂
	999	Others

The above listed items are materials only for fillers.
The user can select all the components
as fillers except items of Substrate, Crystal and
Sol-Gel Material in INTERGLAD system.

Substrate

Glass	980	Alkali Silicate
	981	Non-alkali Silicate
	982	Silica Glass
	983	Other Glass

Single Crystal	984	Silicon Crystal
	985	Other Crystal

Others	986	Ceramic
	987	Metal
	988	Plastic
	999	Others

ID	Crystal	Component
Crystal		
421	Albite	NaAlSi ₃ O ₈
422	Anorthite	CaAl ₂ Si ₂ O ₈ 灰長石
423	Apatite	A ₁₀ (MO ₄) ₆ X ₂ ex) A: Ca, M: P, X: OH, F
424	Aragonite	CaCO ₃
425	Baddeleyite	monoclinic ZrO ₂
462	BaZr ₂ F ₁₀	
463	BaZrF ₆	
426	Canasite	
427	Ca-Orthophosphate	Ca ₃ (PO ₄) ₂
428	Carnegieite	NaAlSiO ₄
429	Celsian	BaAl ₂ Si ₂ O ₈
430	Cordierite	2MgO·2Al ₂ O ₃ ·5SiO ₂
431	Corundum	α-Al ₂ O ₃
460	Cristobalite	SiO ₂
432	Devitrite	
433	Diopside	CaMg(SiO ₃) ₂
434	Enstatite	MgO·SiO ₂
435	Eucryptite	Li ₂ O·Al ₂ O ₃ ·2SiO ₂
436	Hematite	Fe ₂ O ₃
437	Feldspar	K-Na-Ca-Al-Si-O
438	Fluor amphibole	
439	Fluor mica	
440	Fluorophlogopite	
441	Fluorrichterite	
442	Forsterite	Mg ₂ SiO ₄
443	Gehlenite	Ca ₂ Al ₂ SiO ₇
444	Gahnite	ZnAl ₂ O ₄
445	Keatite	
446	Lepidolite	K-(LiAl)-(Si,Al)-O-(F,OH)
447	Li-Disilicate	Li ₂ Si ₂ O ₅
474	Li-Metasilicate	Li ₂ SiO ₃
448	Magnetite	
449	Mg-Titanate	
470	Mica	
471	Monazite (Cryptolite)	M(PO ₄)
450	Mullite	3Al ₂ O ₃ ·2SiO ₂
451	Nepheline	NaAlSiO ₄
473	Osumilite	BaO·2MgO·3Al ₂ O ₃ ·9SiO ₂
452	Pollucite	(Cs,Na) ₂ Al ₂ Si ₄ O ₁₂ ·H ₂ O
461	Quartz	SiO ₂
464	β-Quartz	SiO ₂
453	Richterite	(Na,K) ₂ (Mg,Mn,Ca) ₆ Si ₈ O ₂₂ ·(OH) ₂
454	Rutile	TiO ₂
465	Silicon nitride	Si ₃ N ₄
455	Sphene	CaTiSiO ₅
456	Spinel	MR ₂ O ₄ ex) MgAl ₂ O ₄
466	Spodumene	Li ₂ O·Al ₂ O ₃ ·4SiO ₂
467	Tricalcium phosphate	Ca ₃ (PO ₄) ₃
457	Tridymite	SiO ₂
469	VOPO ₄	
458	Willemite	2ZnO·SiO ₂
468	Wollastonite	CaSiO ₃
472	Zirconia	ZrO ₂
459	Zn-Petallite	ZnO-Al ₂ O ₃ -SiO ₂
999	Others	

Category	ID	Component
Sol-Gel Material		
Material		
Si 4-functional	611	Si(OCH ₃) ₄
	612	Si(OC ₂ H ₅) ₄
	613	Si(O-n-C ₃ H ₇) ₄
	614	Si(O-n-C ₄ H ₉) ₄
	615	HSi(OCH ₃) ₃
Si 3-functional, methoxy	616	CH ₃ Si(OCH ₃) ₃
	617	C ₂ H ₅ Si(OCH ₃) ₃
	618	CH ₂ =CHSi(OCH ₃) ₃
	619	C ₆ H ₅ Si(OCH ₃) ₃
	620	CH ₂ =C(CH ₃)COOC ₃ H ₆ Si(OCH ₃) ₃
	621	CH ₂ OCHCH ₂ OC ₂ H ₆ Si(OCH ₃) ₃
	622	3-amionpropyltrimethoxysilane
Si 3-functional, ethoxy	623	CH ₃ Si(OC ₂ H ₅) ₃
	624	C ₂ H ₅ Si(OC ₂ H ₅) ₃
	625	CH ₂ =CHSi(OC ₂ H ₅) ₃
	626	C ₆ H ₅ Si(OC ₂ H ₅) ₃
	627	3-amionpropyltriethoxysilane
Si 2-functional	628	(CH ₃) ₂ Si(OC ₂ H ₅) ₂
B	629	B(OCH ₃) ₃
	630	B(OC ₂ H ₅) ₃
	631	B(O-n-C ₄ H ₉) ₃
	632	H ₃ BO ₃
Al	633	Al(O-i-C ₃ H ₅) ₃
	634	Al(O-sec-C ₄ H ₉) ₃
	635	Al(NO ₃) ₃
P	636	H ₃ PO ₄
	711	PO(OCH ₃) ₃
	637	PO(OC ₂ H ₅) ₃
Ge	638	Ge(OC ₂ H ₅) ₄
	639	GeCl ₄
	640	Ge(O-i-C ₃ H ₇) ₄
Ti	641	Ti(OC ₂ H ₅) ₄
	642	Ti(O-i-C ₃ H ₇) ₄
	643	Ti(O-n-C ₄ H ₉) ₄
	644	Ti(O-i-C ₄ H ₉) ₄
	645	Ti(O-sec-C ₄ H ₉) ₄
V	646	VO(O-i-C ₃ H ₇) ₃
Mn	647	Mn(CH ₃ COO) ₂ ·2H ₂ O
Zr	648	Zr(O-n-C ₃ H ₇) ₄
	649	Zr(O-n-C ₄ H ₉) ₄
	650	ZrOCl ₂
	651	ZrO(NO ₃) ₂ ·2H ₂ O
	652	Nb(OC ₂ H ₅) ₅
Nb	652	Nb(OC ₂ H ₅) ₅
Ta	653	Ta(OC ₂ H ₅) ₅
Li	654	LiOCH ₃
	655	LiOC ₂ H ₅
	656	CH ₃ COOLi
Na	657	NaOCH ₃
	712	NaOC ₂ H ₅
	658	CH ₃ COONa
Mg	659	Mg(OC ₂ H ₅) ₂
	660	Mg(CH ₃ COO) ₂
Ca	661	Ca(O-i-C ₃ H ₇) ₂
Sr	662	Sr- 2-ethylhexanoate
Ba	663	Ba(OC ₂ H ₅) ₂
	664	Ba metal

Category	ID	Component
	665	Ba(CH ₃ COO) ₂
Bi	666	Bi-2-ethylhexanoate
Pb	667	Pb(CH ₃ COO) ₂ ·3H ₂ O
	668	Pb(OC ₂ H ₅) ₂
Solvent		
Alcohol	669	CH ₃ OH
	670	C ₂ H ₅ OH
	671	n-C ₃ H ₇ OH
	672	i-C ₃ H ₇ OH
	673	n-C ₄ H ₉ OH
	674	2-CH ₃ OCH ₂ OH
	675	2-CH ₃ OC ₂ H ₄ OH
	676	2-C ₂ H ₅ OC ₂ H ₄ OH
	677	Diacetone alcohol
	678	Ethylene glycol
	679	1,3-propandiol
Others	680	1,3-butanediol
	681	1,4-butanediol
	682	Tetrahydrofuran
	683	Dioxane
	684	Dimethylformamide
	685	Formamide
	686	Acetonitrile
	687	H ₂ O
Catalyst		
Acid	688	HCl
	689	HNO ₃
	690	CH ₃ COOH
	691	H ₂ SO ₄
	692	HF
Base	693	NH ₄ OH
	694	NaOH
Additive		
	695	Polyvinyl alcohol
	696	Polyethylene glycol
	697	Polyethylene oxide
	698	Poly acrylic acid
	699	Polyvinylpyrrolidone
	700	Acethylacetone
	701	Ethylacetoacetate
	702	Monoethanolamine
	703	Diethanolamine
	704	Triethanolamine
	705	Hydrogen peroxide
	706	Methacrylic acid
	707	Dimethylformamide
	708	Dimethylacetamide
	709	Formamide
	710	Glycerol
Others		
	999	Others

Property

(1) Mechanical, Physical

Category	ID	Property	Common	SI	CGS	PSI
Density, Porosity						
	0301	Pore Size	nm	m	nm	nm
	0302	Pore Volume	cm ³ /g	m ³ /kg	cm ³ /g	cm ³ /g
	0303	Specific Surface Area	m ² /g	m ² /kg	m ² /g	m ² /g
	0304	Porosity	%	—	—	—
	0015	Molar Volume at RT	cm ³ /mol	m ³ /mol	cm ³ /mol	m ³ /mol
	0016	Molar Volume at XT	cm ³ /mol	m ³ /mol	cm ³ /mol	m ³ /mol
[Density]						
	0009	Bulk Density	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0010	Density (Miscell)	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0510	Density at RT	g/cm ³	kg/m ³	g/cm ³	lb/in ³
[Density (100-900C)]						
	0511	Density at 100C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0512	Density at 200C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0513	Density at 300C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0514	Density at 400C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0515	Density at 500C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0516	Density at 600C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0517	Density at 700C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0518	Density at 800C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0519	Density at 900C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
[Density (1000-2000C)]						
	0520	Density at 1000C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0521	Density at 1100C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0522	Density at 1200C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0523	Density at 1300C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0524	Density at 1400C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0525	Density at 1500C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0526	Density at 1600C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0527	Density at 1700C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0528	Density at 1800C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0529	Density at 1900C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
	0530	Density at 2000C	g/cm ³	kg/m ³	g/cm ³	lb/in ³
Elasticity						
	0050	Shear Modulus	GPa	Pa	kgf/mm ²	psi
	0070	Bulk Modulus	GPa	Pa	kgf/mm ²	psi
	0060	Poisson Ratio	—	—	—	—
	0051	Temp Coeff of Shear Mod	#	#	#	#
	0041	Temp Coeff of Young's Mod	#	#	#	#
	7190	Internal Friction	—	—	—	—
[Young's Modulus]						
	0040	Young's Modulus (Miscell)	GPa	Pa	kgf/mm ²	psi
	0042	Young's Modulus at <0C	GPa	Pa	kgf/mm ²	psi
	0540	Young's Modulus at RT	GPa	Pa	kgf/mm ²	psi
[Young's Modulus (100~1200C)]						
	0541	Young's Modulus at 100C	GPa	Pa	kgf/mm ²	psi
	0542	Young's Modulus at 200C	GPa	Pa	kgf/mm ²	psi

