Pilkington Pyrostop® and Pilkington Pyrodur® fire-rated insulating glass (with PVB) by NSG Group

Health Product Declaration v2.1.1

created via: HPDC Online Builder

CLASSIFICATION: 08 88 13 Fire resistant glazing

PRODUCT DESCRIPTION: Fire-rated architectural glazing, made from sheets of soda-lime-silica flat glass and layers of fire-resistant material. The glazing contains an impact-resistant PVB layer. The components are combined into an Insulating Glass Unit. (Note that the CAS number for the glass component includes all types of glass. This product only contains soda-lime-silica flat glass.)

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format

- ○ Nested Materials Method
- ◉ Basic Method

Threshold Disclosed Per

- ○ Material
- ◉ Product

Threshold level

- ○ 100 ppm
- ○ 1,000 ppm
- ◉ Per GHS SDS
- ○ Per OSHA MSDS
- ○ Other

Residuals/Impurities

- ◉ Considered
- ○ Partially Considered
- ○ Not Considered

Explanation(s) provided for Residuals/Impurities?

- ◉ Yes ○ No

All Substances Above the Threshold Indicated Are:

Characterized ○ Yes Ex/SC ○ Yes ◉ No

% weight and role not provided for all substances and/ or one or more Special Condition did not follow guidance.

Screened ○ Yes Ex/SC ○ Yes ◉ No

One or more substances not screened using Priority Hazard Lists with results disclosed and/ or one or more Special Condition did not follow guidance.

Identified ○ Yes Ex/SC ○ Yes ◉ No

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | *RESIDUAL OR IMPURITY*
GREENSCREEN SCORE | HAZARD TYPE

PILKINGTON PYROSTOP® AND PILKINGTON PYRODUR® FIRE-RATED INSULATING GLASS (WITH PVB) [SOLID / PLATE GLASS LT-UNK SODIUM SILICATE LT-P1 | END GLYCERIN LT-UNK SPACER BAR Not Screened CALCIUM CARBONATE BM-3 ALIPHATIC POLYSULFIDE-POLYMERS, MOLECULAR WEIGHT >=1800 LT-P1 | MUL TRIETHYLENE GLYCOL DI(2-ETHYLHEXOATE) (PRIMARY CASRN IS 94-28-0) LT-UNK EDGE TAPE Not Screened POLYVINYL BUTYRAL (PRIMARY CASRN IS 63148-65-2) LT-UNK 1,2-BENZENEDICARBOXYLIC ACID, BENZYL C7-9-BRANCHED AND LINEAR ALKYL ESTERS LT-UNK POLYISOBUTYLENE (PRIMARY CASRN IS 9003-27-4) LT-UNK MANGANESE (II) OXIDE LT-P1 BIS(2-BUTOXYETHYL) ADIPATE NoGS CARBON BLACK LT-1 | CAN 1-BUTENE, POLYMER WITH ETHENE AND 1-PROPENE LT-UNK DISULFIRAM LT-P1 | AQU | SKI | MUL SODIUM HYDROXIDE LT-P1 | SKI | PHY DIETHYLDITHIOCARBAMIC ACID ZINC SALT LT-P1 | AQU | SKI | EYE | MUL TEXANOL BENYZL PHTHALATE LT-UNK]

Number of Greenscreen BM-4/BM3 contents ... 1

Contents highest concern GreenScreen Benchmark or List translator Score ... LT-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

All components.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

See Section 3 for additional listings.

VOC emissions: CDPH standard method - not applicable

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?

- ○ Yes
- ◉ No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2019-10-09
PUBLISHED DATE: 2020-03-12
EXPIRY DATE: 2022-10-09

Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- *Basic Inventory method with Product-level threshold.*
- *Nested Material Inventory method with Product-level threshold*
- *Nested Material Inventory method with individual Material-level thresholds*

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-1-standard

PILKINGTON PYROSTOP® AND PILKINGTON PYRODUR® FIRE-RATED INSULATING GLASS (WITH PVB)

PRODUCT THRESHOLD: Per GHS SDS

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: All residuals and impurities considered.

OTHER PRODUCT NOTES: This HPD applies to Pilkington Pyrostop® and Pilkington Pyrodur® insulating fire-rated glass with a break-resistant PVB layer, in an IGU. It is only valid for products made at Pilkington Deutschland AG in Gelsenkirchen, because of the IGU materials used.

SOLID / PLATE GLASS

ID: 65997-17-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-10-09

%: 76.80 - 87.10 GS: LT-UNK RC: Both NANO: No ROLE: Bulk glass.

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The product contains glass recycled in the manufacturing facility, and may contain pre- and post-consumer recycled glass.

The bulk glass is 100% soda-lime-silicate flat glass which is included in CAS number 65997-17-3. Flat glass does not contain any fiber glass or crystalline silica and therefore does not have any of the potential health risks associated with them.

The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

SODIUM SILICATE

ID: 1344-09-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-10-09

%: 9.40 - 19.50 GS: LT-P1 RC: None NANO: No ROLE: Component of the fire resistant layers

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

GLYCERIN

ID: 56-81-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-10-09

%: **1.30 - 2.60** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of the fire resistant layers**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

SPACER BAR

ID: **Not Registered**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.19 - 0.48** GS: **Not Screened** RC: **UNK** NANO: **No** ROLE: **Spacer**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
	Hazard Screening not performed	

SUBSTANCE NOTES: Steel spacer (specification available, if required).

