



# EPD Transparency Summary

**COMPANY NAME**            **EPS Industry Alliance**

**PRODUCT TYPE**            **Insulation**

**PRODUCT NAME**            **Expanded Polystyrene (EPS) Insulation**

**PRODUCT DEFINITION**    EPS insulation is a versatile molded closed-cell foam plastic insulation that provides long-term stable R-value. EPS has a high level of moisture resistance and meets the most demanding compressive and thermal resistance building requirements.

**PRODUCT CATEGORY RULE (PCR)**    Building Envelope Thermal Insulation Product Category Rule (PCR), version 1.4 by Underwriters Laboratory (UL).

**CERTIFICATION PERIOD**    August 10, 2017 - August 10, 2022

**DECLARATION NUMBER**    4787238681.101.1



## LIFECYCLE IMPACT CATEGORIES

The environmental impacts listed below were assessed throughout the product's lifecycle – including raw material extraction, transportation, manufacturing, packaging, use, and disposal at end of life.

	ATMOSPHERE			WATER		EARTH	
	<b>Global Warming Potential</b> refers to long-term changes in global weather patterns – including temperature and precipitation – that are caused by increased concentrations of greenhouse gases in the atmosphere.	<b>Ozone Depletion Potential</b> is the destruction of the stratospheric ozone layer, which shields the earth from ultraviolet radiation that's harmful to life, caused by human-made air pollution.	<b>Photochemical Ozone Creation Potential</b> happens when sunlight reacts with hydrocarbons, nitrogen oxides, and volatile organic compounds, to produce a type of air pollution known as smog.	<b>Acidification Potential</b> is the result of human-made emissions and refers to the decrease in pH and increase in acidity of oceans, lakes, rivers, and streams – a phenomenon that pollutes groundwater and harms aquatic life.	<b>Eutrophication Potential</b> occurs when excessive nutrients cause increased algae growth in lakes, blocking the underwater penetration of sunlight needed to produce oxygen and resulting in the loss of aquatic life.	<b>Depletion of Abiotic Resources (Elements)</b> refers to the reduction of available non-renewable resources, such as metals and gases, that are found on the periodic table of elements, due to human activity.	<b>Depletion of Abiotic Resources (Fossil Fuels)</b> refers to the decreasing availability of non-renewable carbon-based compounds, such as oil and coal, due to human activity.
<b>TRAC</b>	2.79 kg CO <sub>2</sub> eq	1.6E-08 kg CFC-11 eq	0.20 kg O <sub>3</sub> eq	0.46 mol H <sup>+</sup> eq	3.6E-04 kg N eq		
<b>GMI</b>							

**FUNCTIONAL UNIT** The functional unit is 1 m<sup>2</sup> (10.765 ft<sup>2</sup>) of insulation material with a thickness that gives an average thermal resistance RSI = 1 m<sup>2</sup>·K/W (R-value 5.68 ft<sup>2</sup>·hr·°F/BTU) and with a building service life of 60 years. The thickness of the ASTM C578 Type I EPS insulation required for the functional unit is 4.01 centimeters (1.58 in).





# Environment

## MATERIAL CONTENT

Material content measured to 1%.

COMPONENT	MATERIAL	AVAILABILITY	MASS%	ORIGIN
	Virgin Expanded Polystyrene (EPS)	fossil resource, non-renewable	97%	
	Recycled EPS Insulation	recycled material	2%	
	Blowing Agent (Pentane)	fossil resource, non-renewable	0.6%	
	Flame Retardant	fossil resource, non-renewable	0.4%	

## ADDITIONAL ENVIRONMENTAL INFORMATION

PRE-CONSUMER RECYCLED CONTENT	
POST-CONSUMER RECYCLED CONTENT	2%
VOC EMISSIONS	
WATER CONSUMPTION	9.94 L

## RECYCLING OR REUSE

Recycling has always been an integral part of operations at EPS processing plants. Cutting scrap is recycled and incorporated into the production cycle to make new EPS insulation, and many manufacturers also include post-consumer recycled material. In addition to insulation, recycled EPS can be processed into new products such as plastic lumber.

## ENERGY

RENEWABLE ENERGY	2%	1.74 MJ
NON-RENEWABLE ENERGY	98%	69.7 MJ

## STANDARDS

ASTM C578  
 CAN/ULC S701  
 ASTM E84  
 CAN/ULC S102.2  
 ASTM C1512  
 ASHRAE 90.1  
 NFPA 285

## CERTIFICATIONS


## MANUFACTURER CONTACT INFO

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