Category	ID	Property	Common	SI	CGS	PSI
	0543	Young's Modulus at 300C	GPa	Pa	kgf/mm ²	psi
	0544	Young's Modulus at 400C	GPa	Pa	kgf/mm ²	psi
	0545	Young's Modulus at 500C	GPa	Pa	kgf/mm ²	psi
	0546	Young's Modulus at 900C	GPa	Pa	kgf/mm ²	psi
	0547	Young's Modulus at 1000C	GPa	Pa	kgf/mm ²	psi
	0548	Young's Modulus at 1100C	GPa	Pa	kgf/mm ²	psi
	0549	Young's Modulus at 1200C	GPa	Pa	kgf/mm ²	psi
Sound Velocity						
	0080	Velocity Longitudial Wave	m/s	m/s	m/s	m/s
	0081	Velocity Longitudial Wave >500C	m/s	m/s	m/s	m/s
	0085	Velocity Transvece Wave	m/s	m/s	m/s	m/s
	0090	Velocity of Surface Wave	m/s	m/s	m/s	m/s
Mechanical Strength						
	0110	Abraded Strength	MPa	Pa	kgf/mm ²	psi
	0120	Tensile Strength	MPa	Pa	kgf/mm ²	psi
	0140	Compressive Strength	MPa	Pa	kgf/mm ²	psi
	0150	Torsion Strength	MPa	Pa	kgf/mm ²	psi
	[Flexural Strength]					
	0102	Flexural Strength (Miscell)	MPa	Pa	kgf/mm ²	psi
	0100	Flexural Strength (3p)	MPa	Pa	kgf/mm ²	psi
	0101	Flexural Strength (4p)	MPa	Pa	kgf/mm ²	psi
Hardness, Toughness						
	0160	Fracture Toughness	MPa•m ^{1/2}	Pa•m ^{1/2}	MPa•m ^{1/2}	Pa•m ^{1/2}
	0161	Brittleness	m ^{-1/2}	m ^{-1/2}	μ m ^{-1/2}	m ^{-1/2}
	0200	Machinability	—	—	—	—
	0171	Knoop Hardness	MPa	Pa	kgf/mm ²	psi
	0172	Mohs Hardness	—	—	—	—
	[Vickers Hardness]					
	0180	Vickers Hardness (Typical)	MPa	Pa	kgf/mm ²	psi
	0170	Vickers Hardness (Miscell)	MPa	Pa	kgf/mm ²	psi
	0173	Vickers Hardness 50g	MPa	Pa	kgf/mm ²	psi
	0174	Vickers Hardness 100g	MPa	Pa	kgf/mm ²	psi
	0175	Vickers Hardness 200g	MPa	Pa	kgf/mm ²	psi
	0176	Vickers Hardness 500g	MPa	Pa	kgf/mm ²	psi
Fatigue, Relaxation						
	0210	Static Fatigue	—	—	—	—
	0211	Dynamic Fatigue	MPa	Pa	kgf/mm ²	psi
	0215	Stress Corrosion Resist	—	—	—	—
	0099	Stress Relaxation	—	—	—	—
Interfacial						
	0191	Friction Coeff	—	—	—	—
	0190	Abrasion Resistance	#	#	#	#
	0230	Adhesion	—	—	—	—

Chapter 6 Appendix (5. Glass ID List)

Category	ID	Property	Common	SI	CGS	PSI
	1460	Adsorption	g/m^2	g/m^2	g/m^2	g/m^2
	1470	Adsorption Heat	kJ/mol	J/mol	kcal/mol	kJ/mol
	0021	Wettability	—	—	—	—
[Surface Tension]						
	0020	Surface Tension (Miscell)	N/m	N/m	dyn/cm	dyn/cm
	0560	Surface Tension at RT	N/m	N/m	dyn/cm	dyn/cm
[Surface Tension (100-950C)]						
	0561	Surface Tension at 100C	N/m	N/m	dyn/cm	dyn/cm
	0562	Surface Tension at 200C	N/m	N/m	dyn/cm	dyn/cm
	0563	Surface Tension at 300C	N/m	N/m	dyn/cm	dyn/cm
	0564	Surface Tension at 400C	N/m	N/m	dyn/cm	dyn/cm
	0565	Surface Tension at 500C	N/m	N/m	dyn/cm	dyn/cm
	0566	Surface Tension at 600C	N/m	N/m	dyn/cm	dyn/cm
	0582	Surface Tension at 650C	N/m	N/m	dyn/cm	dyn/cm
	0567	Surface Tension at 700C	N/m	N/m	dyn/cm	dyn/cm
	0583	Surface Tension at 750C	N/m	N/m	dyn/cm	dyn/cm
	0568	Surface Tension at 800C	N/m	N/m	dyn/cm	dyn/cm
	0584	Surface Tension at 850C	N/m	N/m	dyn/cm	dyn/cm
	0569	Surface Tension at 900C	N/m	N/m	dyn/cm	dyn/cm
	0585	Surface Tension at 950C	N/m	N/m	dyn/cm	dyn/cm
[Surface Tension (1000-2100C)]						
	0570	Surface Tension at 1000C	N/m	N/m	dyn/cm	dyn/cm
	0586	Surface Tension at 1050C	N/m	N/m	dyn/cm	dyn/cm
	0571	Surface Tension at 1100C	N/m	N/m	dyn/cm	dyn/cm
	0587	Surface Tension at 1150C	N/m	N/m	dyn/cm	dyn/cm
	0572	Surface Tension at 1200C	N/m	N/m	dyn/cm	dyn/cm
	0588	Surface Tension at 1250C	N/m	N/m	dyn/cm	dyn/cm
	0573	Surface Tension at 1300C	N/m	N/m	dyn/cm	dyn/cm
	0589	Surface Tension at 1350C	N/m	N/m	dyn/cm	dyn/cm
	0574	Surface Tension at 1400C	N/m	N/m	dyn/cm	dyn/cm
	0590	Surface Tension at 1450C	N/m	N/m	dyn/cm	dyn/cm
	0575	Surface Tension at 1500C	N/m	N/m	dyn/cm	dyn/cm
	0591	Surface Tension at 1550C	N/m	N/m	dyn/cm	dyn/cm
	0576	Surface Tension at 1600C	N/m	N/m	dyn/cm	dyn/cm
	0592	Surface Tension at 1650C	N/m	N/m	dyn/cm	dyn/cm
	0577	Surface Tension at 1700C	N/m	N/m	dyn/cm	dyn/cm
	0593	Surface Tension at 1750C	N/m	N/m	dyn/cm	dyn/cm
	0578	Surface Tension at 1800C	N/m	N/m	dyn/cm	dyn/cm
	0579	Surface Tension at 1900C	N/m	N/m	dyn/cm	dyn/cm
	0580	Surface Tension at 2000C	N/m	N/m	dyn/cm	dyn/cm
	0581	Surface Tension at 2100C	N/m	N/m	dyn/cm	dyn/cm

(2) Thermal

Category	ID	Property	Common	SI	CGS	PSI
Crystallization						
	1010	Crystallization	—	—	—	—
	1011	Liquidus Temperature	C	K	C	C
	1012	Rate of Nucleation	$/(m^3 \cdot s)$	$/(m^3 \cdot s)$	$/(cm^3 \cdot s)$	$/(cm^3 \cdot s)$
	1013	Velocity of Cryst Growth	$\mu m/s$	m/s	$\mu m/s$	$\mu m/s$
	1014	Crystallization Temp	C	K	C	C
	1015	Melting Temp of Crystal	C	K	C	C
	1016	Phase Separation	—	—	—	—
Thermal Expansion						
	1040	α -T Curve	—	—	—	—
[Linear Expansion Coefficient]						
	1020	Expansion Coeff (Typical)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1030	Expansion Coeff (0~100C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1021	Expansion Coeff (0~300C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1023	Expansion Coeff (20~100C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1022	Expansion Coeff (20~300C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1031	Expansion Coeff (20~400C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1035	Expansion Coeff (20~500C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1027	Expansion Coeff (20~TG)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1036	Expansion Coeff (30~300C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1028	Expansion Coeff (30~380C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1024	Expansion Coeff (50~350C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1032	Expansion Coeff (100~200C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1025	Expansion Coeff (100~300C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1033	Expansion Coeff (200~300C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1034	Expansion Coeff (300~400C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1026	Expansion Coeff (-30~70C)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1029	Expansion Coeff X	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
	1039	Expansion Coeff (Miscell)	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
[Volumetric Expansion Coefficient]						
	1051	Volumetric Expansion Coeff	$10^{-7}/K$	$10^{-7}/K$	$10^{-7}/C$	$10^{-7}/C$
Heat Capacity						
[Specific Heat]						
	1080	Specific Heat (Miscell)	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1601	Specific Heat at <-200C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1602	Specific Heat at -100C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1603	Specific Heat at RT	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
[Specific Heat (100-700C)]						
	1604	Specific Heat at 100C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1605	Specific Heat at 200C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1606	Specific Heat at 300C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1607	Specific Heat at 400C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1608	Specific Heat at 500C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1609	Specific Heat at 600C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
	1610	Specific Heat at 700C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$
[Specific Heat (800-1500C)]						
	1611	Specific Heat at 800C	$J/(kg \cdot K)$	$J/(kg \cdot K)$	$cal/(g \cdot C)$	$Btu/(lb \cdot F)$

Category	ID	Property	Common	SI	CGS	PSI
	1612	Specific Heat at 900C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
	1613	Specific Heat at 1000C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
	1614	Specific Heat at 1100C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
	1615	Specific Heat at 1200C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
	1616	Specific Heat at 1300C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
	1617	Specific Heat at 1400C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
	1618	Specific Heat at 1500C	J/(kg•K)	J/(kg•K)	cal/(g•C)	Btu/(lb•F)
[Molar Specific Heat]						
	1670	Molar Specific Heat (Miscell)	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1671	Molar Specific Heat at <-200C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1672	Molar Specific Heat at -100C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1673	Molar Specific Heat at 0C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1674	Molar Specific Heat at RT	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1675	Molar Specific Heat at 100C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1676	Molar Specific Heat at 200C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1677	Molar Specific Heat at 300C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1678	Molar Specific Heat at 400C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1679	Molar Specific Heat at 500C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1680	Molar Specific Heat at 600C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1681	Molar Specific Heat at 700C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1682	Molar Specific Heat at 800C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1683	Molar Specific Heat at 900C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1684	Molar Specific Heat at 1000C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1685	Molar Specific Heat at 1100C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1686	Molar Specific Heat at 1200C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1687	Molar Specific Heat at 1300C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1688	Molar Specific Heat at 1400C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
	1689	Molar Specific Heat at 1500C	J/(mol•C)	J/(mol•K)	cal/(mol•C)	Btu/(mol•F)
Heat Transfer						
	1100	Thermal Diffusivity	cm ² /s	m ² /s	cm ² /s	cm ² /s
[Thermal Conductivity]						
	1090	Thermal Conductivity (Miscell)	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1631	Thermal Conductivity at <-200C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1632	Thermal Conductivity at -100C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1630	Thermal Conductivity at 0C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1633	Thermal Conductivity at RT	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
[Thermal Conductivity (100-700C)]						
	1634	Thermal Conductivity at 100C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1635	Thermal Conductivity at 200C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1636	Thermal Conductivity at 300C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1637	Thermal Conductivity at 400C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1638	Thermal Conductivity at 500C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1639	Thermal Conductivity at 600C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1640	Thermal Conductivity at 700C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
[Thermal Conductivity (800-1500C)]						
	1641	Thermal Conductivity at 800C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1642	Thermal Conductivity at 900C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1643	Thermal Conductivity at 1000C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1644	Thermal Conductivity at 1100C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1645	Thermal Conductivity at 1200C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1646	Thermal Conductivity at 1300C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)

Category	ID	Property	Common	SI	CGS	PSI
	1647	Thermal Conductivity at 1400C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)
	1648	Thermal Conductivity at 1500C	W/(m•K)	W/(m•K)	cal/(cm•s•C)	Btu/(ft•h•F)

