

Environmental Product Declaration for
**EPD for Precast Concrete Products
Camas Plant**



General Information

This cradle to gate Environmental Product Declaration covers precast products produced at the Camas Plant located at Camas WA. The Life Cycle Assessment (LCA) was prepared in conformity with ISO 21930, ISO 14025, ISO 14040, and ISO 14044, and the governing precast concrete category rules and ASTM international's EPD program operator rules. This EPD is intended for business-to-business (B-to-B) audiences.

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EPD 1158

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ISO 21930:2017 Sustainability in Building Construction-Environmental Declaration of Building Products serves as the core PCR

Product Category Rules:

NSF PCR for Precast Concrete, V3.0, May 2021.

Independent verification of the declaration, according to ISO 21930:2017 and ISO 14025:2006:

internal external

Third-party verifier

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EPDs are comparable only if they comply with ISO 21930 (2017), use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works.

General Information

Producer

Jensen Infrastructure is a U.S.-based manufacturer of precast concrete and engineered infrastructure products serving utility, transportation, and civil construction markets. Founded in 1968 and headquartered in Nevada, the company operates multiple manufacturing facilities across the western United States, including locations in California, Arizona, Nevada, Washington, and Hawaii. Jensen designs, engineers, and produces a wide range of precast and infrastructure products such as utility vaults, stormwater management systems, retaining wall components, and transportation-related structures. Products are manufactured in controlled plant environments using standardized processes and are designed to meet applicable ASTM, AASHTO, and project-specific requirements. The company focuses on providing durable, high-quality infrastructure solutions, supported by in-house engineering services that deliver custom designs, stamped drawings, and project-specific submittals to meet the needs of municipal, commercial, and utility projects.

Product

This EPD covers all precast concrete products poured at the Camas Plant, including but not limited to the products listed in the table. The products covered in this EPD meet the following description and standards: EPD

Product Name	Product Description	Standards
ODOT P&L Barrier	Precast Concrete Traffic Barrier	ASTM C94 / ASTM A615
ODOT P&L Mound Barrier	Precast Concrete Traffic Barrier (Mound Placement)	ASTM C94 / ASTM A615
ODOT P&L Terminal End Barrier	Precast Concrete Barrier Terminal Section	ASTM C94 / ASTM A615
ODOT P&L 8 Hole BBD Barrier	Precast Concrete Anchored Traffic Barrier	ASTM C94 / ASTM A615
ODOT Guardrail Transition	Precast Concrete Guardrail Transition Unit	ASTM C94 / ASTM A36
ODOT Tall Barrier	Precast Concrete Tall Traffic Barrier	ASTM C94 / ASTM A615
ODOT Tall Narrow Base Barrier	Precast Concrete Tall Narrow Base Barrier	ASTM C94 / ASTM A615
ODOT Tall Mod Scupper Barrier	Precast Concrete Tall Drainage Barrier	ASTM C94 / ASTM A615
ODOT Tall to Standard Transition Barrier	Precast Concrete Barrier Transition Unit	ASTM C94 / ASTM A615
ODOT Type F Barrier	Precast Concrete F-Shape Traffic Barrier	ASTM C94 / ASTM A615
ODOT Type F Narrow Base Barrier	Precast Concrete Narrow Base F-Shape Barrier	ASTM C94 / ASTM A615
ODOT Type F Large Scupper Barrier	Precast Concrete F-Shape Drainage Barrier	ASTM C94 / ASTM A615
ODOT Type F Mod Scupper Barrier	Precast Concrete F-Shape Drainage Barrier	ASTM C94 / ASTM A615
ODOT Soundwall Panels	Precast Concrete Sound Barrier Panels	ASTM C94 / ASTM C33
ODOT Soundwall Pilasters	Precast Concrete Soundwall Support Columns	ASTM C94 / ASTM A615
WSDOT Type F Barrier	Precast Concrete F-Shape Traffic Barrier	ASTM C94 / ASTM A615
WSDOT Type F Narrow Base Barrier	Precast Concrete Narrow Base F-Shape Barrier	ASTM C94 / ASTM A615
WSDOT Type F Large Scupper Barrier	Precast Concrete F-Shape Drainage Barrier	ASTM C94 / ASTM A615
WSDOT Type F Terminal End Barrier	Precast Concrete Barrier Terminal Section	ASTM C94 / ASTM A615
WSDOT Type 2 Barrier	Precast Concrete Traffic Barrier	ASTM C94 / ASTM A615
WSDOT Type 2 Terminal End Barrier	Precast Concrete Barrier Terminal Section	ASTM C94 / ASTM A615
WSDOT 42" Single Slope Barrier	Precast Concrete Single Slope Barrier	ASTM C94 / ASTM A615
WSDOT 48" Single Slope Barrier	Precast Concrete Single Slope Barrier	ASTM C94 / ASTM A615
WSDOT 54" Single Slope Barrier	Precast Concrete Single Slope Barrier	ASTM C94 / ASTM A615
WSDOT 42" Vertical Back Barrier	Precast Concrete Vertical Back Barrier	ASTM C94 / ASTM A615
WSDOT 48" Vertical Back Barrier	Precast Concrete Vertical Back Barrier	ASTM C94 / ASTM A615
WSDOT 42" Large Scupper Single Slope Barrier	Precast Concrete Drainage Barrier	ASTM C94 / ASTM A615
MSE Panels	Precast Concrete Retaining Wall Panels	ASTM C94 / ASTM A615

Declared Unit

The declared unit is metric ton of product.

