



IMPORTANT NOTE

Technical data and contents may not be current.

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LITE-FLOOR



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LITE-FLOOR - the emotional challenge for functional glass floors

The application of glass in walkable areas opens new, emotional dimensions for functional components such as stairs and walkways.

1. General

LITE-FLOOR is a walkable laminated safety glass with ideal slip-resistant properties and/or structural integrity.

2. Application

Glass floors, Glass bridges, Glass landings and Glass stairs, in particular for:

- Illumination of multi-storey rooms
- Multi-dimensional room ambience
- Adventure-architecture - involving the end-user through emotional challenges.

3. Execution

LITE-FLOOR is available in three different types, depending on the specific requirements:

LITE-FLOOR CL (to ÖNORM B 4012)

A laminate of two sheets of annealed glass without slip-resistance. Vision-protection can be achieved using opaque interlayers.

LITE-FLOOR R (to ÖNORM B 4012)

A laminate with slip-resistance partially transparent/translucent.

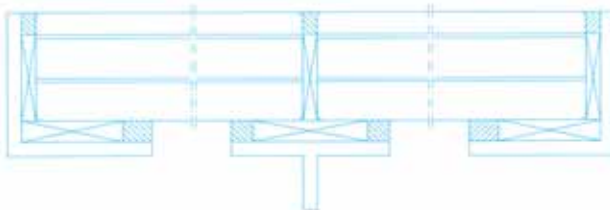
LITE-FLOOR RTF (to German requirements)

A laminate with slip-resistance and tested structural integrity in accordance with German standards.

Two sided support



Four sided support



Installation concept

Supporting and spacing material preferably in Silicone of 60 - 80° Shore hardness.

Jointing

Silicone compatible with laminated glass interlayers. The adhesion ability of silicone to the structure must be tested by the installer/contractor. Maximum allowable deflection of the supporting structure is $l/500$.

4. Structural Concept

LITE-FLOOR laminated safety glass typically comprises three sheets of glass.

The (two) lower sheets of annealed or heat-strengthened glass act as the load-bearing part of the unit. The upper sheet is heat-strengthened and is coated with a patented slip-resistant coating.

4.1 Safety

The highly tear-resistant interlayers provide integrity in lamination even when individual sheets fail under load. The laminate remains intact. A reduced load-bearing capacity depends on the type and amount of damage.

LITEFLOOR RTF has undergone extensive testing for load-bearing capacity following forced failure.

The results of this testing are to be taken into consideration when applying for construction permission (particular to Germany)

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Raiffeisenbank Innsbruck, Glass bridge: LITE-FLOOR R; Architect: DI Heinz Örley; Photography: CROCE & WIR



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5. Technical information

Slip-resistance

LITE-FLOOR R and RTF

LITE-FLOOR has been tested to DIN 51130 and ZH1/571 for slip-resistance. The process determines the slip-resistance suitability of floor coverings in working areas.

Angle of slope	Rating of slip-resistance
10° to 19°	R 10
from 19° to 27°	R 11
from 27° to 35°	R 12
over 35°	R 13

Corrected angle of slope is the average angle of slope at which the person begins to slip.

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Surface durability

The basis glass used for LITE-FLOOR is normal commercial silica glass with the same characteristics as normal float glass - it may become scratched.

Wear-resistance of the coating

When compared to regular commercial floor tiles, the durability of the coating fulfilled the abrasion resistance requirements as determined in report Nr. 23073 from the Austrian Coatings Institute in Vienna.

Highly frequented areas with above average traffic may lead to varying and product-specific degrees of wear.

A long-term test over two years and a traffic frequency of over 100.000 cycles indicated only a minimal reduction in slip-resistance from R10 to R 9.

Quartier 203, Berlin, Floor: LITE-FLOOR RTF
Elevators: LITE-WALL Mono
Architect: Von Gerkan, Marg&Partners
Fotography: CROCE & WIR

Cleaning

To clean LITE-FLOOR with slip-resistant coating, use a wet brush, regular commercial glass stain remover and finally a rubber wiper or a steam vacuum cleaner for best results. Cloths or sponges leave residue.

Cleaning resistance

According to ÖNORM 3081 there is no optical detriment after 1000 wash cycles.

Safety Note

Glass breakage is highly unlikely due to high safety factors applied. Should, however, glass breakage occur we recommend that the glass not be walked on and that it should be replaced.



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Employment of the performance coating LITE-FLOOR R and LITE-FLOOR RTF

Slip-resistant coated glass floors and glass stairs have shown better friction values than conventional materials. The creative use of glass in floor and stair design has no limitations.

Partial coverage

Vision-protection possible depending on design. For sensitive applications it is possible to achieve full vision-protection using a translucent pvb interlayer.

Full coverage

Translucent vision-protection given.

Structural dimensioning

The required glass thickness is dependent on the specific method of support; size of the unit and loading cases, and needs to be determined for each particular case with respect to the structural requirements.

