

# Product Environmental Aspects Declaration



Heat-resistant crystallized glass for fire door (intermediate goods)  
(Applicable PCR No. DP-01-02)

No. DP-18-001

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<http://www.neg.co.jp/>

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FIRELITE/FIRELITE PREMIUM November 12, 2018

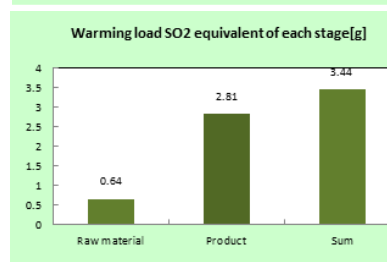
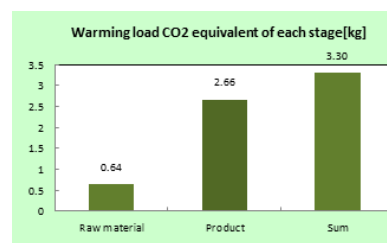
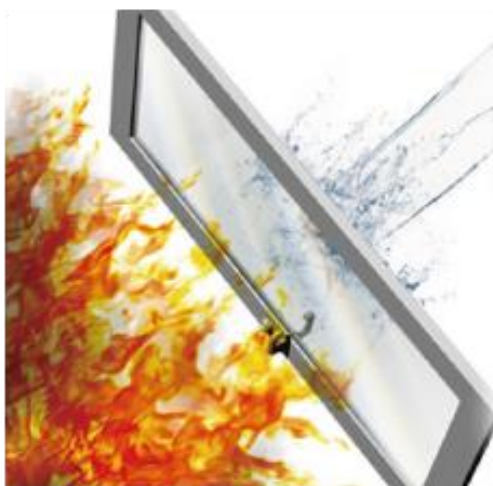
Name of product: Heat resistant crystallized glass for fire door

Product specifications: Heat-proof temperature: 800 °C No bonding Sash not included

Calculated weight: 1 kg

Certification: fire protection equipment, specific fire protection equipment certification, UL certification

Consumption and discharge in a life cycle	All the stage sum totals
Global Warming (CO <sub>2</sub> equivalent)	3.30kg
Acidification (SO <sub>2</sub> equivalent)	3.44g
Energy Consumption	59.1MJ



This product is an intermediate goods.  
Distribution, use, disposal and recycling are not covered.

Notes:

1. The basic data is described on the product environmental information disclosure sheet (PEIDS) and product data sheet.
2. For unified standards for data calculation, please refer to product classification standard (PCR). Please visit <http://www.ecoleaf-jemai.jp/> for details.
3. The country of shipment of this product is Japan, and it is calculated using data in Japan. Part of the basic unit data is using IDEA Ver 2.0.
4. It is calculated using the characterization coefficient v 02.1 of the Eco Leaf program

## [Supplemental environmental information]

We manufacture it at a business site that has received ISO 14001 certification.(Head office site, Takatsuki site)  
Arsenic is not contained in this product.

PCR review was conducted by :September 1st.2016 : Yuko Yamaguchi Affiliation Kyoritsu Women's Junior College  
Independent verification of the declaration and data, according to ISO14025 ISO21930  internal  external  
Third party verifier: Yasuo Koseki

Programme operator: Japan Environmental Management Association for Industry, [ecoleaf@jemai.or.jp](mailto:ecoleaf@jemai.or.jp)

\* In the case of an business entity certified as an Ecoleaf-data-collection system, the names of certification auditors are wri



## Product Environmental Information Data Sheet (PEIDS)

Document control no.	F-02As-02
Product vendor	Nippon Electric Glass Co., Ltd.
EcoLeaf registration no.	DP-18-001

Unit Function DB version	v2.1
Characterization Factor DB version	v2.1

PCR name	Fire-rated glass ceramics (intermediate product)	Product type	firelite/ firelite premium				
PCR code	DP-01-02	Product weight (kg)	1	Package (kg)	0	Weight total (kg)	1