Viscosity**[Standard Point (1E1-1E7 dPa•s)]**

1110	T at 1E1 dPa•s	C	K	C	C
1111	T at 1E2 dPa•s (Melting P)	C	K	C	C
1137	Melting P (Miscell)	C	K	C	C
1129	T at 1E2.5 dPa•s	C	K	C	C
1112	T at 1E3 dPa•s	C	K	C	C
1113	T at 1E4 dPa•s (Working P)	C	K	C	C
1114	T at 1E5dPa•s (Flow P)	C	K	C	C
1115	T at 1E6 dPa•s (Sealing P)	C	K	C	C
1131	T at 1E7 dPa•s	C	K	C	C

[Standard Point (1E9-1E14.5 dPa•s)]

1126	T at 1E7.5dPa•s	C	K	C	C
1116	T at 1E7.6(7.65) dPa•s (Sof P) (Littleton Point)	C	K	C	C
1135	Sof P (DTA, DSC)	C	K	C	C
1118	Sof P (TMA, Deformation P)	C	K	C	C
1136	Sof P (Miscell)	C	K	C	C
1132	T at 1E8 dPa•s	C	K	C	C
1133	T at 1E9 dPa•s	C	K	C	C
1134	T at 1E10 dPa•s	C	K	C	C
1117	Sag Point	C	K	C	C
1127	T at 1E11 dPa•s	C	K	C	C
1128	T at 1E12 dPa•s	C	K	C	C
1119	T at 1E13dPa•s (Annealing P)	C	K	C	C
1122	T at 1E14 dPa•s (Strain P)	C	K	C	C
1123	T at 1E14.5 dPa•s (Strain P)	C	K	C	C

[Standard Point X dPa•s]

1124	T at X dPa•s	C	K	C	C
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[Viscosity (100-1000C)]

1201	Viscosity at 100C	dPa•s	Pa•s	Poise	g/(cm•s)
1202	Viscosity at 200C	dPa•s	Pa•s	Poise	g/(cm•s)
1203	Viscosity at 300C	dPa•s	Pa•s	Poise	g/(cm•s)
1204	Viscosity at 400C	dPa•s	Pa•s	Poise	g/(cm•s)
1205	Viscosity at 500C	dPa•s	Pa•s	Poise	g/(cm•s)
1206	Viscosity at 600C	dPa•s	Pa•s	Poise	g/(cm•s)
1207	Viscosity at 700C	dPa•s	Pa•s	Poise	g/(cm•s)
1208	Viscosity at 800C	dPa•s	Pa•s	Poise	g/(cm•s)
1209	Viscosity at 900C	dPa•s	Pa•s	Poise	g/(cm•s)
1210	Viscosity at 1000C	dPa•s	Pa•s	Poise	g/(cm•s)

[Viscosity (1100-1550C)]

1211	Viscosity at 1100C	dPa•s	Pa•s	Poise	g/(cm•s)
1224	Viscosity at 1150C	dPa•s	Pa•s	Poise	g/(cm•s)
1212	Viscosity at 1200C	dPa•s	Pa•s	Poise	g/(cm•s)
1225	Viscosity at 1250C	dPa•s	Pa•s	Poise	g/(cm•s)
1213	Viscosity at 1300C	dPa•s	Pa•s	Poise	g/(cm•s)
1226	Viscosity at 1350C	dPa•s	Pa•s	Poise	g/(cm•s)
1214	Viscosity at 1400C	dPa•s	Pa•s	Poise	g/(cm•s)

Category	ID	Property	Common	SI	CGS	PSI
	1227	Viscosity at 1450C	dPa•s	Pa•s	Poise	g/(cm•s)
	1215	Viscosity at 1500C	dPa•s	Pa•s	Poise	g/(cm•s)
	1228	Viscosity at 1550C	dPa•s	Pa•s	Poise	g/(cm•s)
[Viscosity (1600-2500C)]						
	1216	Viscosity at 1600C	dPa•s	Pa•s	Poise	g/(cm•s)
	1229	Viscosity at 1650C	dPa•s	Pa•s	Poise	g/(cm•s)
	1217	Viscosity at 1700C	dPa•s	Pa•s	Poise	g/(cm•s)
	1230	Viscosity at 1750C	dPa•s	Pa•s	Poise	g/(cm•s)
	1218	Viscosity at 1800C	dPa•s	Pa•s	Poise	g/(cm•s)
	1219	Viscosity at 1900C	dPa•s	Pa•s	Poise	g/(cm•s)
	1220	Viscosity at 2000C	dPa•s	Pa•s	Poise	g/(cm•s)
	1222	Viscosity at 2200C	dPa•s	Pa•s	Poise	g/(cm•s)
	1223	Viscosity at 2500C	dPa•s	Pa•s	Poise	g/(cm•s)
[Viscosity (XC)]						
	1221	Viscosity at XC	dPa•s	Pa•s	Poise	g/(cm•s)
[Fulcher's Equation]						
	1231	Const A of Fulcher Eq (FIG)	log(dPa•s)	log(dPa•s)	log(Poise)	log(dPa•s)
	1232	Const B of Fulcher Eq (FIG)	C	K	C	C
	1233	Const To of Fulcher Eq (FIG)	C	K	C	C
	1235	Min Temp of Fulcher Eq (FIG)	C	K	C	C
	1236	Max Temp of Fulcher Eq (FIG)	C	K	C	C
	1237	Min Viscosity of Fulcher Eq (FIG)	dPa•s	Pa•s	Poise	g/(cm•s)
	1238	Max Viscosity of Fulcher Eq (FIG)	dPa•s	Pa•s	Poise	g/(cm•s)

Diffusion

	1370	Ion Exchange	—	—	—	—
	1380	Thermotransport	—	—	—	—
[Ion Diffusion D_0]						
	1353	Diffusion Coeff D_0 (Miscell)	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1301	Diffusion Coeff D_0 of H ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1303	Diffusion Coeff D_0 of Li ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1305	Diffusion Coeff D_0 of Na ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1307	Diffusion Coeff D_0 of K ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1309	Diffusion Coeff D_0 of Rb ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1311	Diffusion Coeff D_0 of Cs ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1382	Diffusion Coeff D_0 of Cu ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1313	Diffusion Coeff D_0 of F ⁻	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1315	Diffusion Coeff D_0 of O ²⁻	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1317	Diffusion Coeff D_0 of Ca ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1319	Diffusion Coeff D_0 of Mg ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1321	Diffusion Coeff D_0 of Sr ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1323	Diffusion Coeff D_0 of Ba ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1325	Diffusion Coeff D_0 of Tl ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1327	Diffusion Coeff D_0 of Ag ⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1329	Diffusion Coeff D_0 of Cl ⁻	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1371	Diffusion Coeff D_0 of Ni ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1373	Diffusion Coeff D_0 of Fe ³⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1375	Diffusion Coeff D_0 of Co ²⁺	cm ² /s	m ² /s	cm ² /s	cm ² /s
	1377	Diffusion Coeff D_0 of Si	cm ² /s	m ² /s	cm ² /s	cm ² /s
[Ion Diffusion E_d]						
	1354	Activation Energy E_d of Diff (Miscell)	kJ/mol	J/mol	kcal/mol	kJ/mol
	1302	Activation Energy E_d of Diff H ⁺	kJ/mol	J/mol	kcal/mol	kJ/mol

Category	ID	Property	Common	SI	CGS	PSI
	1304	Activation Energy Ed of Diff Li^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1306	Activation Energy Ed of Diff Na^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1308	Activation Energy Ed of Diff K^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1310	Activation Energy Ed of Diff Rb^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1312	Activation Energy Ed of Diff Cs^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1383	Activation Energy Ed of Diff Cu^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1314	Activation Energy Ed of Diff F^-	kJ/mol	J/mol	kcal/mol	kJ/mol
	1316	Activation Energy Ed of Diff O^{2-}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1318	Activation Energy Ed of Diff Ca^{2+}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1320	Activation Energy Ed of Diff Mg^{2+}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1322	Activation Energy Ed of Diff Sr^{2+}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1324	Activation Energy Ed of Diff Ba^{2+}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1326	Activation Energy Ed of Diff Tl^{2+}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1328	Activation Energy Ed of Diff Ag^+	kJ/mol	J/mol	kcal/mol	kJ/mol
	1330	Activation Energy Ed of Diff Cl^-	kJ/mol	J/mol	kcal/mol	kJ/mol
	1372	Activation Energy Ed of Diff Ni^{++}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1374	Activation Energy Ed of Diff Fe^{++}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1376	Activation Energy Ed of Diff Co^{++}	kJ/mol	J/mol	kcal/mol	kJ/mol
	1378	Activation Energy Ed of Diff Si	kJ/mol	J/mol	kcal/mol	kJ/mol
[Atomic, Molecular Diffusion D_0, D_t (Eq B in 2(2) Chapter 6)]						
	1331	Diffusion Coeff D_0 of N_2	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1333	Diffusion Coeff D_0 of O_2	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1335	Diffusion Coeff D_0 of H_2O	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1363	Diffusion Coeff D_0 of D_2O	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1379	Diffusion Coeff D_0 of CO_2	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1337	Diffusion Coeff D_0 of He	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1339	Diffusion Coeff D_0 of Ne	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1341	Diffusion Coeff D_0 of Ar	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1343	Diffusion Coeff D_0 of Xe	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1365	Diffusion Coeff D_t of He	cm^2/sK	m^2/sK	cm^2/sK	cm^2/sK
	1367	Diffusion Coeff D_t of Ne	cm^2/sK	m^2/sK	cm^2/sK	cm^2/sK
	1369	Diffusion Coeff D_t of Ar	cm^2/sK	m^2/sK	cm^2/sK	cm^2/sK
[Atomic, Molecular Diffusion E_d]						
	1332	Activation Energy Ed of Diff N_2	kJ/mol	J/mol	kcal/mol	kJ/mol
	1334	Activation Energy Ed of Diff O_2	kJ/mol	J/mol	kcal/mol	kJ/mol
	1336	Activation Energy Ed of Diff H_2O	kJ/mol	J/mol	kcal/mol	kJ/mol
	1364	Activation Energy Ed of Diff D_2O	kJ/mol	J/mol	kcal/mol	kJ/mol
	1381	Activation Energy Ed of Diff CO_2	kJ/mol	J/mol	kcal/mol	kJ/mol
	1338	Activation Energy Ed of Diff He	kJ/mol	J/mol	kcal/mol	kJ/mol
	1340	Activation Energy Ed of Diff Ne	kJ/mol	J/mol	kcal/mol	kJ/mol
	1342	Activation Energy Ed of Diff Ar	kJ/mol	J/mol	kcal/mol	kJ/mol
	1344	Activation Energy Ed of Diff Xe	kJ/mol	J/mol	kcal/mol	kJ/mol
[Ion Exchange D_0]						
	1345	Diff Coeff D_0 of $\text{Li}^+=\text{Na}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1347	Diff Coeff D_0 of $\text{Li}^+=\text{K}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1349	Diff Coeff D_0 of $\text{Na}^+=\text{K}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1351	Diff Coeff D_0 of $\text{Na}^+=\text{Ag}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1355	Diff Coeff D_0 of $\text{Na}^+=\text{Cu}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1357	Diff Coeff D_0 of $\text{Na}^+=\text{Tl}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1359	Diff Coeff D_0 of $\text{K}^+=\text{Tl}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
	1361	Diff Coeff D_0 of $\text{Li}^+=\text{Ag}^+$	cm^2/s	m^2/s	cm^2/s	cm^2/s
[Ion Exchange E_d]						
	1346	Activation Energy Ed of $\text{Li}^+=\text{Na}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol

