

SAFETY DATA SHEET

Float and Rolled Flat Glass

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

USA: PILKINGTON North America, Inc.
811 Madison Ave.
Toledo, OH 43697-0799
Emergency Telephone: 419-247-3731

Europe: PILKINGTON Ltd.
European Technical Centre.
Hall Lane, Lathom,
Ormskirk, Lancashire L40 5UF
Emergency Telephone: 01695 50000

Product: Sheets of flat glass

Common Names: Float glass, rolled plate glass, or flat glass; under the following trade names:

Architectural

Pilkington Activ™ (Clear, Blue, Neutral)	Pilkington K Glass™	Pilkington Planar™
Pilkington Activ Optitherm™	Pilkington Karatachi™ Dark Grey	Pilkington Planar Activ™
Pilkington Activ Suncool™	Pilkington Microfloat™	Pilkington Planarclad™
Pilkington Arctic Blue™	Pilkington Mirropane™	Pilkington Plateau™
Pilkington Dark Bronze C™	Pilkington Mistlite™ Clear	Pilkington Profilite™
Pilkington Dark Grey™	Pilkington Nashiji™ Clear	Pilkington Reflite™
Pilkington Design Glass	Pilkington Optar™	Pilkington Solar-E™
Pilkington Eclipse Advantage™ (Clear, Blue-Green, Arctic Blue, Grey, Bronze, Evergreen)	Pilkington Optifloat™ (Clear, Bronze, Grey, Blue, Green, Blue-Green)	Pilkington Suncool™
Pilkington Emerald Green™	Pilkington Optifloat™ Opal	Pilkington SunShade™ Silver
Pilkington Energy Advantage™	Pilkington Optitherm™	Pilkington SuperGrey™
Pilkington EverGreen™	Pilkington OptiView™	Pilkington TEC Glass™
Pilkington Galleria™	Pilkington Optiwhite™	Pilkington Texture Glass
Pilkington Horticultural Glass	Pilkington Oriel Collection	
Pilkington JadeGreen™		

Automotive

Pilkington Light Green	Pilkington Solar Green	Pilkington Sundym
Pilkington Green	Pilkington EZ Kool	Pilkington Galaxsee
Pilkington Dark Green	Pilkington EZ eye	Pilkington Optikool
Pilkington Clear	Pilkington Bronze	Pilkington Arctic Lite

Intended Use: Glass, glazing systems and products manufactured from sheets of flat glass.

Date Prepared: May 2015

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This safety datasheet has been prepared in accordance with the EC Regulations 1907/2006 and 453/2010 (REACH and annex II) in accordance with the Global Harmonised System (GHS) and EC Regulation 1272/2008 (CLP). Although Pilkington and the NSG Group provide this information in this format, **this document does not constitute a Safety Data Sheet with regard the European REACH regulation**. The substance "glass" and manufactured "articles" referred to in section 1 are exempt from registration and thus do not require a Safety Data Sheet.

SECTION 2 TOXICOLOGICAL INFORMATION

2.1 Classification of the substance or mixture.

Further information on the risks to health and /or the environment is given in sections 3, 11, 12 and 16.

2.1.1 Classification according to regulation (EC) 1272/2008

The product does not contain a substance that is classified as hazardous according to the provisions of Regulation (EC) 1272/2008 (CLP).

2.2.1 Labeling according to Regulation 1272/2008 (CLP)

Hazard Statements

None

Classification 1272/2008 (CLP) warning pictograms

None

2.3 Classification according to Directive 67/548/EC

Not classified

2.3.1 Labeling according to Directive 67/548/EEC

None

Indication

None

Risk Phrases

None

Safety Phrases

None

2.3 Other

The mixture does not meet the criteria for PBT or vPvB substances according to Annex III of REACH regulation EC 1907/2006.

No hazards identified.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Composition.

Substance.	CAS	Conc. %.	Class. 67/548/CEE.	Class 1272/2008 (CLP).
Glass	CAS. 65997-17-3	100	none	none

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The products listed in section 1 are based on typical soda-lime-silicate flat glass. In Europe, EINECS identifies glass in the following terms: Glass, oxide, chemicals (EC:266-046-0). CAS: 65997-17-3. Trace amounts of the metals Fe, Se, Ni, Cr and Co are purposely added to some compositions to color the glass and a trace amount of Pb is sometimes present as a contaminant.

3.2. Coatings

Some products may be coated. Coatings are deposited onto the glass to form hard durable coatings on the surface. These coatings comprise of single or multiple layer coatings and are between 15 and 350 nm in thickness. Depending on the deposition process, the coatings are either amorphous or polycrystalline. They adhere strongly to the glass surface. Depending on the desired product characteristics, the coatings may contain the following elements: Si, Sn, Ni, Cr, Ti, Fe and Sb. Very small quantities (a few atom percent) of other "dopant" elements are added to modify the products optical and physical characteristics.

