



News of glass products standardization in Russia

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Standardization rules in Russia (reference)



Particularities to standardization and
certification of glass products in Russia

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GPD-1999



Climatic factors (reference)

Designing of high-rise building glazing for strict climatic conditions

Alexander G. Chesnokov,

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GPD-2007

16.06.2007



Program of glass products standardization in Russia (reference)

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GPD–2009

15.06.2009



On the activity of the Russian Standardization Technical Committee TC “Glass” (reference)



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GPD-2011
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26 new GOST R standards were developed during 2010–2011 and now they are officially active

- 8 standards in substitution of discontinued ones
- 18 new standards
 - 22 are harmonized with ISO or CEN
 - 4 are original ones
 - 11 are specifications
 - 13 describe test methods
 - 2 formalize calculation methods



GOST R (ГОСТ Р) for the product types

#	Label	Denotation	The closest international analogous standard	Discontinued standards
1	ГОСТ Р (GOST R) 54161–2010	Mirrors. General specifications	EN 1036–1:2007	ГОСТ (GOST) 17716–91
2	ГОСТ Р (GOST R) 54162–2010	Tempered glass. Specifications	EN 12150–1:2000, EN 12150–2:2004	ГОСТ (GOST) 30698–2000
3	ГОСТ Р (GOST R) 54169–2010	Tinted flat glass. General specifications	EN 572–8:2004	
4	ГОСТ Р (GOST R) 54170–2010	Clear flat glass. Specifications	EN 572–8:2004	ГОСТ (GOST) 111–2001
5	ГОСТ Р (GOST R) 54171–2010	Laminated glass. Specifications	EN ISO 12543–4:1998, EN ISO 12543–5:1998, EN ISO 12543–6:1998, ISO 16933–2007	ГОСТ (GOST) 30826–2001; ГОСТ Р (GOST R) 51136–2008
6	ГОСТ Р (GOST R) 54175–2010	Sealed insulating glass units. Specifications	EN 1279–1:2004, EN 1279–2:2002, EN 1279–3:2002, EN 1279–4:2002, EN 1279–6:2002	ГОСТ (GOST) 24866–99
7	ГОСТ Р (GOST R) 54176–2010	Soft coating low emissivity glass. Specifications	EN 1096–1:1998, EN 1096–3:2001, EN 1096–4:2004	ГОСТ (GOST) 31364–2007
8	ГОСТ Р (GOST R) 54177–2010	Hard coating low emissivity glass. Specifications	EN 1096–1:1998, EN 1096–2:2001, EN 1096–4:2004	ГОСТ (GOST) 30733–2000
9	ГОСТ Р (GOST R) 54178–2010	Soft coating solar protection or decorative glass. Specifications	EN 1096–1:1998, EN 1096–3:2001, EN 1096–4:2004	
10	ГОСТ Р (GOST R) 54179–2010	Hard coating solar protection or decorative glass. Specifications	EN 1096–1:1998, EN 1096–2:2001, EN 1096–4:2004	
11	ГОСТ Р (GOST R) 54180–2010	Heat strengthened glass. Specifications	EN 1863–1:2000, EN 1863–2:2000	

SOURCE: www.gpd.fi

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GOST R (ГОСТ Р) for the test methods



#	Label	Denotation	The closest international analogous standard	Discontinued standards
1	ГОСТ Р (ГОСТ Р) 54163-2010	Glass and glass products. Test methods for resistance to climatic exposure. Frost resistance test method		
2	ГОСТ Р (ГОСТ Р) 54164-2010 (ISO 9050:2003)	Glass and glass products. Optical characteristics determination methods. Determination of luminous and solar characteristics	ISO 9050:2003	
3	ГОСТ Р (ГОСТ Р) 54165-2010 (ISO 10293:1997)	Glass and glass products. Thermal properties determination methods. Thermal resistance determination method	ISO 10293:1997	
4	ГОСТ Р (ГОСТ Р) 54168-2010	Glass and glass products. Thermal properties determination methods. Determination of the emissivity	EN 12898:2001	
5	ГОСТ Р (ГОСТ Р) 54172-2010	Insulating glass units. Method of determination of life circle	EN 1279-2:2002	ГОСТ (ГОСТ) 30779-2001
6	ГОСТ Р (ГОСТ Р) 54173-2010 (EN 1279-4:2002)	Insulating glass units. Methods of test for the physical attributes of edge seals	EN 1279-4:2002	
7	ГОСТ Р (ГОСТ Р) 54174-2010 (EN 1279-6:2002)	Insulating glass units. Methods and rules of products quality assurance	EN 1279-6:2002	
8	ГОСТ Р (ГОСТ Р) 54181-2010	Glass and glass products. Test method for resistance to humidity		
9	ГОСТ Р (ГОСТ Р) 54182-2010	Glass and glass products. Salt spray test method		
10	ГОСТ Р (ГОСТ Р) 54183-2010	Glass and glass products. Test method for resistance to UV-radiation		
11	ГОСТ Р (ГОСТ Р) 54495-2011	Glass and glass products. Fire resistance test method	ISO 834-1:1999, EN 1363-1:1999, EN 1363-2:1999, EN 13501-2:2007	
12	ГОСТ Р (ГОСТ Р) ISO 16932:2011	Glass and glass products. Destructive-windstorm-resistant security glazing. Method of testing and classification	ISO 16932:2007	
13	ГОСТ Р (ГОСТ Р) 54327-2011 (ISO 16940:2008)	Glass and glazing. Sound insulation determination method	ISO 16940:2008	

SOURCE: www.gpd.fi

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GOST R (ГОСТ Р) for the calculation methods