Category	ID	Property	Common	SI	CGS	PSI
	1348	Activation Energy Ed of Diff $\text{Li}^+=\text{K}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
	1350	Activation Energy Ed of Diff $\text{Na}^+=\text{K}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
	1352	Activation Energy Ed of Diff $\text{Na}^+=\text{Ag}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
	1356	Activation Energy Ed of Diff $\text{Na}^+=\text{Cu}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
	1358	Activation Energy Ed of Diff $\text{Na}^+=\text{Tl}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
	1360	Activation Energy Ed of Diff $\text{K}^+=\text{Tl}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
	1362	Activation Energy Ed of Diff $\text{Li}^+=\text{Ag}^+$	kJ/mol	J/mol	kcal/mol	kJ/mol
[Temp Range of D_0 and E_d]						
	1392	Min Temp of Diffusion Equation	C	K	C	C
	1393	Max Temp of Diffusion Equation	C	K	C	C
Permeability						
[Permeability]						
	1411	Permeability He	#	#	#	#
	1412	Permeability Ne	#	#	#	#
	1413	Permeability Ar	#	#	#	#
	1414	Permeability N	#	#	#	#
	1415	Permeability O	#	#	#	#
	1416	Permeability H	#	#	#	#
	1417	Permeability X	#	#	#	#
[Activation Energy of Perm Ep]						
	1421	Activation Energy Ep of He	kJ/mol	J/mol	kcal/mol	kJ/mol
	1422	Activation Energy Ep of Ne	kJ/mol	J/mol	kcal/mol	kJ/mol
	1423	Activation Energy Ep of Ar	kJ/mol	J/mol	kcal/mol	kJ/mol
	1424	Activation Energy Ep of N	kJ/mol	J/mol	kcal/mol	kJ/mol
	1425	Activation Energy Ep of O	kJ/mol	J/mol	kcal/mol	kJ/mol
	1426	Activation Energy Ep of H	kJ/mol	J/mol	kcal/mol	kJ/mol
	1427	Activation Energy Ep of X	kJ/mol	J/mol	kcal/mol	kJ/mol
[Permeation Coeff Po]						
	1431	Permeation Coeff Po of He	atom/s•cm•K•atm		atom/s•cm•K•atm	
			atom/s•m•K•atm		atom/s•cm•K•atm	
	1432	Permeation Coeff Po of Ne	atom/s•cm•K•atm		atom/s•cm•K•atm	
			atom/s•m•K•atm		atom/s•cm•K•atm	
	1433	Permeation Coeff Po of Ar	atom/s•cm•K•atm		atom/s•cm•K•atm	
			atom/s•m•K•atm		atom/s•cm•K•atm	
Solubility						
	1511	Solubility He	#	#	#	#
	1512	Solubility Ne	#	#	#	#
	1512	Solubility O_2	#	#	#	#
	1514	Solubility N_2	#	#	#	#
	1515	Solubility H_2O	#	#	#	#
	1516	Solubility CO_2	#	#	#	#
	1517	Solubility SO_3	#	#	#	#
	1518	Solubility X	#	#	#	#
	1501	Solubility/mol He	$\text{cm}^3/(\text{mol}\cdot\text{atm})$	$\text{m}^3/(\text{mol}\cdot\text{atm})$	$\text{cm}^3/(\text{mol}\cdot\text{atm})$	$\text{in}^3/(\text{mol}\cdot\text{atm})$
	1502	Solubility/mol Ne	$\text{cm}^3/(\text{mol}\cdot\text{atm})$	$\text{m}^3/(\text{mol}\cdot\text{atm})$	$\text{cm}^3/(\text{mol}\cdot\text{atm})$	$\text{in}^3/(\text{mol}\cdot\text{atm})$
	1503	Solubility/mol O_2	$\text{cm}^3/(\text{mol}\cdot\text{atm})$	$\text{m}^3/(\text{mol}\cdot\text{atm})$	$\text{cm}^3/(\text{mol}\cdot\text{atm})$	$\text{in}^3/(\text{mol}\cdot\text{atm})$

Category	ID	Property	Common	SI	CGS	PSI
	1504	Solubility/mol N ₂	cm ³ /(mol•atm)	m ³ /(mol•atm)	cm ³ /(mol•atm)	in ³ /(mol•atm)
	1505	Solubility/mol H ₂ O	cm ³ /(mol•atm)	m ³ /(mol•atm)	cm ³ /(mol•atm)	in ³ /(mol•atm)
	1506	Solubility/mol CO ₂	cm ³ /(mol•atm)	m ³ /(mol•atm)	cm ³ /(mol•atm)	in ³ /(mol•atm)
	1507	Solubility/mol SO ₃	cm ³ /(mol•atm)	m ³ /(mol•atm)	cm ³ /(mol•atm)	in ³ /(mol•atm)
	1508	Solubility/mol X	cm ³ /(mol•atm)	m ³ /(mol•atm)	cm ³ /(mol•atm)	in ³ /(mol•atm)
	1521	Solubility/vol He	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1522	Solubility/vol Ne	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1523	Solubility/vol O ₂	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1524	Solubility/vol N ₂	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1525	Solubility/vol H ₂ O	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1526	Solubility/vol CO ₂	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1527	Solubility/vol SO ₃	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1528	Solubility/vol X	cm ³ /cm ³	m ³ /m ³	cm ³ /cm ³	in ³ /in ³
	1571	Solubility Coeff S ₀ of He	atom/(cm ³ •atm)	atom/(m ³ •atm)	atom/(cm ³ •atm)	atom/(cm ³ •atm)
	1572	Solubility Coeff S ₀ of Ne	atom/(cm ³ •atm)	atom/(m ³ •atm)	atom/(cm ³ •atm)	atom/(cm ³ •atm)
	1573	Solubility Coeff S ₀ of Ar	atom/(cm ³ •atm)	atom/(m ³ •atm)	atom/(cm ³ •atm)	atom/(cm ³ •atm)
	1581	Activation Energy Es of He	kJ/mol	J/mol	kcal/mol	kJ/mol
	1582	Activation Energy Es of Ne	kJ/mol	J/mol	kcal/mol	kJ/mol
	1583	Activation Energy Es of Ar	kJ/mol	J/mol	kcal/mol	kJ/mol
Glass Transition Point						
	1140	Glass Transition Point (Typical)	C	K	C	C
	1120	Tg (DTA)	C	K	C	C
	1121	Tg (Expansion)	C	K	C	C
	1125	Tg (Miscell)	C	K	C	C
Others						
	1390	Thermal Shock Resistance (dT)	deg	deg	deg	deg
	1391	Thermal Endurance	C	K	C	C
	1530	Vaporization	—	—	—	—
	1550	Meltability	—	—	—	—
	1560	Sintering	—	—	—	—
	1531	Vapour Pressure (Miscell)	torr	Pa	mmHg	psi
	1532	Vapour Pressure 1000°C	torr	Pa	mmHg	psi
	1533	Vapour Pressure 1100°C	torr	Pa	mmHg	psi
	1534	Vapour Pressure 1200°C	torr	Pa	mmHg	psi
	1535	Vapour Pressure 1300°C	torr	Pa	mmHg	psi
	1536	Vapour Pressure 1400°C	torr	Pa	mmHg	psi
	1537	Vapour Pressure 1500°C	torr	Pa	mmHg	psi

(3) Optical

Category	ID	Property	Common	SI	CGS	PSI
Refraction						
[Refractive Index (Typical)]						
	2010	Refractive Index (Typical)	—	—	—	—
[Refractive Index UV]						
	2030	Refract Index <300nm	—	—	—	—
	2011	Refract Index 365.0nm i	—	—	—	—
[Refractive Index Visible]						
	2012	Refract Index 404.7nm h	—	—	—	—
	2013	Refract Index 435.8nm g	—	—	—	—
	2014	Refract Index 480.0nm F'	—	—	—	—
	2015	Refract Index 486.1nm F	—	—	—	—
	2016	Refract Index 546.1nm e	—	—	—	—
	2017	Refract Index 587.6nm d	—	—	—	—
	2018	Refract Index 589.3nm D	—	—	—	—
	2028	Refract Index 632.8nm He-Ne	—	—	—	—
	2019	Refract Index 643.8nm C'	—	—	—	—
	2020	Refract Index 656.3nm C	—	—	—	—
	2021	Refract Index 706.5nm r	—	—	—	—
	2035	Refract Index (Miscell)	—	—	—	—
[Refractive Index IR]						
	2022	Refract Index 852.1nm s	—	—	—	—
	2023	Refract Index 1014.0nm t	—	—	—	—
	2024	Refract Index 1um	—	—	—	—
	2025	Refract Index 2um	—	—	—	—
	2031	Refract Index 3um	—	—	—	—
	2026	Refract Index 5um	—	—	—	—
	2032	Refract Index 8um	—	—	—	—
	2027	Refract Index 10um	—	—	—	—
	2033	Refract Index 11um	—	—	—	—
	2034	Refract Index 12um	—	—	—	—
[Refractive Index at Specified Condition]						
	2029	Ref Index at Specified Cond	—	—	—	—
[Temp Dependence of Refractive Index]						
	2061	Temp Coeff of RI e-line -20~0C	$10^{-6}/K$	$10^{-6}/K$	/C	/C
	2062	Temp Coeff of RI e-line 0~20C	$10^{-6}/K$	$10^{-6}/K$	/C	/C
	2063	Temp Coeff of RI e-line 20~40C	$10^{-6}/K$	$10^{-6}/K$	/C	/C
	2064	Temp Coeff of RI Other Data	$10^{-6}/K$	$10^{-6}/K$	/C	/C
	2480	Thermo Optical Constant	$10^{-6}/K$	$10^{-6}/K$	/C	/C
[Graded Index]						
	2040	Graded Index	—	—	—	—
[Abbe Value]						
	2051	Abbe Value (nd-1)/(nF-nC)	—	—	—	—
	2052	Abbe Value (ne-1)/(nF'-nC')	—	—	—	—
	2053	Abbe Value Other Data	—	—	—	—
[Sellmeier Formula]						
	2081	Const of Sellmeier F A ₁	—	—	—	—
	2082	Const of Sellmeier F B ₁	—	—	—	—
	2083	Const of Sellmeier F A ₂	—	—	—	—

Category	ID	Property	Common	SI	CGS	PSI
	2084	Const of Sellmeier F B ₂	—	—	—	—
	2085	Const of Sellmeier F A ₃	—	—	—	—
	2086	Const of Sellmeier F B ₃	—	—	—	—
[Dispersion Formula (n-λ curve)]						
	2101	Const of Disp F A ₀	—	—	—	—
	2102	Const of Disp F A ₁	—	—	—	—
	2103	Const of Disp F A ₂	—	—	—	—
	2104	Const of Disp F A ₃	—	—	—	—
	2105	Const of Disp F A ₄	—	—	—	—
	2106	Const of Disp F A ₅	—	—	—	—
[Mean Dispersion]						
	2111	Mean Dispersion F-C	—	—	—	—
	2112	Mean Dispersion g-d	—	—	—	—
	2113	Mean Dispersion Other Data	—	—	—	—
[Relative Partial Dispersion]						
	2115	Relative Partial Disp (d-C)/(F-C)	—	—	—	—
	2116	Relative Partial Disp (g-F)/(F-C)	—	—	—	—
	2118	Relative Partial Disp (C-r)/(F-C)	—	—	—	—
	2119	Relative Partial Disp (C'-r)/(F'-C')	—	—	—	—
	2121	Relative Partial Disp (d-C)/(F'-C')	—	—	—	—
	2122	Relative Partial Disp (F-e)/(F-C)	—	—	—	—
	2123	Relative Partial Disp (F'-e)/(F'-C')	—	—	—	—
	2124	Relative Partial Disp (g-d)/(F-C)	—	—	—	—
	2125	Relative Partial Disp (g-d)/(F'-C')	—	—	—	—
	2126	Relative Partial Disp (g-F)/(F'-C')	—	—	—	—
	2127	Relative Partial Disp (h-g)/(F'-C')	—	—	—	—
	2117	Relative Partial Disp Other Data	—	—	—	—
	2120	Normal Partial Disp	—	—	—	—
	2130	Deviation of Relative Partial Disp	—	—	—	—
Transmission						
	2150	Polarization	—	—	—	—
[Transmittance (FIG)]						
	2218	UV/IR Transmission Spectrum	—	—	—	—
[Transmittance UV]						
	2200	Transmittance UV	%	—	—	—
[Transmittance Visible]						
	2201	Transmittance 400~500nm	%	—	—	—
	2202	Transmittance 500~600nm	%	—	—	—
	2203	Transmittance 600~700nm	%	—	—	—
	2210	Transmittance Visible	%	—	—	—
[Transmittance IR]						
	2204	Transmittance 700~1000nm	%	—	—	—
	2205	Transmittance 1~2um	%	—	—	—
	2206	Transmittance 2~5um	%	—	—	—
	2207	Transmittance 5~10um	%	—	—	—
	2208	Transmittance 10um	%	—	—	—
	2209	Transmittance IR	%	—	—	—
[Transmittance Other Data]						
	2211	Transmittance Other Data	%	—	—	—
	2212	Transmittance Solar	%	—	—	—
	2213	Transmittance Illuminant A	%	—	—	—