Pre-dimensioning tables in accordance to ÖNORM B 4102 are illustrated on our CD-ROM "Glass Systems"

You can request our CD-ROM including all updates from the following:

e-mail: vertrieb@eckelt.at

Fax: 0043/7252/894-30128



Glasinform, Vienna; Architect: Prof.Gerischer/Eckelt; Photography: DI Rüdiger Ettl



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6. Glass Types:

LITE-FLOOR CL			
Type mm/sheets	Thickness mm	Weight kg/m ²	Slip-resistance
CL 17/2	17 ± 1	42	none
CL 21/2	21 ± 1	52	none
CL 26/2	26 ± 1,5	65	none
CL 32/2	32 ± 2,0	80	none

Production sizes: max. 150 x 220 cm
min. 20 x 50 cm

Standards: Dimensioning in accordance with ÖNORM B 4012 for dwellings.

Edge quality: fine ground (KGS)
Optional: polished (KPO)
Post-tempering edge-working is not allowable.

Installation: For external and internal applications in dwellings.

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LITE-FLOOR R				
Type mm/sheets	Thickness mm	Weight kg/m ²	Slip-resistance	
			part-coated	total coated
R 17/2	17±1	42	R 12	R 13
R 24/3	24±1	60	R 12	R 13
R 28/3	28±1,5	70	R 12	R 13
R 32/3	32±1,5	80	R 12	R 13
R 38/3	28±1,5	95	R 12	R 13
R 46/3	46±2,0	115	R 12	R 13

Production sizes: max. 150 x 220 cm
min. 20 x 50 cm

Installation: Only recommended for internal applications. High frequency traffic (10.000 to 20.000 per annum) should have a slip-resistance of R 13 (total coverage)

Edge quality: fine ground (KGS)
Optional: polished (KPO)
Post-tempering edge-working is not allowable.

Standards: Dimensioning in accordance with ÖNORM B 4012.

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LITE-FLOOR RTF

In Germany it is necessary to obtain individual construction permission for walkable glass installations. This is because no standards or regulations currently exist.

As a result of successful testing for structural integrity, LITE-FLOOR RTF will significantly simplify obtaining approval for installations.

Mock-Up testing

In August 1999 VEGLA in association with the Technical High School in Munich, carried out mock-up testing on walkable glass. Impact safety and structural integrity were tested on point-supported and line-supported glass-elements. The tested units varied in size, composition and specification for each method of support. A General Construction Permit has been applied for at the DIBt in Berlin.

LITE-FLOOR RTF			
Type mm/sheets	Thickness mm	Weight kg/m ²	Slip-resistance
RTF 26/3-4S	26±1	65	R 13
RTF 30/3-4S	30±1,5	75	R 13
RTF 34/3-4S	34±1,5	85	R 13
RTF 43/4-4P	43±2,0	108	R 13
RTF 43/4-6P	43±2,0	108	R 13
RTF 49/4-6P	49±2,5	123	R 13
RTF 49/4-9P	49±2,5	123	R 13
RTF 42/4-4PK	42±2,5	105	R 13

Production sizes: max. 150 x 220 cm
min. 20 x 50 cm

Structural: In accordance with Building Control requirements

Edge quality: fine ground (KGS)
Optional: polished (KPO)
Post-tempering edge-working is not allowable.

Standards: Dimensioning in accordance with German Regulations DIN 1055-3 and the requirements of the National Trading Association of Baden Württemberg, Edition 28.7.1999

Installation: Only recommended for internal applications. High frequency traffic (10.000 to 20.000 per annum) should have a slip-resistance of R 13 (total coverage)

Glass Systems

SGG LITE-WALL
SGG LITE-POINT
SGG VARIO
SGG DLS

Point-fixed glazing system
Facade cladding system
Insulating glass with all-glass appearance
System solution for day-lightening control
- DLS Fish
- DLS micro-louvre
- DLS Litestar
- DLS Eclipse
Walkable glass
Canopy system

SGG LITE-FLOOR
SGG ROOF-LITE

Design
Glass cladding
Glass cladding
Curved glass

SGG SERALIT-LITEX
SGG EMALIT
SGG METALIT
SGG TRANSRADIAL

SGG CLIMAPLUS SOLAR CONTROL
SGG CLIMAPLUS SILENCE
SGG CONTRAFLAM F 30, F 60, F 90
SGG FIVESTAR
SGG SWISSFLAM
SGG CLIMATOP SOLAR
SGG CLIMAPLUS

Solar control
Acoustic control
Fire resistant glass G 30
Fire resistant glass F 30
Solar glass
Thermal Insulating glass

SGG SECURIT
SGG STADIP
SGG STADIP PROTECT A
SGG STADIP PROTECT B
SGG STADIP PROTECT C
SGG STADIP PROTECT D

Toughened safety glass (ESG)
Laminated safety glass (VSG)
projectile-resistant
penetration-resistant
bullet-resistant
explosion-resistant

SGG SECURIT HSW
SGG SECURIT PORTAL
SAPHIR

Sliding glass walls
All glass doors
Fitting system

Engineering, consulting, site installation and supervision.



MORE THAN GLASS

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