

Statistical Data on Mechanical Properties of SVEZA Exterior Birch Plywood

Comparison of mechanical properties of SVEZA exterior birch plywood (coated & uncoated) with relevant industrial normative values for the period of 2019-2021

1.10.2021



Mechanical Properties of SVEZA Exterior Birch Plywood (Coated & Uncoated), Thickness 21 mm



Performance Characteristics	Minimum Values according to the STO*	Minimum Values according to the Declared EN Class	Average** Values for the Period 2019-2021
1) Moisture content, % <i>(test method according to GOST 9621-72 and EN 322:1993)</i>	5 to 12	-	7,5
2) Density, kg/m ³ <i>(test method according to GOST 9621-72 and EN 323:1993)</i>	-	650	681
3) Bonding quality, MPa <i>(test method according to GOST 9624-2009 and EN 314-1:1993)</i>	1,0	-	1,78
4) Bending strength along the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	60	52	74,8
5) Bending strength across the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	30	30	63,4
6) Modulus of elasticity in bending, along the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	6000	5400	8544
7) Modulus of elasticity in bending, across the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	3000	2700	6629

* STO = SVEZA corporate standard. According to STO 52654419-006-2018 «Film faced birch plywood. Technical specifications» and STO 52654419-001-2018 “Birch plywood of general application. Technical specifications”

**Average values were calculated for plywood of thickness 21 mm, the data were collected from all 7 mills of SVEZA Group. The values show average of 5% quantile values from each mill.

Actual values of mechanical properties are given in Passport of Quality for each batch or by request.

Mechanical Properties of SVEZA Exterior Birch Plywood (Coated & Uncoated), Thickness 18 mm



Performance Characteristics	Minimum Values according to the STO*	Minimum Values according to the Declared EN Class	Average** Values for the Period 2019-2021
1) Moisture content, % <i>(test method according to GOST 9621-72 and EN 322:1993)</i>	5 to 12	-	7,3
2) Density, kg/m ³ <i>(test method according to GOST 9621-72 and EN 323:1993)</i>	-	650	681
3) Bonding quality, MPa <i>(test method according to GOST 9624-2009 and EN 314-1:1993)</i>	1,0	-	1,75
4) Bending strength along the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	60	52	73,6
5) Bending strength across the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	30	30	63,3
6) Modulus of elasticity in bending, along the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	6000	5400	8544
7) Modulus of elasticity in bending, across the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	3000	2700	6493

* STO = SVEZA corporate standard. According to STO 52654419-006-2018 «Film faced birch plywood. Technical specifications» and STO 52654419-001-2018 “Birch plywood of general application. Technical specifications”

**Average values were calculated for plywood of thickness 18 mm, the data were collected from all 7 mills of SVEZA Group. The values show average of 5% quantile values from each mill.

Actual values of mechanical properties are given in Passport of Quality for each batch or by request.

Mechanical Properties of SVEZA Exterior Birch Plywood (Coated & Uncoated), Thickness 15 mm



Performance Characteristics	Minimum Values according to the STO*	Minimum Values according to the Declared EN Class	Average** Values for the Period 2019-2021
1) Moisture content, % <i>(test method according to GOST 9621-72 and EN 322:1993)</i>	5 to 12	-	7,0
2) Density, kg/m ³ <i>(test method according to GOST 9621-72 and EN 323:1993)</i>	-	650	680
3) Bonding quality, MPa <i>(test method according to GOST 9624-2009 and EN 314-1:1993)</i>	1,0	-	1,79
4) Bending strength along the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	60	52	77,4
5) Bending strength across the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	30	30	63,7
6) Modulus of elasticity in bending, along the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	6000	5400	8798
7) Modulus of elasticity in bending, across the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	3000	2700	6304

* STO = SVEZA corporate standard. According to STO 52654419-006-2018 «Film faced birch plywood. Technical specifications» and STO 52654419-001-2018 “Birch plywood of general application. Technical specifications”

**Average values were calculated for plywood of thickness 15 mm, the data were collected from all 7 mills of SVEZA Group. The values show average of 5% quantile values from each mill.

Actual values of mechanical properties are given in Passport of Quality for each batch or by request.

Mechanical Properties of SVEZA Exterior Birch Plywood (Coated & Uncoated), Thickness 12 mm



Performance Characteristics	Minimum Values according to the STO*	Minimum Values according to the Declared EN Class	Average** Values for the Period 2019-2021
1) Moisture content, % <i>(test method according to GOST 9621-72 and EN 322:1993)</i>	5 to 12	-	6,8
2) Density, kg/m ³ <i>(test method according to GOST 9621-72 and EN 323:1993)</i>	-	650	684
3) Bonding quality, MPa <i>(test method according to GOST 9624-2009 and EN 314-1:1993)</i>	1,0	-	1,78
4) Bending strength along the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	60	52	82,3
5) Bending strength across the grain (Modulus of rupture, MOR), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	30	30	63,8
6) Modulus of elasticity in bending, along the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	6000	5400	9112
7) Modulus of elasticity in bending, across the grain (MOE), MPa <i>(test method according to GOST 9625-2013 and EN 310:1993)</i>	3000	2700	6119

* STO = SVEZA corporate standard. According to STO 52654419-006-2018 «Film faced birch plywood. Technical specifications» and STO 52654419-001-2018 “Birch plywood of general application. Technical specifications”

**Average values were calculated for plywood of thickness 12 mm, the data were collected from all 7 mills of SVEZA Group. The values show average of 5% quantile values from each mill.

Actual values of mechanical properties are given in Passport of Quality for each batch or by request.

Mechanical Properties of SVEZA Exterior Birch Plywood. Disclaimer



- Minimal normative indicators are taken in accordance with STO 52654419-006-2018 “Film faced birch plywood. Technical specifications” and STO 52654419-001-2018 “Birch plywood of general application. Technical specifications”. STO is SVEZA corporate standard. The above mentioned documents are available on the website sveza.com
- Average values for the period of 2019-2021 were calculated for the indicated plywood thickness based on the data collected from all 7 mills of SVEZA Group. The values show average of 5% quantile values from each mill. The declared performance characteristics are based on the results of FPC laboratory tests of samples with standard dimensions and by using test procedures in compliance with the indicated industrial standards.
- The indicated average strength values are not characteristic values and can be used for the purpose of structural design calculations only with additional correction factors (according to the Building code SNiP II-25-80 “Wooden constructions” and other regulatory documents in the construction industry).
- SVEZA Group would not bear any responsibility for the accuracy and correctness of any engineering calculations made by using the indicated performances and would not be held liable for any possible consequences (including material) in case of engineering mistakes or operating errors.
- Minimal performance characteristics according to EN classes are indicated for all the mills of SVEZA Group. Actual EN classes for each individual SVEZA mill can be higher; and all the products are manufactured in full compliance with the declared classes.
- In case of questions please contact us at info@sveza.com with the email subject “Mechanical properties of SVEZA exterior birch plywood”.