Category	ID	Property	Common	SI	CGS	PSI
	2214	Transmittance Illuminant C	%	—	—	—
[Internal Transmittance (Miscellaneous)]						
	2300	Internal Trans (Miscell)	%	—	—	—
[Internal Transmittance UV]						
	2290	Internal Trans UV	%	—	—	—
[Internal Transmittance Visible]						
	2291	Int Trans 400~500nm	%	—	—	—
	2292	Int Trans 500~600nm	%	—	—	—
	2293	Int Trans 600~700nm	%	—	—	—
[Internal Transmittance IR]						
	2294	Int Trans 700~1000nm	%	—	—	—
	2295	Int Trans 1~2μm	%	—	—	—
	2296	Int Trans 2~5μm	%	—	—	—
	2297	Int Trans 5~10μm	%	—	—	—
	2298	Int Trans 10μm	%	—	—	—
	2299	Int Trans IR	%	—	—	—
Absorption						
	2901	X-Ray Absorption Coeff	/cm	/m	/cm	/cm
	2906	Neutron Absorption	—	—	—	—
	2282	Optical Gap	eV	eV	eV	eV
[Absorption Edge]						
	2280	Absorption Edge UV/Visible	nm	m	nm	nm
	2281	Absorption Edge IR	μm	m	nm	nm
	2861	Cut-off Wavelength	μm	m	μm	μm
[Absorption (FIG)]						
	2278	Absorption Spectrum (UV~IR)	—	—	—	—
[Absorbance UV] [Optical Density UV]						
	2240	Absorbance UV	—	—	—	—
[Absorbance Visible] [Optical Density Visible]						
	2241	Absorbance 400~500nm	—	—	—	—
	2242	Absorbance 500~600nm	—	—	—	—
	2243	Absorbance 600~700nm	—	—	—	—
	2251	Absorbance Visible	—	—	—	—
[Absorbance IR] [Optical Density IR]						
	2244	Absorbance 700~1000nm	—	—	—	—
	2245	Absorbance 1~2μm	—	—	—	—
	2246	Absorbance 2~5μm	—	—	—	—
	2247	Absorbance 5~10μm	—	—	—	—
	2248	Absorbance 10μm	—	—	—	—
	2249	Absorbance IR	—	—	—	—
[Absorbance Other Data] [Optical Density Other Data]						
	2250	Absorbance Other Data	—	—	—	—
[Absorption Coefficient UV]						
	2260	Absorption Coeff UV	/cm	/m	/cm	/cm
[Absorption Coefficient Visible]						
	2261	Absorption Coeff 400~500nm	/cm	/m	/cm	/cm
	2262	Absorption Coeff 500~600nm	/cm	/m	/cm	/cm
	2263	Absorption Coeff 600~700nm	/cm	/m	/cm	/cm
	2271	Absorption Coeff Visible	/cm	/m	/cm	/cm

Category	ID	Property	Common	SI	CGS	PSI
[Absorption Coefficient IR]						
	2264	Absorption Coeff 700~1000nm	/cm	/m	/cm	/cm
	2265	Absorption Coeff 1~2μm	/cm	/m	/cm	/cm
	2266	Absorption Coeff 2~5μm	/cm	/m	/cm	/cm
	2267	Absorption Coeff 5~10μm	/cm	/m	/cm	/cm
	2268	Absorption Coeff 10μm	/cm	/m	/cm	/cm
	2269	Absorption Coeff IR	/cm	/m	/cm	/cm
[Absorption Coefficient Other Data]						
	2270	Absorption Coeff Other Data	/cm	/m	/cm	/cm
Color						
	2370	Color Code	—	—	—	—
	2371	Dominant Wave Length	nm	m	nm	nm
	2372	Color Temperature	C	K	C	C
	2373	Chromaticity x	—	—	—	—
	2374	Chromaticity y	—	—	—	—
	2375	Chromaticity Stimulus Y	—	—	—	—
	2376	Color Purity	—	—	—	—
[Color]						
	2350	Color (Miscell)	—	—	—	—
	2351	Color (Red)	—	—	—	—
	2352	Color (Orange)	—	—	—	—
	2353	Color (Yellow)	—	—	—	—
	2354	Color (Green)	—	—	—	—
	2355	Color (Blue)	—	—	—	—
	2356	Color (Violet)	—	—	—	—
	2357	Color (Black)	—	—	—	—
	2358	Color (Gray)	—	—	—	—
	2359	Color (White)	—	—	—	—
	2360	Color (Brown)	—	—	—	—
	2361	Color (Other)	—	—	—	—
Scattering						
[Scattering (Miscellaneous)]						
	2340	Scattering (Miscell)	#	#	#	#
[Scattering UV]						
	2330	Scattering UV	#	#	#	#
[Scattering Visible]						
	2331	Scattering 400~500nm	#	#	#	#
	2332	Scattering 500~600nm	#	#	#	#
	2333	Scattering 600~700nm	#	#	#	#
[Scattering IR]						
	2334	Scattering 700~1000nm	#	#	#	#
	2335	Scattering 1~2μm	#	#	#	#
	2336	Scattering 2~5μm	#	#	#	#
	2337	Scattering 5~10μm	#	#	#	#
	2338	Scattering 10μm	#	#	#	#
	2339	Scattering IR	#	#	#	#

Category	ID	Property	Common	SI	CGS	PSI
Reflection						
	[Reflectance (FIG)]					
	2398	Reflectance Spectrum (UV~IR)	—	—	—	—
	[Reflectance (Miscellaneous)]					
	2390	Reflectance (Miscell)	%	—	—	—
	[Reflectance UV]					
	2380	Reflectance UV	%	—	—	—
	[Reflectance Visible]					
	2381	Reflectance 400~500nm	%	—	—	—
	2382	Reflectance 500~600nm	%	—	—	—
	2383	Reflectance 600~700nm	%	—	—	—
	[Reflectance IR]					
	2384	Reflectance 700~1000nm	%	—	—	—
	2385	Reflectance 1~2μm	%	—	—	—
	2386	Reflectance 2~5μm	%	—	—	—
	2387	Reflectance 5~10μm	%	—	—	—
	2388	Reflectance 10μm	%	—	—	—
	2389	Reflectance IR	%	—	—	—
Radiation						
	2500	Emissivity	—	—	—	—
	2509	Emissivity Spectrum (FIG)	—	—	—	—
External Induced						
	2400	Fluorescence	—	—	—	—
	2401	Life Time of Fluorescence	s	s	s	s
	2405	Luminescence	—	—	—	—
	2406	Thermoluminescence	—	—	—	—
	2407	Upconversion	—	—	—	—
	2402	Juddy-Ofelt Param OM2	10^{-20}cm^2	m^2	10^{-20}cm^2	10^{-20}cm^2
	2403	Juddy-Ofelt Param OM4	10^{-20}cm^2	m^2	10^{-20}cm^2	10^{-20}cm^2
	2404	Juddy-Ofelt Param OM6	10^{-20}cm^2	m^2	10^{-20}cm^2	10^{-20}cm^2
	2140	Stress Optical Coeff	TPa^{-1}	Pa^{-1}	$\text{nm}\cdot\text{cm}/\text{kgf}$	Pa^{-1}
	2141	Ref Index of Parallel to Stress	—	—	—	—
	2142	Ref Index of Perpend to Stress	—	—	—	—
	2445	Build up Ratio	—	—	—	—
	2446	Photo Hole Burning	—	—	—	—
	2450	Kerr Constant	#	#	#	#
	2460	Acousto Opt Fig of Merit	—	—	—	—
	2470	Photo Conduction	—	—	—	—
	2490	Verdet Constant	$\text{rad}/(\text{T}\cdot\text{m})$	$\text{rad}/(\text{T}\cdot\text{m})$	$\text{min}/(\text{Oe}\cdot\text{cm})$	$\text{min}/(\text{Oe}\cdot\text{cm})$
	[Birefringence]					
	2850	Birefringence (Typical)	nm/m	nm/m	nm/cm	nm/cm
	2851	Birefringence 0.63μm	nm/m	nm/m	nm/cm	nm/cm
	2852	Birefringence 0.85μm	nm/m	nm/m	nm/cm	nm/cm
	2853	Birefringence 1.30μm	nm/m	nm/m	nm/cm	nm/cm
	2854	Birefringence Xμm	nm/m	nm/m	nm/cm	nm/cm
	[Photoinduced]					
	2435	Photoinduced Stress	Pa	Pa	kgf/cm^2	psi

Category	ID	Property	Common	SI	CGS	PSI
	2436	Photoind Change in Ref Index	—	—	—	—
	2420	Solarization Hg Lamp	—	—	—	—
	2421	Solarization Other Data	—	—	—	—
[Browning]						
	2902	Electron Browning	—	—	—	—
	2903	G-Ray Radiation Browning	—	—	—	—
	2904	X-Ray Browning	—	—	—	—
	2905	UV Browning	—	—	—	—
	2907	Neutron Browning	—	—	—	—
	2422	Photo Bleaching	—	—	—	—
	2430	Photosensitivity	—	—	—	—
	2431	Photodarkening	—	—	—	—
	2432	Photodoping	—	—	—	—
[Chromism]						
	2440	Photochromism	—	—	—	—
	2443	Thermochromism	—	—	—	—
	2444	Electrochromism	—	—	—	—
Laser Optics						
	2410	Laser	—	—	—	—
	2411	Crosssection of Stimu Emission	cm ²	m ²	cm ²	cm ²
	2412	Gain Constant	#	#	#	#
	2413	Slope Efficiency	%	—	—	—
	2414	Threshold Value	#	#	#	#
	2415	Temp Coeff of Optical Path	—	—	—	—
Fiber Optics						
	2846	Rayleigh Coeff	dB/(km•μm ⁴)	dB/(km•μm ⁴)	dB/(km•μm ⁴)	dB/(km•μm ⁴)
	2871	Fiber Grating	—	—	—	—
	2872	Fiber Amplification	—	—	—	—
[Transmission Loss]						
	2801	Transmission Loss (Miscell)	dB/km	dB/m	dB/km	dB/km
	2802	Transmission Loss 0.63μm	dB/km	dB/m	dB/km	dB/km
	2803	Transmission Loss 0.85μm	dB/km	dB/m	dB/km	dB/km
	2804	Transmission Loss 1.30μm	dB/km	dB/m	dB/km	dB/km
	2805	Transmission Loss 1.55μm	dB/km	dB/m	dB/km	dB/km
	2806	Transmission Loss 2.90μm	dB/km	dB/m	dB/km	dB/km
	2807	Transmission Loss Xμm	dB/km	dB/m	dB/km	dB/km
[Numerical Aperture]						
	2810	Numerical Aperture (Miscell)	—	—	—	—
	2811	Numerical Aperture 0.85μm	—	—	—	—
	2812	Numerical Aperture 1.30μm	—	—	—	—
	2813	Numerical Aperture Xμm	—	—	—	—
[Transmission Band]						
	2820	Transmission Band (Miscell)	MHz•km	Hz•m	MHz•km	MHz•km
	2821	Transmission Band 0.85μm	MHz•km	Hz•m	MHz•km	MHz•km
	2822	Trancmission Band 1.30μm	MHz•km	Hz•m	MHz•km	MHz•km
	2823	Transmission Band Xμm	MHz•km	Hz•m	MHz•km	MHz•km
[Mode Field Diameter]						
	2830	Mode Field Dia (Miscell)	μm	m	μm	μm