SECTION 4 FIRST AID MEASURES

This product is not considered to be or to contain hazardous chemicals based on evaluations made by our company under the US Hazard Communication Standard, 29 CFR 1910.1200, or appropriate EU regulations. Any dust generated during breakage or fabrication of this product is an amorphous silicate substance and should be considered as a "nuisance particulate".

4.1. Description of first aid measures.

4.1.1 Glass dust

EYES: Remove any contact lenses. Rinse eyes with of water and consult a doctor.

SKIN: Wash with soap and water. Do not rub.

INGESTION: Seek medical attention.

INHALATION: Remove from exposure and contact physician.

4.1.2 Flat glass

EYES: Remove any contact lenses. Rinse eyes with of water and consult a doctor.

SKIN: If laceration occurs seek appropriate first aid or medical attention for cuts and bleeding.

INGESTION: Not applicable

INHALATION: Not applicable

4.2. Other

For toxicological information see section 11.

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SECTION 5 FIRE FIGHTING MEASURES

5.1. Fire-fighting measures

The product is not classified as flammable or combustible under Directives 67/548 / EEC and Regulation EC No. 1272/2008.

SUITABLE EXTINGUISHERS

Not applicable

EXTINGUISHING MEDIA NOT SUITABLE

Not applicable

5.2. Special hazards arising from the substance or mixture in a fire

None.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and procedures in case of emergency.

Safety glasses/goggles are recommended to protect eyes in the event of glass breakage. Appropriate personal protective equipment is recommended to protect hands, arms and body.

6.2. Methods and materials for containment and cleaning

Not considered a hazardous waste. Consult Federal, State and Local Regulations.
Recycle broken glass wherever appropriate facilities exist.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Use proper material handling equipment to avoid accidental breakage. Ensure product is handled with proper personal protective equipment to avoid lacerations.
Stand out of the danger zone when moving glass.

7.2. Conditions for safe storage, including any incompatibilities

Secure glass against breaking, falling, impact and vibrations

SECTION 8 EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1. Exposure controls

The greatest risk in the handling and storage of glass is through laceration. Appropriate precautions to prevent the risk of this should be taken e.g. eye protection, cuffs, gloves, foot protection, head protection if handling above head height, etc. The use of adequate technical equipment must always take priority over personal protection equipment. In Europe, the personal protective equipment must bear the CE mark certifying its compliance with applicable regulations.

RESPIRATORY PROTECTION

Respiratory protection is not required under normal use of this product where there are no cutting or grinding operations that may generate dust. Respiratory protection may be necessary if engineering controls are not used to reduce dust generation during cutting or grinding operations. If respiratory protection is deemed necessary from

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exposure monitoring data, follow OSHA regulation 29 CFR 1910.134 or other local regulations. Always use a NIOSH or other approved respirator when necessary.

HAND PROTECTION

Anti-lacerative gloves recommended.

SKIN PROTECTION

Glass handlers' cuffs, chaps, and apron should be worn as required.

EYE PROTECTION

Goggles or face shield is recommended.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical.

Appearance:	Solid
Color:	Clear or tinted
Odor:	None
Odour threshold:	None
pH:	Not applicable
Melting point:	> 1100°C, >2000°F
Boiling point:	Not applicable
Boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable.
Flammability:	Not applicable
Lower explosive limit:	Not applicable
Upper explosive limit:	Not applicable
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Relative density:	2.45 g/cc
Solubility:	Insoluble
Ignition temperature:	Not applicable.
Decomposition temp:	Not applicable

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Viscosity: Not applicable

Explosive properties: Not applicable

Oxidising properties: Not applicable

9.2. Other information.

No other relevant information.

SECTION 10 STABILITY AND REACTIVITY DATA

10.1. Reactivity.

There are no risks of reaction with other substances during normal conditions of use.

10.2. Chemical stability.

The product is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

In normal conditions of use and storage there are no dangerous reactions.

10.4. Conditions to avoid.

There are no particular conditions to avoid in normal use and storage.

10.5. Incompatible materials.

There are no incompatible materials to avoid in normal use and storage.

10.6. Hazardous decomposition products.

None.

10.7 Coatings.

The coatings on the coated products listed in section 1 are all designed to pass European Standard (EN1096) which tests the coatings' durability to high temperatures, humidity, corrosive atmospheres and abrasion to ensure the coatings are not damaged or release materials in service. The coatings are stable during post-production processing (e.g. toughening). The coatings' surface is stable and inert. The only exception to this is Pilkington Activ™ self cleaning glass, where the surface purposely acts as a photo-catalyst accelerating the decomposition of organic dirt, but it is not used up or changed during the catalytic process.

