



# EXTRA CLEAR™

NATURALLY CLEAR FLOAT GLASS



Opera, Copenhagen Architect: Henning Larsens Tegnestue



## PRODUCT FEATURES

Standard clear glass has an inherent greenish colour. This is visible in particular when viewing the edge of the glass or in a composite stack of many glass lites. Responsible for the colour appearance is the content of iron in the sand and other raw materials. Guardian ExtraClear™ contains up to 5 times less iron compared to standard clear float glass.

Well-selected materials as well as the use of the latest glass manufacturing technologies give Guardian ExtraClear™ its typical characteristics, which are highly appreciated by architects and planners.

Especially the enhanced colour neutrality in transmission and reflection as well as the outstanding transpance make the difference to common clear float glass.

- Higher transpance than standard float glass
- Higher energy transmittance
- Less greenish appearance
- Enhanced colour rendering



## APPLICATIONS

Guardian ExtraClear™ can be toughened or laminated. It is the preferred choice for many applications such as:

- High transparent façades
- Partitions, shop fronts, show cases
- Table tops, Shelves, Consoles, Folding screens
- Solar applications
- Transparent laminated safety glass
- Silk-screen printed glass
- Horticulture Glass / Greenhouses



## PERFORMANCE DATA

Thickness [mm]	Light transmission [%]	Light reflection [%]	Colour rendering index Ra	Direct energy transmission [%]	Energy reflection [%]	Energy absorption [%]	Solar factor [%]	Shading Coefficient (g / 0,80)	UV transmission [%]
3	91	8	99	88	8	4	89	1,11	77
4	91	8	99	87	8	5	88	1,10	74
5	90	8	99	86	8	6	87	1,09	71
6	90	8	99	84	8	8	86	1,07	69
8	90	8	99	83	8	9	85	1,06	65
10	89	8	98	80	8	12	83	1,04	61
12	88	8	98	78	8	14	82	1,02	59

All values are nominal values and are subject to production tolerances. The data were determined according to EN 410.



## STANDARDS AND APPROVALS

Guardian Europe has obtained ISO 9002 accreditation for the manufacturing of float glass at all its European based float glass plants.

Guardian ExtraClear™ float glass complies with the requirements of the standards EN 572-2: 1994 “Glass in Building- Basic soda lime silicate glass products - Part 2: Float glass” and DIN 1249-10: 1990 “Glass in Building; chemical and physical properties”.

**Disclaimer:** The information contained in this publication is a general description of the product ExtraClear™ and Guardian hereby disclaims all liability arising from any inaccuracy in or omissions from this publication and all the consequences of relying on it. It is the responsibility of the users of this information to ensure that the intended application of ExtraClear™ is appropriate and complies with all relevant laws, regulations, standards, codes of practices and other requirements.



[www.guardian-europe.com](http://www.guardian-europe.com)

Foto: H.G. Esch, Hennef

Lufthansa Aviation Center, Frankfurt/Main

Architect: Ingenhoven Architekten, Düsseldorf