Category	ID	Property	Common	SI	CGS	PSI
	2831	Mode Field Dia 1.30 μ m	μ m	m	μ m	μ m
	2832	Mode Field Dia 1.55 μ m	μ m	m	μ m	μ m
	2833	Mode Field Dia X μ m	μ m	m	μ m	μ m
[Dispersion]						
	2864	Dispersion 1.30 μ m	ps/(km•nm)	ps/(km•nm)	ps/(km•nm)	ps/(km•nm)
	2865	Dispersion 1.55 μ m	ps/(km•nm)	ps/(km•nm)	ps/(km•nm)	ps/(km•nm)
	2863	Dispersion (Miscell)	ps/(km•nm)	ps/(km•nm)	ps/(km•nm)	ps/(km•nm)
	2862	Zero Disp Wavelength	μ m	m	μ m	μ m
[Polarization Cross Talk]						
	2840	Polari Cross Talk (Miscell)	dB	dB	dB	dB
	2841	Polari Cross Talk 0.63 μ m	dB	dB	dB	dB
	2842	Polari Cross Talk 0.85 μ m	dB	dB	dB	dB
	2843	Polari Cross Talk 1.30 μ m	dB	dB	dB	dB
	2844	Porari Cross Talk X μ m	dB	dB	dB	dB
Non-linear Optics						
	2161	Nonlinear Opt Property	#	#	#	#
	2162	Nonlinear Response Time	s	s	s	s
	2164	3rd Harmonic Generation (Miscell)	#	#	#	#
	2163	Nonlinear Susceptibility χ_3	esu	m ² /V ²	esu	esu
	2165	2nd Harmonic Generation (Miscell)	#	#	#	#
	2160	Nonlinear Ref Index n ₂	esu	m ² /W	esu	esu
	2167	Electrooptical Effect	#	#	#	#

(4) Electrical, Magnetic

Category	ID	Property	Common	SI	CGS	PSI
Electric Conductivity						
	3305	Super Ionic Conduction	#	#	#	#
	3300	Super Conduction	—	—	—	—
	3117	Temp for $1E8 \text{ Ohm}\cdot\text{cm}$	C	K	C	C
	3118	Surface Resistance	Ohm/sq	Ohm/sq	Ohm/sq	Ohm/sq
[Electric Conductivity (Miscell)]						
	3010	Electric Conduct (Miscell)	S/cm	S/m	S/cm	S/cm
[Electric Conductivity (0-150C)]						
	3011	Electric Conduct 0C	S/cm	S/m	S/cm	S/cm
	3012	Electric Conduct RT	S/cm	S/m	S/cm	S/cm
	3014	Electric Conduct 50C	S/cm	S/m	S/cm	S/cm
	3015	Electric Conduct 100C	S/cm	S/m	S/cm	S/cm
	3016	Electric Conduct 150C	S/cm	S/m	S/cm	S/cm
[Electric Conductivity (200-900C)]						
	3017	Electric Conduct 200C	S/cm	S/m	S/cm	S/cm
	3018	Electric Conduct 250C	S/cm	S/m	S/cm	S/cm
	3019	Electric Conduct 300C	S/cm	S/m	S/cm	S/cm
	3020	Electric Conduct 350C	S/cm	S/m	S/cm	S/cm
	3021	Electric Conduct 400C	S/cm	S/m	S/cm	S/cm
	3022	Electric Conduct 500C	S/cm	S/m	S/cm	S/cm
	3023	Electric Conduct 600C	S/cm	S/m	S/cm	S/cm
	3024	Electric Conduct 700C	S/cm	S/m	S/cm	S/cm
	3025	Electric Conduct 800C	S/cm	S/m	S/cm	S/cm
	3026	Electric Conduct 900C	S/cm	S/m	S/cm	S/cm
[Electric Conductivity (1000-1900C)]						
	3027	Electric Conduct 1000C	S/cm	S/m	S/cm	S/cm
	3028	Electric Conduct 1100C	S/cm	S/m	S/cm	S/cm
	3029	Electric Conduct 1200C	S/cm	S/m	S/cm	S/cm
	3030	Electric Conduct 1300C	S/cm	S/m	S/cm	S/cm
	3031	Electric Conduct 1400C	S/cm	S/m	S/cm	S/cm
	3032	Electric Conduct 1500C	S/cm	S/m	S/cm	S/cm
	3033	Electric Conduct 1600C	S/cm	S/m	S/cm	S/cm
	3034	Electric Conduct 1700C	S/cm	S/m	S/cm	S/cm
	3035	Electric Conduct 1800C	S/cm	S/m	S/cm	S/cm
	3036	Electric Conduct 1900C	S/cm	S/m	S/cm	S/cm
[Coefficient S_0, C_0 of Electric Conductivity Equation (FIG)]						
	3041	S_0 of Electric Conductivity Eq A	S/cm	S/m	S/cm	S/cm
	3042	S_0 of Eq A (Low Temp)	S/cm	S/m	S/cm	S/cm
	3043	S_0 of Eq A (High Temp)	S/cm	S/m	S/cm	S/cm
	3044	S_0 of Eq A (Middle Temp)	S/cm	S/m	S/cm	S/cm
	3049	C_0 of Electric Conductivity Eq B	SK/cm	SK/m	SKcm	SK/cm
[Activation Energy E of Electric Conductivity Equation (FIG)]						
	3045	Activation Energy E of Electric Conductivity	eV	J/mol	kcal/mol	eV
	3046	Activation Energy E (Low Temp)	eV	J/mol	kcal/mol	eV
	3047	Activation Energy E (High Temp)	eV	J/mol	kcal/mol	eV
	3048	Activation Energy E (Middle Temp)	eV	J/mol	kcal/mol	eV
[DC Volume Resistivity (Miscell)]						
	3050	DC Vol Resistivity (Miscell)	Ohm $\cdot$ cm	Ohm $\cdot$ m	Ohm $\cdot$ cm	Ohm $\cdot$ cm
[DC Volume Resistivity (0-150C)]						
	3051	DC Vol Resistivity 0C	Ohm $\cdot$ cm	Ohm $\cdot$ m	Ohm $\cdot$ cm	Ohm $\cdot$ cm
	3052	DC Vol Resistivity RT	Ohm $\cdot$ cm	Ohm $\cdot$ m	Ohm $\cdot$ cm	Ohm $\cdot$ cm

Category	ID	Property	Common	SI	CGS	PSI
	3054	DC Vol Resistivity 50C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3055	DC Vol Resistivity 100C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3056	DC Vol Resistivity 150C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[DC Volume Resistivity (200-900C)]						
	3057	DC Vol Resistivity 200C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3058	DC Vol Resistivity 250C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3059	DC Vol Resistivity 300C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3060	DC Vol Resistivity 350C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3061	DC Vol Resistivity 400C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3062	DC Vol Resistivity 500C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3063	DC Vol Resistivity 600C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3064	DC Vol Resistivity 700C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3065	DC Vol Resistivity 800C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3066	DC Vol Resistivity 900C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[DC Volume Resistivity (1000-1900C)]						
	3067	DC Vol Resistivity 1000C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3068	DC Vol Resistivity 1100C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3069	DC Vol Resistivity 1200C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3070	DC Vol Resistivity 1300C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3071	DC Vol Resistivity 1400C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3072	DC Vol Resistivity 1500C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3073	DC Vol Resistivity 1600C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3074	DC Vol Resistivity 1700C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3075	DC Vol Resistivity 1800C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3076	DC Vol Resistivity 1900C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[DC Volume Resistivity Equation (FIG)]						
	3077	Coeff R ₀ of DC Vol Resist Eq	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3078	Activation Energy E of DC Vol Resistivity	eV	J/mol	kcal/mol	eV
[AC Volume Resistivity (Miscell)]						
	3090	AC Vol Resistivity (Miscell)	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[AC Volume Resistivity (0-150C)]						
	3091	AC Vol Resistivity 0C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3092	AC Vol Resistivity RT	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3094	AC Vol Resistivity 50C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3095	AC Vol Resistivity 100C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3096	AC Vol Resistivity 150C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[AC Volume Resistivity (200-900C)]						
	3097	AC Vol Resistivity 200C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3098	AC Vol Resistivity 250C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3099	AC Vol Resistivity 300C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3100	AC Vol Resistivity 350C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3101	AC Vol Resistivity 400C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3102	AC Vol Resistivity 500C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3103	AC Vol Resistivity 600C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3104	AC Vol Resistivity 700C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3105	AC Vol Resistivity 800C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3106	AC Vol Resistivity 900C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[AC Volume Resistivity (1000-1900C)]						
	3107	AC Vol Resistivity 1000C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3108	AC Vol Resistivity 1100C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3109	AC Vol Resistivity 1200C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3110	AC Vol Resistivity 1300C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm

Category	ID	Property	Common	SI	CGS	PSI
	3111	AC Vol Resistivity 1400C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3112	AC Vol Resistivity 1500C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3113	AC Vol Resistivity 1600C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3114	AC Vol Resistivity 1700C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3115	AC Vol Resistivity 1800C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3116	AC Vol Resistivity 1900C	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
[AC Volume Resistivity Equation (FIG)]						
	3085	Coeff R ₀ of AC Vol Resist Eq	Ohm•cm	Ohm•m	Ohm•cm	Ohm•cm
	3086	Activation Energy E of AC Vol Resistivity	eV	J/mol	kcal/mol	eV
Dielectric						
	3320	Electric Polarization	#	#	#	#
	3180	DC Breakdown Voltage (Miscell)	#	#	#	#
	3188	DC Breakdown Voltage	kV/mm	kV/m	kV/mm	kV/mm
[Loss Tangent (Miscell)]						
	3120	Loss Tangent (Miscell)	%	—	—	—
[Loss Tangent 1kHz]						
	3121	Loss Tangent 1kHz 0C	%	—	—	—
	3122	Loss Tangent 1kHz RT	%	—	—	—
	3124	Loss Tangent 1kHz 50C	%	—	—	—
	3125	Loss Tangent 1kHz 100C	%	—	—	—
	3126	Loss Tangent 1kHz 150C	%	—	—	—
	3127	Loss Tangent 1kHz 200C	%	—	—	—
	3128	Loss Tangent 1kHz 250C	%	—	—	—
	3129	Loss Tangent 1kHz 300C	%	—	—	—
	3152	Loss Tangent 1kHz 500C	%	—	—	—
	3130	Loss Tangent 1kHz XC	%	—	—	—
[Loss Tangent 1MHz]						
	3131	Loss Tangent 1MHz 0C	%	—	—	—
	3132	Loss Tangent 1MHz RT	%	—	—	—
	3134	Loss Tangent 1MHz 50C	%	—	—	—
	3135	Loss Tangent 1MHz 100C	%	—	—	—
	3136	Loss Tangent 1MHz 150C	%	—	—	—
	3137	Loss Tangent 1MHz 200C	%	—	—	—
	3138	Loss Tangent 1MHz 250C	%	—	—	—
	3139	Loss Tangent 1MHz 300C	%	—	—	—
	3140	Loss Tangent 1MHz XC	%	—	—	—
[Loss Tangent 1GHz]						
	3141	Loss Tangent 1GHz 0C	%	—	—	—
	3142	Loss Tangent 1GHz RT	%	—	—	—
	3144	Loss Tangent 1GHz 50C	%	—	—	—
	3145	Loss Tangent 1GHz 100C	%	—	—	—
	3146	Loss Tangent 1GHz 150C	%	—	—	—
	3147	Loss Tangent 1GHz 200C	%	—	—	—
	3148	Loss Tangent 1GHz 250C	%	—	—	—
	3149	Loss Tangent 1GHz 300C	%	—	—	—
	3150	Loss Tangent 1GHz XC	%	—	—	—
[Loss Tangent YHz XC]						
	3151	Loss Tangent YHz XC	%	—	—	—
[Dielectric Constant]						
	3174	Dielectric Const (Typical)	—	—	—	—