SECTION 11 TOXICOLOGY INFORMATION

11.1. General information on effects.

Flat glass products in their normal state do not present an inhalation or ingestion hazard. Fabrication operations such as cutting, grinding, seaming, edging or breaking may result in the release of airborne dust which may present a health hazard. Dust generated during breakage or fabrication of this product should be considered a "nuisance particulate".

US regulation

Component	CAS No.	PEL	TLV
Particulate – not otherwise regulated	65997-17-3	15 mg/m ³ (total)	10 mg/m ³ (inhalable)
		5 mg/m ³ (Respirable)	3 mg/m ³ (Respirable)

UK regulation

UK occupational exposure standards are 10 mg/m³ total inhalable nuisance dust (8 hour time weighted average) and 4 mg/m³ for respirable nuisance dust (8 hour time weighted average).

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Other countries' exposure standards may vary and local guidance should be followed wherever appropriate.

IOELVs are health-based limits set under the European Chemical Agents Directive (98/24/EC). Pilkington Glass is not assigned an IOELV

11.2 Specific information in effects.

a) Acute toxicity;

The product is not classified as acutely toxic.

b) Skin corrosion / irritation;

The product is not classified as a skin irritant.

c) Eye damage / irritation;

CLP Regulation: the product may cause serious eye damage.

d) Respiratory or skin sensitization;

The product does not cause skin sensitization.

e) Germ cell mutagenicity;

The product is not classified as a mutagen.

f) Carcinogenicity;

The product is not classified as a carcinogen.

g) Reproductive toxicity;

The product is not classified as reprotoxic.

SECTION 12 ECOLOGICAL INFORMATION

12.1. General toxicity.

The product is not classified as toxic.

12.2. Persistence and degradability.

Not applicable.

12.3. Bioaccumulation potential.

Not applicable.

12.4. Mobility in soil.

Not applicable.

12.5. Results of PBT and vPvB.

The product does not contain PBT or vPvB substances according to Annex XIII of REACH regulation.

12.6. Other adverse effects.

None known.

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SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Methods of waste treatment.

No specific disposal considerations.
Reuse or recycle the material when possible.
Dispose as an industrial waste per local requirements.

Broken glass ("cullet") and glass dust can be recycled into some new glass products and should be recycled wherever appropriate and possible.

Glass and glass dust is not considered a hazardous waste under USEPA RCRA, or European Hazardous Waste Directive definitions.

In Europe, waste from manufacture of glass and glass products have the following Consolidated European Waste Catalogue references -

10 11 12	Waste glass (other than those mentioned in 10 11 11)
10 11 14	Glass polishing and grinding sludge (other than those mentioned in 10 11 13)

For the coated glass products listed in section 1, the amount of material in the coatings is extremely small and has an insignificant impact on the composition of the glass with regard disposal. The coated glass can be recycled through conventional means alongside other glass.

SECTION 14 TRANSPORTATION INFORMATION

Glass is not classified as hazardous under European Directive 67/548/EC or Regulation 1272/2008 and does not require specific transportation conditions.

Glass is not classified as hazardous for transport (ADR(Road), RID (Rail), IMDG/GGVSea (Sea)).

Glass is not a hazardous material under USDOT regulations, RQ = NA.

Glass is not considered dangerous goods per Canadian TDG regulations.

SECTION 15 REGULATORY INFORMATION

15.1. European standards and legislation on health, safety and environment.

Substances in Candidate List (Art. 59 REACH).
None.

Substances subject to authorization (Annex XIV REACH).
None.

Substances subject to export notification Reg. (EC) 649/2012:
None.

Substances subject to the Rotterdam Convention:
None.

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Substances subject to the Stockholm Convention:
None.

RoHS

The European Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive bans the placing of new electrical and electronic equipment on the EU market containing more than certain levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. The products listed in section 1 meet these requirements and do not exceed threshold levels

15.2 US standards and legislation on health, safety and environment.

Carcinogenicity:	Glass and Glass Dust is not listed by IARC, NTP or OSHA
EPCRA, CERCLA, SARA:	Glass and Glass dust is not listed as an Extremely Hazardous Substance under Section 302 and is not listed as a Hazardous Substance under Section 304 The products do not contain any listed Section 313 (40 CFR 372) chemicals in amounts above the <i>de minimis</i> notification levels.
Reportable Quantity (RQ):	NA
TSCA (USA):	Listed

15.3. Chemical safety assessment.

Not applicable.

SECTION 16 OTHER INFORMATION

Important note regarding REACH

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The information in this sheet is based on knowledge available at the date of the last version. Users must verify the suitability and completeness of information in relation to the specific use of the product. It should not be construed as a guarantee on any specific product property.

The information presented above is believed to be accurate and reliable to the best of our knowledge, however NSG makes no warranties expressed or implied regarding this information. In addition, since the use of the product is not within the control of NSG, it is the user’s obligation to determine the conditions of safe use of the product.