In/Out items	Life Cycle Stage	Unit	Production		Distribution	Use	Disposition	Total		
			Raw material	Product						
<b>Energy Consumption</b>										
		MJ	1.27E+01	4.64E+01	0	0	0	5.92E+01		
		Mcal	3.04E+00	1.11E+01	0	0	0	1.41E+01		
Inventory analyses	Impact by Resource Consumption	Exhaustible resources	Coal	kg	4.67E-02	1.08E-01	0	0	1.55E-01	
			Crude oil (for fuel)	kg	1.98E-02	2.49E-01	0	0	2.69E-01	
			LNG	kg	2.88E-02	4.54E-01	0	0	4.83E-01	
			Uranium content of an ore	kg	7.31E-07	7.34E-06	0	0	8.07E-06	
			Crude oil (for material)	kg	1.01E-01	4.75E-04	0	0	1.01E-01	
			Iron content of an ore	kg	5.35E-05	4.74E-08	0	0	5.36E-05	
			Cu content of an ore	kg	1.68E-07	1.12E-10	0	0	1.68E-07	
			Al content of an ore	kg	5.11E-01	3.66E-03	0	0	5.15E-01	
			Ni content of an ore	kg	3.01E-07	4.02E-10	0	0	3.02E-07	
			C content of an ore	kg	7.93E-07	1.13E-09	0	0	7.95E-07	
		Mn content of an ore	kg	5.46E-07	5.25E-10	0	0	5.46E-07		
		Pb content of an ore	kg	7.43E-07	1.06E-09	0	0	7.44E-07		
		Sn content of an ore	kg	-	-	-	-	-	-	
		Zn content of an ore	kg	2.44E-08	2.75E-11	0	0	2.44E-08		
		Au content of an ore	kg	6.64E-11	8.62E-14	0	0	6.65E-11		
		Ag content of an ore	kg	1.66E-09	1.16E-12	0	0	1.66E-09		
		Silica Sand	kg	4.56E-01	1.42E-10	0	0	4.56E-01		
		Halite	kg	1.13E-02	7.62E-05	0	0	1.13E-02		
		Limestone	kg	2.14E-01	8.22E-05	0	0	2.14E-01		
		Natural soda ash	kg	4.36E-03	0	0	0	4.36E-03		
Renewable resources	Wood	kg	-	-	-	-	-	-		
	Water	kg	2.72E+02	9.61E+01	0	0	0	3.68E+02		
Inventory analyses	Impact by Emission/Discharge to the environment	to Atmosphere	CO2	kg	6.22E-01	2.28E+00	0	0	2.90E+00	
			Sox	kg	3.67E-04	7.82E-04	0	0	1.15E-03	
			Nox	kg	3.84E-04	2.89E-03	0	0	3.28E-03	
			N2O	kg	2.93E-05	1.43E-03	0	0	1.46E-03	
			CH4	kg	4.00E-04	2.13E-05	0	0	4.21E-04	
			CO	kg	3.91E-05	3.82E-04	0	0	4.22E-04	
			NMVOc	kg	7.69E-06	3.84E-05	0	0	4.61E-05	
			CxHy	kg	8.63E-06	2.50E-04	0	0	2.58E-04	
			Dust	kg	5.31E-04	1.09E-04	0	0	6.40E-04	
			to Water system	to Water domain	BOD	kg	1.47E-06	6.65E-09	0	0
		COD			kg	3.45E-06	1.61E-08	0	0	3.47E-06
		to Soil system	N total	kg	6.23E-08	8.43E-11	0	0	6.23E-08	
			P total	kg	1.31E-13	1.82E-16	0	0	1.31E-13	
			SS	kg	3.05E-06	1.42E-08	0	0	3.06E-06	
			Unspecified Solid Waste	kg	5.03E-02	2.93E-03	0	0	5.32E-02	
			Slag	kg	9.43E-08	1.28E-10	0	0	9.44E-08	
			Sludge	kg	8.04E-02	3.79E-04	0	0	8.08E-02	
			Low level radio-active waste	kg	8.94E-05	5.23E-06	0	0	9.35E-05	
			Hazardous waste	kg	0.00E+00	1.19E-03	0	0	1.19E-03	
		Impact assessment	By Res	Exhaustible resources	Energy resources (crude oil equivalent)	kg	9.06E-02	9.27E-01	0	0
Mineral resources (Iron ore equivalent)	kg				1.20E+00	8.41E-03	0	0	1.20E+00	
to Atmosphere	Global Warming (CO2 equivalent)			kg	6.38E-01	2.66E+00	0	0	3.30E+00	
	Acidification (SO2 equivalent)			kg	6.36E-04	2.81E-03	0	0	3.44E-03	
	Ozone Depletion (CFC-11 equivalent)			kg	-	-	-	-	-	
	Photochemical Oxidant			kg	2.30E-04	1.56E-04	0	0	3.86E-04	
	Eutrophication (Phosphate equivalent)			kg	1.02E-07	3.90E-10	0	0	1.02E-07	

[Notes for readers: EcoLeaf common rules]

### I. Stage related

A. "Production" stage is intended for two sub-stages listed below.

- (1) "Raw material" production: consists of mining, transportation and raw material production.
- (2) "Product" production: consists of the parts processing, assembly and installation.