Category	ID	Property	Common	SI	CGS	PSI
	3175	Dielectric Const 60Hz	—	—	—	—
	3176	Dielectric Const 100Hz	—	—	—	—
	3170	Dielectric Const 1kHz	—	—	—	—
	3177	Dielectric Const 10kHz	—	—	—	—
	3172	Dielectric Const 100kHz	—	—	—	—
	3178	Dielectric Const 1MHz	—	—	—	—
	3171	Dielectric Const 1GHz	—	—	—	—
	3179	Dielectric Const 3GHz	—	—	—	—
	3181	Dielectric Const 10GHz	—	—	—	—
	3173	Dielectric Const Other Data	—	—	—	—
	3189	Dielectric Const (Miscell)	—	—	—	—
Functional						
	3190	Photoelectric Conversion	—	—	—	—
	3195	Thermoelectric Power	mV/K	mV/K	mV/K	mV/K
	3200	Piezo Electric Constant	—	—	—	—
	3201	Ferroelectric	—	—	—	—
	3310	Switching	—	—	—	—
	3400	Secondary Electron Emission	—	—	—	—
Magnetic						
	4000	Magnetism	—	—	—	—
	4001	Ferromagnetic	—	—	—	—
	4002	Ferrimagnetic	—	—	—	—
	4005	Curie Point	C	K	C	C
	4009	Magnetic Permeability	H/m	H/m	H/m	H/m
	4010	Specific Permeability	—	—	—	—
	4011	Magnetic Moment	#	#	#	#
	4030	Magnetic Susceptibility (Miscell)	#	#	#	#
	4031	Magnetic Susceptibility/vol X	emu/cm ³	m ³ /m ³	emu/cm ³	emu/cm ³
	4032	Magnetic Susceptibility/mass X	emu/g	m ³ /kg	emu/g	emu/g
	4033	Magnetic Susceptibility/mol X	emu/mol	m ³ /mol	emu/mol	emu/mol
	4034	Specific Susceptibility	—	—	—	—
	4040	Magnetic Coercive Force	A/m	A/m	Oe	Oe
	4050	Satur Mag Flux Density Bs	T	T	G	G
	4051	Residual Mag Flux Density Br	T	T	G	G
	4052	Satr Magnetization Ms	#	#	#	#

(5) Chemical, Biochemical

Category	ID	Property	Common	SI	CGS	PSI
Chemical						
[Water Durability]						
	5011	Water Durability ASTM	#	#	#	#
	5012	Water Durability DIN	#	#	#	#
	5013	Water Durability JIS	#	#	#	#
	5014	Water Durability JOGIS	#	#	#	#
	5015	Water Durability ISO	#	#	#	#
	5010	Water Durability Other	#	#	#	#
[Acid Resistance]						
	5021	Acid Resistance ASTM	#	#	#	#
	5022	Acid Resistance DIN	#	#	#	#
	5024	Acid Resistance JOGIS	#	#	#	#
	5025	Acid Resistance ISO	#	#	#	#
	5020	Acid Resistance Other	#	#	#	#
	5023	HF Resistance	#	#	#	#
[Alkaline Resistance]						
	5031	Alkaline Resistance ASTM	#	#	#	#
	5032	Alkaline Resistance DIN	#	#	#	#
	5033	Alkaline Resistance JOGIS	#	#	#	#
	5034	Alkaline Resistance ISO	#	#	#	#
	5030	Alkaline Resistance Other	#	#	#	#
[Other Resistance]						
	5040	Climate Resistance	#	#	#	#
	5050	Stain Resistance	#	#	#	#
	5060	Organic Solvent Resistance	#	#	#	#
	5070	Detergent Resistance	#	#	#	#
	5080	Salt Water Resistance	#	#	#	#
[Reactive]						
	1540	Hydration	—	—	—	—
	5150	Reaction with Gas	—	—	—	—
	5151	Reaction with Liquid	—	—	—	—
	5152	Reaction with Solid	—	—	—	—
	5153	Photocatalytic Ability	—	—	—	—
	5100	Ionic Selectivity	—	—	—	—
Biochemical						
	5200	Biocompatibility	—	—	—	—
	5201	Bioactive	0, +1	0, +1	0, +1	0, +1
	5210	Antithrombogenicity	—	—	—	—

(6) Characterization

Category	ID	Property	Common	SI	CGS	PSI
	7010	IR Spectrum	—	—	—	—
	7011	IR Reflection Spectrum	—	—	—	—
	7020	Raman Spectrum	—	—	—	—
	7030	UV / Visible Spectrum	—	—	—	—
	7035	UV / Visible Reflection Spectrum	—	—	—	—
	7040	Photo Acoustic Microscopy	—	—	—	—
	7050	SEM / EPMA	—	—	—	—
	7060	TEM	—	—	—	—
	7070	Tunnel SEM	—	—	—	—
	7080	Optical Microscope	—	—	—	—
	7081	AFM	—	—	—	—
	7090	Neutron Diffraction	—	—	—	—
	7091	SANS	—	—	—	—
	7100	X-Ray Diffraction	—	—	—	—
	7105	Fl X-Ray Spectrum	—	—	—	—
	7110	SAXS	—	—	—	—
	7120	EXAFS / XANES	—	—	—	—
	7130	NMR / NQR	—	—	—	—
	7140	ESR / EPR	—	—	—	—
	7150	Moessbauer	—	—	—	—
	7160	ESCA / Auger / SIMS / RBS / XPS	—	—	—	—
	7170	TG / DTA / DSC	—	—	—	—
	7180	TG-GS	—	—	—	—
	7200	Structure Model	—	—	—	—
	7210	Computer Simulation	—	—	—	—
	7212	Molecular Dynamics	—	—	—	—
	7220	Oxidation-Reduction	—	—	—	—
	7221	Oxidation	—	—	—	—
	7222	Reduction	—	—	—	—
	7225	Voltammetry	—	—	—	—
	7230	Structure Relaxation	—	—	—	—
	7240	Photo Acoustic Spectrum	—	—	—	—
	7242	Dielectric Relaxation	—	—	—	—
	7245	Electric Relaxation	—	—	—	—
	7250	Positron Annihilation	—	—	—	—
	7260	Ion beam Irradiation	—	—	—	—
	7021	Brillouin Scattering	—	—	—	—

(7) Miscellaneous

8001 ~ 8009	Miscellaneous	#	#	#	#
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5.2 ID List for Structure Database

State

Glass General

Glass
Glass-Ceramics
Thin Film

Melt

Crystal

Not Specified

Structure

Category	ID	Structure	Shortened form in system	Unit
Spectrum				
	[Spectral Curve]			
	01101	IR-Visible (Figure)	IR-Visible (Fig)	—
	01102	Visible-UV (Figure)	Visible-UV (Fig)	—
	01114	Luminescence / IR-Visible (Figure)	Lumi / IR-Visible (Fig)	—
	01115	Luminescence / Visible-UV (Figure)	Lumi / Visible-UV (Fig)	—
	01103	Raman (Figure)	Raman (Fig)	—
	01104	NMR (Figure)	NMR (Fig)	—
	01105	Moessbauer (Figure)	Moessbauer (Fig)	—
	01106	ESR (Figure)	ESR (Fig)	—
	01107	XPS (Figure)	XPS (Fig)	—
	01108	XAFS, XANES, EXAFS (Figure)	XAFS (Fig)	—
	01109	X-Ray Diffraction (Figure)	X-Ray (Fig)	—
	01110	Neutron Diffraction (Figure)	Neutron (Fig)	—
	01111	Calculation (MD, MO) (Figure)	Calc (MD, MO) (Fig)	—
	01113	Others (Figure)	Others (Fig)	—
	[Peak or Valley]			
	01201	IR-Visible (Peak or Valley)	IR-Visible (Peak, Valley)	cm ⁻¹
	01202	Visible-UV (Peak or Valley)	Visible-UV (Peak, Valley)	nm
	01214	Luminescence / IR-Visible (Peak or Valley)	Lumi / IR-Visible (Peak, Valley)	cm ⁻¹
	01215	Luminescence / Visible-UV (Peak or Valley)	Lumi / Visible-UV (Peak, Valley)	nm
	01203	Raman (Peak or Valley)	Raman (Peak, Valley)	cm ⁻¹
	01204	NMR (Peak or Valley)	NMR (Peak, Valley)	kHz
	01205	Moessbauer (Peak or Valley)	Moessbauer (Peak, Valley)	kHz
	01206	ESR (Peak or Valley)	ESR (Peak, Valley)	mT
	01207	XPS (Peak or Valley)	XPS (Peak, Valley)	eV
	01208	XAFS, XANES, EXAFS (Peak or Valley)	XAFS (Peak, Valley)	eV
	01209	X-Ray Diffraction (Peak or Valley)	X-Ray (Peak, Valley)	deg
	01210	Neutron Diffraction (Peak or Valley)	Neutron (Peak, Valley)	deg
	01211	Calculation(MD, MO) (Peak or Valley)	Calc (MD, MO) (Peak, Valley)	—
	01213	Others (Peak or Valley)	Others (Peak, Valley)	—