System Boundary

This EPD is a cradle-to-gate EPD covering A1-A3 stages of the life cycle.

PRODUCTION Stage (Mandatory)			CONSTRUCTION Stage		USE STAGE					END-OF-LIFE Stage			
Extraction and upstream production	Transport to factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	De-construction/ Demolition	Transport to waste processing or disposal	Waste processing	Disposal of waste
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

Note: MND = module not declared; X = module included.

Cut-Off

Items excluded from system boundary include:

- production, manufacture and construction of manufacturing capital goods and infrastructure;
- production and manufacture of production equipment, delivery vehicles, and laboratory equipment;
- personnel-related activities (travel, furniture, and office supplies); and
- energy and water use related to company management and sales activities that may be located either within the factory site or at another location.

Allocation Procedure

Allocation follows the requirements and guidance of ISO 14044:2006, Clause 4.3.4; and ISO 21930:2017 section 7.2. Recycling and recycled content is modeled using the cut-off rule.



Table 1 Cradle-to-Gate Impact Results for Products Covered in Study (per 1 mtn of finished product) Camas Plant

Impact category	Unit	Jensen Infrastructure Products			
		precast, Camas Plant			
		A1	A2	A3	Total
Global warming	kg CO ₂ eq	2.21E+02	6.27E+00	2.34E+01	2.50E+02
Ozone depletion	kg CFC-11 eq	4.36E-06	2.65E-10	1.08E-08	4.37E-06
Eutrophication	kg N eq	2.43E-01	4.52E-03	2.59E-02	2.74E-01
Acidification	kg SO ₂ eq	9.38E-01	7.53E-02	3.07E-01	1.32E+00
Smog	kg O ₃ eq	2.30E+01	1.91E+00	9.73E+00	3.46E+01
Resource Use					
Abiotic depletion (non-fossil mineral)	kg Sb eq	2.28E-03	0.00E+00	5.41E-08	2.28E-03
Abiotic depletion (fossil fuels)	MJ, NCV	1.29E+03	9.00E+01	3.14E+02	1.70E+03
Renewable primary energy resources as energy	MJ, NCV	6.69E+01	0.00E+00	3.14E+00	7.01E+01
Renewable primary resources as material	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-renewable primary resources as energy	MJ, NCV	1.56E+03	9.00E+01	3.15E+02	1.96E+03
Non-renewable primary resources as material	MJ, NCV	7.64E+00	0.00E+00	0.00E+00	7.64E+00
Consumption of fresh water	m ³	1.04E+00	0.00E+00	2.89E+01	3.00E+01
Secondary Material, Fuel and Recovered Energy					
Secondary materials	kg	4.22E+01	0.00E+00	0.00E+00	4.22E+01
Renewable secondary fuels	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-renewable secondary fuels	MJ, NCV	9.28E+01	0.00E+00	0.00E+00	9.28E+01
Recovered energy	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Waste & Output Flows					
Hazardous waste disposed	kg	3.52E-02	0.00E+00	0.00E+00	3.52E-02
Non-hazardous waste disposed	kg	3.26E+00	0.00E+00	1.27E+00	4.53E+00
High-level radioactive waste	m ³	8.75E-04	0.00E+00	3.92E-10	8.75E-04
Intermediate and low-level radioactive waste	m ³	3.62E-04	0.00E+00	1.87E-09	3.62E-04
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	8.82E-01	0.00E+00	4.94E-01	1.38E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recovered energy exported from product system	MJ, NCV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Calcination	kg CO ₂ eq	8.52E+01	0.00E+00	0.00E+00	8.52E+01
Biogenic CO ₂ emissions	kg CO ₂ eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00

* This EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. As such, caution should be exercised when evaluating EPDs from different manufacturers or programs, as the EPD results may not be entirely comparable. Any EPD comparison must be carried out at the construction works level per ISO 21930:2017 guidelines. The results of this EPD reflect an average performance by the product and its actual impacts may vary on a case-to-case basis.

** Not all LCA datasets for upstream materials include these impact categories and thus results may be incomplete. Use caution when interpreting data in these categories.

References

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