B. "Distribution" stage is intended for transportation of produced product. Transportation of consumables and maintenance goods (e.g. replacement parts) for use of the product are included into "Use" stage.

C. "Use" stage is intended for use of the product (active mode, standby mode, etc.) and production, transportation to disposal of consumables/maintenance goods (e.g. replacement parts).

D. "Disposition" stage is intended for environmental impacts by product disposition.

### II. Inventory analyses

A. Data of mineral ore on "Exhaustible resources" are presented in weight of pure ingredients (e.g. iron, aluminum) in the ore.

B. Data on energy resources are presented based on origin in calorific value. e.g. Data on uranium ore presents weight of uranium concentrate, which is available for use as an atomic fuel.

C. Data of discharge to water system are in actual figure (not calculated using unit function in inventory analyses).

### III. Impact analyses

Result of the "Impact analyses" is found in converting results of inventory analyses into total amount of a reference material (e.g. CO<sub>2</sub> in case of "Global Warming").

A. Impact "by resource consumption" represents magnitude of impacts to resource depletion.

B. Impact "by emission/discharge to environment" represents magnitude of impacts to Atmosphere, Water and Soil system.

### IV. Data entry format

A. Exponential notation, after the decimal point to two, should be used.

B. Indicate "0" instead exponential notation, if the result of calculation or estimation is considered as "zero" or negligible in comparison to related results.

C. Indicate "-" if calculation nor estimation can not be done, in order to differentiate to indicate "zero".

D. Row total of the data is automatically calculated, excluding a row includes "-" item. Row total of such is presented as a blank (no data).

(BGD for material production are for production from mineral ore. Those data do not include reclaiming processes like recovery from scrap.)

[Notes for readers: Target product specific]

## Product data sheet

(Input data and parameters for LCA)



Document control no.	F-03s-02
Product vendor	Nippon Electric Glass Co., Ltd.
EcoLEaf registration no.	DP-18-001

PCR name	Fire-rated glass ceramics (intermediate product)	Product type	firelite / firelite premium				
LCA/LCIA in units of:	1kg	Product weight (kg)	1	Package (kg)	0	Weight total (kg)	1

### 1. Product information (per unit): parts etc. by material and by process/assembly method

Product	Breakdown of primary materials				Math breakdown of parts, which need to apply Processing / Assembly Base Units (Parts B, C)			
	Material name	Weight (kg)	Material name	Weight (kg)	Process name	Weight (kg)	Process name	Weight (kg)
	Silica sand							
	Aluminum oxide	5.82E-01						
	Lithium carbonate							
	glass	5.20E-02						
	Reproduction	3.70E-01						
	Subtotal	1.00E+00	Subtotal	0.00E+00				
	Total			1.00E+00	Subtotal	0.00E+00	Subtotal	0.00E+00

Note

### 2. Production site information (per unit): Consumption and discharge/emission for production/processing/assembly within the site.

SO<sub>x</sub> and NO<sub>x</sub> should be indicated in SO<sub>2</sub>, NO<sub>2</sub> equivalent.

Consumption	Classification	Energy	Energy	Material	Energy	Material	Energy	Material	Material
	Distribution	Diesel oil as fuel (kg)	Electricity (kWh)	Ultrapure water (kg)	Furnace urban gas (13A) (m <sup>3</sup> )	Industrial water (kg)	Furnace LNG (kg)	Alumina	Diesel truck: 10 ton (kg·km)
	Quantity	3.00E-03	1.99E+00	1.00E+00	5.06E-01	1.20E+01	9.56E-05	1.00E-03	8.55E+01
	Note								
Emission/Discharge	Classification	Material							
	Distribution	Freight by ship (kg·km)							
	Quantity	4.61E+03							
	Note								
Emission/Discharge	Classification	Water system	Soil system	Soil system					
	Distribution	Sewage processing (kg)	Unspecified Solid Waste	Landfill: General waste (kg)					
	Quantity	1.30E+01	1.19E-03	1.00E-03					
	Note								

Note

### 3. Distribution stage information (per unit): means, distance, loading ratio, consumptions and emissions/discharges.

Distribution	Means of transportation								
	Conditions								
	Quantity								
	Note								

Note

### 4. Use stage (per unit): use condition (mode, term) including active mode, standby mode and maintenance.

#### 4.1 Product and accessories subject to this analysis

Product	Classification								
	Distribution								
	Quantity								
	Note								

Note

#### 4.2 Disposition/Recycle information on consumables and replacement parts

Consumables	Classification								
	Distribution								
	Quantity								
	Note								

Note

### 5. Disposition/Recycle stage information (per product): process method and scenarios

Scenario	Classification								
	Distribution								
	Quantity								
	Note								

Note

### 6. Others