#	Label	Denotation	The closest international analogous standard	Discontinued standards
1	ГОСТ Р (GOST R) 54166–2010 (EN 673:1997)	Glass and glass products. Thermal properties determination methods. Thermal resistance calculation method	EN 673:1997	
2	ГОСТ Р (GOST R) 54167–2010 (ISO 14438:2002)	Glass and glass products. Determination of energy balance value. Calculation method	ISO 14438:2002	



New projects of CIS interstate standards (2011–2012)



- ▶ In 2011–2012 TC 41 “Glass” developed 32 new projects of CIS interstate standard drafts:
 - ▶ 6 come to replace old acting standards
 - ▶ 26 are completely new standards
 - ▶ 17 are harmonized with ISO or CEN
 - ▶ 15 are original
 - 5 are specifications
 - 20 describe test methods
 - 7 are methodological standards



Specifications standards



#	Title	International harmonization	Replaced standard
1	Wired glass. Specifications	EN 572-3:2012 EN 572-6:2012 EN 572-8:2012	GOST 7481-78
2	Matt glass. Specifications		
3	Painted glass. Specifications		
4	Adhesive backed polymeric filmed glass. Specifications	prEN 15755-1	
5	Patterned glass. Specifications	EN 572-5:2012, EN 572-8:2012	GOST 5533-86



Test method standards

#	Title	International harmonization	Replaced standard
1	Glass and glass products. Test method boiling (temperature resistance)	ISO 12543-4:2011	
2	Glass and glass products. Test method for resistance to impact of hammer and axe	ISO 16936-2:2005	
3	Glass and glass products. Test method for resistance to ball drop	ISO 16936-1:2005	
4	Glass and glass products. Hardness determination method	ISO 9385:1990	
5	Glass and glass products. Heat resistance determination methods	—	GOST 25535-82 GOST 11103-85
6	Glass and glass products. Inspection methods for geometric parameters and appearance	—	
7	Glass and glass products. Methods for determination of mechanical properties. Determination of elasticity modulus at cross static bending	—	GOST 9900-85
8	Glass and glass products. Methods for determination of mechanical properties. Determination of resistance to static load	—	
9	Glass and glass products. Method for determination of mechanical properties. Determination of impact toughness	—	GOST 11067-85
10	Glass and glass products. Methods for determining the optical characteristics. Determination of the refractive index	—	



Test method standards (continued)



#	Title	International harmonization	Replaced standard
11	Glass and glass products. Optical characteristics determination methods. Determination of colour coordinates	—	
12	Glass and glass products. Determination of the bending strength. Coaxial double ring test on flat specimens with large test surface areas	EN 1288-2:2000	
13	Glass and glass products. Determination of the bending strength. Coaxial double ring test on flat specimens with small test surface areas	EN 1288-5:2000	
14	Glass and glass products. Determination of the bending strength. Test with specimen supported at two points (four point bending)	EN 1288-3:2000	
15	Glass in building – Determination of the bending strength of glass – Part 1: Fundamentals of testing glass	EN 1288-1:2000	
16	Glass and glass products. Explosion resistance test method	EN 13541:2012	
17	Glass and glass products. Test method of bullet resistance	EN 1063:1999, ISO 16935:2007	
18	Inorganic glass and glass-crystalline materials. Determination of chemical composition. General requirements for methods of determining the content of major chemical components		
19	Coated glass. Test methods for class A, B, S coatings	EN 1096-2:2012	
20	Coated glass. Test methods for class C and D coatings	EN 1096-3:2012	



Methodological standards



#	Title	International harmonization	Replaced standard
1	Glass and glass products. Marking, packing, transportation, storage	—	
2	Glass and glass products. Visual faults. Terms and definitions	—	
3	Glass and glass products. Procedures for goodness of fit and confidence intervals for Weibull distributed glass strength data	EN 12603:2002	
4	Glass and glass products. Acceptance rules	—	
5	Glass and glass products. Terms and definitions	—	Comecon St. / CT CЭB 2439-80
6	Coated glass. Classification	EN 1096-1:2012	
7	Coated glass. Acceptance rules	EN 1096-4:2004	



Standard projects availability

- ▶ Texts of the standard projects on Russian available through TC 41 website
<http://tc41.ru>
- ▶ All new versions of developing Russian and interstate standards will be available on the web-site too (on Russian language).



Plans for 2013–2014

- ▶ 26 CIS interstate standards on the base of national Russian standards approved in 2010–2011.
- ▶ 5 new CIS interstate standards.



New CIS interstate standards:

- ▶ GOCT (GOST) «Glass and glass products. Optical distortions determination methods»
- ▶ GOCT (GOST) «Glass and glass products. Properties. Terms and definitions»
- ▶ GOCT (GOST) «Glass and glass products. Mechanical properties determination methods. Abrasion resistance test»
- ▶ GOCT (GOST) 10978-? «Glass and glass products. Thermal linear expansion coefficient determination method»
- ▶ GOCT (GOST) «Glass and glass products. Mechanical properties determination methods. Breakage behavior tests»



Cooperation within the CIS space



- Foundation of the Interstate technical committee for the glass and glass products standardization on the TC 41 basis. Azerbaijan, Armenia, Kirgizstan, Moldova, Ukraine and organizations from Belorussia, Kazakhstan and Russia are ready to work.
- Development of the CIS interstate standards on the GOST R, ISO, EN basis



Conclusions



- ▶ Standardization of building and technical glass products in Russia and CIS countries is in active development phase.
- ▶ Substantial effort is being made for harmonization of CIS interstate standards with ISO and CEN standards and to eliminate backlog of Interstate standards from ISO and CEN standards in quantity and quality.



Thank you for
attention!



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