Category	ID	Structure	Shortened form in system	Unit
Interatomic Information				
	02101	RDF etc (Figure) Radial Distribution Function $4\pi r^2 \rho(r)$ Pair Distribution Function $g(r)$ or $\rho(r) = \rho_0 g(r)$ Cumulative Pair Distribution Function Total Correlation Function $t(r) = 4\pi r \rho(r)$ Differential Correlation Function $d(r) = 4\pi r \{\rho(r) - \rho_0\}$ Others	RDF etc (Fig)	—
	02201	Interference Function (Figure)	Interference Function (Fig)	—
	02301	Structure Factor (Figure)	S(k) (Fig)	—
	02701	Ionic Radius	Ionic Radius	nm
	02802	Radius of Heterogeneities	Heterogeneity Radius	nm
[1st Interatomic Distance]				
	02401	1st Interatomic Distance (Typical)	1st Distance (Typical)	nm
	02402	1st Interatomic Distance (Average)	1st Distance (Ave)	nm
	02403	1st Interatomic Distance (Peak)	1st Distance (Peak)	nm
	02404	1st Distance Variance	1st Distance Variance	—
	02405	1st Asymmetric Parameter	1st Asymmetric Param	—
[2nd Interatomic Distance]				
	02501	2nd Interatomic Distance (Typical)	2nd Distance (Typical)	nm
	02502	2nd Interatomic Distance (Average)	2nd Distance (Ave)	nm
	02503	2nd Interatomic Distance (Peak)	2nd Distance (Peak)	nm
	02504	2nd Distance Variance	2nd Distance Variance	—
	02505	2nd Asymmetric Parameter	2nd Asymmetric Param	—
[n-th Interatomic Distance]				
	02901	n-th Interatomic Distance (Typical)	n-th Distance (Typical)	nm
	02902	n-th Interatomic Distance (Average)	n-th Distance (Ave)	nm
	02903	n-th Interatomic Distance (Peak)	n-th Distance (Peak)	nm
	02904	n-th Distance Variance	n-th Distance Variance	—
	02905	n-th Asymmetric Parameter	n-th Asymmetric Param	—
[Bond Angle]				
	02601	Bond Angle (Typical)	Bond Angle (Typical)	deg
	02602	1st Peak Bond Angle (Ave)	Bond Angle (1st Peak) (Ave)	deg
	02610	1st Peak Angle Variance (Ave)	Angle Variance (1st Peak) (Ave)	—
	02603	2nd Peak Bond Angle (Ave)	Bond Angle (2nd Peak) (Ave)	deg
	02604	2nd Peak Angle Variance (Ave)	Angle Variance (2nd Peak) (Ave)	—
	02605	1st Peak Bond Angle (Peak)	Bond Angle (1st Peak) (Peak)	deg
	02606	1st Peak Angle Variance (Peak)	Angle Variance (1st Peak) (Peak)	—
	02607	2nd Peak Bond Angle (Peak)	Bond Angle (2nd Peak) (Peak)	deg
	02608	2nd Peak Angle Variance (Peak)	Angle Variance (2nd Peak) (Peak)	—
	02609	Bond Angle Distribution (Figure)	Bond Angle Distribution (Fig)	—
Ring Structure				
	03001	Ring Size (Typical)	Ring Size (Typical)	—
	03002	Ring Size (Average)	Ring Size (Ave)	—
	03003	Ring Size (1st Peak)	Ring Size (1st Peak)	—
	03004	Ring Size (2nd Peak)	Ring Size (2nd Peak)	—
	03005	2-Membered Ring Proportion	2-Membered Ring	%
	03006	3-Membered Ring Proportion	3-Membered Ring	%

Category	ID	Structure	Shortened form in system	Unit
	03007	4-Membered Ring Proportion	4-Membered Ring	%
	03008	5-Membered Ring Proportion	5-Membered Ring	%
	03009	6-Membered Ring Proportion	6-Membered Ring	%
	03010	7-Membered Ring Proportion	7-Membered Ring	%
	03011	8-Membered Ring Proportion	8-Membered Ring	%
	03012	9-Membered Ring Proportion	9-Membered Ring	%
	03013	10-Membered Ring Proportion	10-Membered Ring	%
	03014	Distribution of Ring Structure (Figure)	Ring Structure Distribution (Fig)	—

Coordination Number

04001	Coordination Number (Typical)	Coord No. (Typical)	—
04002	1st Neighbour Coordination Number	1st Neighbor Coord No.	—
04003	2nd Neighbour Coordination Number	2nd Neighbor Coord No.	—
04004	3rd Neighbour Coordination Number	3rd Neighbor Coord No.	—
04005	Coordination Number 1 Proportion	Coord No. 1	%
04006	Coordination Number 2 Proportion	Coord No. 2	%
04007	Coordination Number 3 Proportion	Coord No. 3	%
04008	Coordination Number 4 Proportion	Coord No. 4	%
04009	Coordination Number 5 Proportion	Coord No. 5	%
04010	Coordination Number 6 Proportion	Coord No. 6	%
04011	Coordination Number 7 Proportion	Coord No. 7	%
04012	Coordination Number 8 Proportion	Coord No. 8	%
04013	Coordination Number 9 Proportion	Coord No. 9	%
04014	Coordination Number 10 Proportion	Coord No. 10	%
04015	Coordination Number 11 Proportion	Coord No. 11	%
04016	Coordination Number 12 Proportion	Coord No. 12	%
04017	Distribution of Coordination Number (Figure)	Coord No. Distribution (Fig)	—

Bridging Oxygen Information

[Bridging Oxygen]

05101	NBO / total O	NBO / total O	%
05102	NBO Number / Network Former X	NBO Number / X	—
05103	BO / total O	BO / total O	%
05104	BO Number / Network Former X	BO Number / X	—
05105	Isolated Oxygen O ²⁻ / total O	O ²⁻ / total O	%
05106	Isolated Oxygen O ²⁻ / Network Former X	O ²⁻ Number / X	—
05107	3 Coordinated Oxygen / total O	O(3) / total O	%
05108	3 Coordinated Oxygen / Network Former X	O(3) Number / X	—

[Qⁿ Distribution]

05201	Q ⁰ / total X	Q ⁰ / total X	%
05202	Q ¹ / total X	Q ¹ / total X	%
05203	Q ² / total X	Q ² / total X	%
05204	Q ³ / total X	Q ³ / total X	%

Category	ID	Structure	Shortened form in system	Unit
	05205	Q ⁴ / total X	Q4 / total X	%
Oxidation Number				
	06001	Valence Number (Average)	Valence No. (Ave)	—
	06002	-6 Valence Proportion	-6 Valence	%
	06003	-5 Valence Proportion	-5 Valence	%
	06004	-4 Valence Proportion	-4 Valence	%
	06005	-3 Valence Proportion	-3 Valence	%
	06006	-2 Valence Proportion	-2 Valence	%
	06007	-1 Valence Proportion	-1 Valence	%
	06008	0 Valence Proportion	0 Valence	%
	06009	+1 Valence Proportion	+1 Valence	%
	06010	+2 Valence Proportion	+2 Valence	%
	06011	+3 Valence Proportion	+3 Valence	%
	06012	+4 Valence Proportion	+4 Valence	%
	06013	+5 Valence Proportion	+5 Valence	%
	06014	+6 Valence Proportion	+6 Valence	%
Structure Model				
	08001	Structure Model	Structure Model	—
Basicity				
	09001	Optical Basicity	Optical Basicity	—
Induced Structure				
	10001	Induced Structure (by Femtosec Laser, etc.)	Induced Structure	—
Phase Separation				
	11001	Phase Separation	Phase Separation	—
FSDP and Boson Peak				
	07001	FSDP Q Value	FSDP Q Value	nm ⁻¹
	07002	FSDP Quasi-Bragg Plane Spacing	FSDP Quasi-Bragg Plane Spacing	nm
	07003	Boson Peak	Boson Peak	cm ⁻¹
Raman Data				
	12001	Depolarization Ratio	Depolarization Ratio	—
ESR Data				
	16001	g Value	g Value	—
	16002	g Value (perpendicular)	g Value (perp)	—
	16003	g Value (parallel)	g Value (para)	—
	16004	Hyperfine Coupling Constant (hfcc) (A)	Hyperfine Coupling Const	cm ⁻¹
	16005	Hyperfine Coupling Constant (perpendicular)	perp Hyperfine Coupling Const	cm ⁻¹

Category	ID	Structure	Shortened form in system	Unit
	16006	Hyperfine Coupling Constant (parallel)	para Hyperfine Coupling Const	cm ⁻¹
	16007	Hyperfine Structure Spacing	Hyperfine Structure Spacing	cm ⁻¹
	16008	ESR / Peak-to-Peak Distance	ESR / Peak-to-Peak	G
	16009	Dipolar Hyperfine Coupling Parameter	Dipolar Hyperfine Coupling Param	cm ⁻¹
	16010	Fermi Contact Interaction Parameter	Fermi Contact Interaction Param	—
XAFS Data				
	13001	Absorption Edge Position	Absorption Edge Position	eV
	13002	Pre Edge Position	Pre Edge Position	eV
NMR Data				
	14001	Quadrupolar Coupling Constant	Quadrupolar Coupling Const	MHz
	14002	Asymmetry Parameter	Asymmetry Param	—
	14003	Proportions Present	Proportions Present	%
	14004	Chemical Shift (Average)	Chemical Shift (Ave)	ppm
	14025	Chemical Shift (Peak)	Chemical Shift (Peak)	ppm
	14005	Chemical Shift Anisotropy	Chemical Shift Anisotropy	ppm
	14006	Isotropic Chemical Shift	Isotropic Chemical Shift	ppm
	14022	Second-order Quadrupolar Shift	2nd-order Quadrupolar Shift	ppm
	14007	Quadrupolar Isotropic Chemical Shift ¹⁷ O	Quadrupolar Isotropic Chemical Shift 17O	ppm
	14008	Shielding Constant	Shielding Const	ppm
	14009	Spin Coupling Constant	Spin Coupling Const	Hz
	14010	Relaxation Time	Relaxation Time	s
	14011	Longitudinal Relaxation Time T ₁	Relaxation Time T1	s
	14012	Transverse Relaxation Time T ₂	Relaxation Time T2	s
	14013	Quadrupole Relaxation	Quadrupole Relaxation	s
	14021	Line Width (FWHM)	NMR-FWHM	ppm
	14015	Dipole Interaction	Dipole Interaction	Hz
	14016	Quadrupole Interaction	Quadrupole Interaction	Hz
	14017	Electric Field Gradient	Electric Field Gradient	—
	14019	Effect of Secondary Quadrupole	2nd Quadrupole Effect	ppm
	14020	Quadrupole Moment	Quadrupole Moment	m ²
	14023	Quadrupolar Coupling Parameter	Quadrupolar Coupling Param	MHz
	14024	Isotropic Dimension	Isotropic Dimension	ppm
Moessbauer Data				
	15001	Isomer Shift	Isomer Shift	mm/s
	15002	Quadrupole Splitting	Quadrupole Splitting	mm/s
	15003	Line Width (FWHM)	Moessbauer-FWHM	mm/s
	15004	Asymmetric Parameter	Asymmetric Param	—
Others				
	99999	Others	Others	—
	(000001~)			

Measurement Method

Measurement method

Shortened form in system

IR-Visible Spectroscopy	IR-Visible
Visible-UV Spectroscopy	Visible-UV
Luminescence / IR-Visible	Lumines / IR-Visible
Luminescence / Visible-UV	Lumines / Visible-UV
Raman Spectroscopy	Raman
Nuclear Magnetic Resonance (NMR)	NMR
Moessbauer Spectroscopy	Moessbauer
X-ray Photoelectron Spectroscopy (XPS)	XPS
Electron Spin Resonance Spectroscopy (ESR)	ESR
Neutron Diffraction	Neutron
X-ray Diffraction	X-ray
X-ray Absorption Fine Structure (XAFS, XANES, EXAFS)	XAFS
Calculation (MO, MD, etc)	Calc (MO, MD, etc)
Others	Others

- In shortened form in this list and in INTERGLAD system, °C→C.
- In INTERGLAD system, superscript or subscript figures, and marks are noted as normal figures and marks.
Ex. $B_2O_3 \rightarrow B2O3$, $Ca^{2+} \rightarrow Ca++$, $cm^3/(mol \cdot atm) \rightarrow cm3/(mol.atm)$
 $Na_2O \cdot Al_2O_3 \cdot 6SiO_2 \rightarrow Na2O-Al2O3-6SiO2$, $\geq \rightarrow >=$
- Greek alphabet is noted as normal. Ex. $\alpha \rightarrow a$, $\beta \rightarrow b$, $\mu \rightarrow u$, $\lambda \rightarrow l$
- For Appearance, Feature, Process, and for Usage, all items in each category are available as a search item.
- For Property, items of **[bold letters]** are available as a search item besides items in the low category.
- Unit "-" means non-unit, and "#" means various specific unit.