CALCIUM CARBONATE

ID: **471-34-1**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.12 - 0.46** GS: **BM-3** RC: **None** NANO: **No** ROLE: **Component of secondary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

ALIPHATIC POLYSULFIDE-POLYMERS, MOLECULAR WEIGHT >=1800

ID: **68611-50-7**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.11 - 0.42** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Component of secondary seal**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

TRIETHYLENE GLYCOL DI(2-ETHYLHEXOATE) (PRIMARY CASRN IS 94-28-0)

ID: **1330-87-6**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.10 - 2.05** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of the PVB safety glass interlayer material**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

EDGE TAPE

ID: Not Registered

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.08 - 0.13** GS: **Not Screened** RC: **None** NANO: **No** ROLE: **Edge tape to protect the fire resistant layer from humidity.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
	Hazard Screening not performed	

SUBSTANCE NOTES: Tape made from aluminium foil laminated with polyester film and acrylic adhesive. The amount of the substance in the product depends on the size of the unit. A typical range is indicated.

POLYVINYL BUTYRAL (PRIMARY CASRN IS 63148-65-2)

ID: 945754-76-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.04 - 5.46** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of the PVB safety glass interlayer material**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

1,2-BENZENEDICARBOXYLIC ACID, BENZYL C7-9-BRANCHED AND LINEAR ALKYL ESTERS

ID: 68515-40-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.03 - 0.15** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of secondary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

POLYISOBUTYLENE (PRIMARY CASRN IS 9003-27-4)

ID: 2098184-81-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.01 - 0.02** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of primary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

MANGANESE (II) OXIDE

ID: 1344-43-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.01 - 0.04** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Component of secondary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

BIS(2-BUTOXYETHYL) ADIPATE

ID: 141-18-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00 - 0.34** GS: **NoGS** RC: **None** NANO: **No** ROLE: **Component of the PVB safety glass interlayer material**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

CARBON BLACK

ID: 1333-86-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00 - 0.05** GS: **LT-1** RC: **None** NANO: **No** ROLE: **Component of primary and secondary seals.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CANCER	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CANCER	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

1-BUTENE, POLYMER WITH ETHENE AND 1-PROPENE

ID: 25895-47-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of primary seal**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

DISULFIRAM

ID: 97-77-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Component of secondary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
ACUTE AQUATIC	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
CHRON AQUATIC	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
SKIN SENSITIZE	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
SKIN SENSITIZE	MAK	Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

SODIUM HYDROXIDE

ID: 1310-73-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Component of secondary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
SKIN IRRITATION	EU - GHS (H-Statements)	H314 - Causes severe skin burns and eye damage
PHYSICAL HAZARD (REACTIVE)	GHS - Korea	H290 - May be corrosive to metals

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

DIETHYLDITHIOCARBAMIC ACID ZINC SALT

ID: 14324-55-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Component of secondary seal.**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
ACUTE AQUATIC	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
CHRON AQUATIC	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
SKIN IRRITATION	EU - GHS (H-Statements)	H315 - Causes skin irritation
SKIN SENSITIZE	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
EYE IRRITATION	EU - GHS (H-Statements)	H319 - Causes serious eye irritation
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

TEXANOL BENYZL PHTHALATE

ID: 16883-83-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2019-10-09**

%: **0.00 - 0.04** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Component of secondary seal**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The relative amount of the substance in the product depends on the size of the unit. A typical range is indicated.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS — **CDPH standard method - not applicable**

CERTIFYING PARTY: Self-declared
APPLICABLE FACILITIES: All.
CERTIFICATE URL:

ISSUE DATE: 2019-10-09

EXPIRY DATE: 2021-10-09

CERTIFIER OR LAB: Self-certified

CERTIFICATION AND COMPLIANCE NOTES: According to LEED v4, sealed units are exempt from CDPH requirements for testing VOC emissions.

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

This HPD is for fire-rated glazing made from sheets of soda-lime-silica glass with a PVB break-resistant layer, manufactured into a Insulating Glass Unit.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **NSG Group**
ADDRESS: **Pilkington Deutschland AG**
Haydnstrasse 19
Gelsenkirchen North Rhine-Westphalia 45884,
Germany
WEBSITE: **www.nsg.com**

CONTACT NAME: **Dr. S. J. Slade**
TITLE: **Principal Environmental Technologist**
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KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
MAM Mammalian/systemic/organ toxicity
MUL Multiple hazards
NEU Neurotoxicity
OZO Ozone depletion
PBT Persistent Bioaccumulative Toxic
PHY Physical Hazard (reactive)
REP Reproductive toxicity
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
LAN Land Toxicity
NF Not found on Priority Hazard Lists

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
BM-2 Benchmark 2 (use but search for safer substitutes)
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (insuficient data to benchmark)
LT-P1 List Translator Possible Benchmark 1
LT-1 List Translator Likely Benchmark 1
LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
NoGS Unknown (no data on List Translator Lists)

Recycled Types

PreC Preconsumer (Post-Industrial)
PostC Postconsumer
Both Both Preconsumer and Postconsumer
Unk Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms
Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- *a method for the assessment of exposure or risk associated with product handling or use,*
- *a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.