



## DATA & COMMUNICATION BACK BOX and COVER

MARFAB's DATA & COMMUNICATION BACK BOX and COVER sets were developed for communication systems. Designed for recessed installation, the back box is open at the top and bottom which allows you to easily pass communication wires. The lance & form perforations along the back provide a dock on which to tie wrap communication wires.

The back box is easily mounted using pre-punched mounting holes on the sides. To attach the cover, simply line up the oblong holes with the back box.

This product is manufactured from corrosion resistant materials. The back box is made from galvanized steel and the cover is made from satin coat steel. The cover is painted in a durable "Standard White" powder coated finish.



## A positive impact with LEED® Canada-NC 2009

The growing interest in sustainability in the design and operation of buildings is embodied in the great systems of Green Building Rating Leadership in Environmental Design (LEED®) in North America. This document explores the potential contribution of the use of MARFAB



DATA & COMMUNICATION BACK BOX AND COVER sets for LEED® Canada-NC & CS 2009 (New Construction and Major Renovations & Core and Shell) systems.

The CaGBC's rating systems LEED® Canada-NC & CS 2009 are based on 110 points divided into seven categories and can be used in different types of construction projects, for commercial or institutional buildings.

MARFAB's DATA & COMMUNICATION BACK BOX AND COVER sets can contribute to LEED® credits. However, the LEED® requirements take into account the project's conception as well as the materials used in the project.

LEED® Canada-NC & CS 2009 System Summary Table					Potential contribution of DATA & COM BACK BOX AND COVER DATA-12/14	
		Prerequisite	Credits	Points	LEED® Canada NC 2009	LEED® Canada CS 2009
<b>SS</b>	Sustainable Sites	1	8	26	0 points	0 points
<b>WE</b>	Water Efficiency	1	3	10	0 points	0 points
<b>EA</b>	Energy and Atmosphere	3	6	35	0 points	0 points
<b>MR</b>	Materials and Resources	1	7	14	4 points	4 points
<b>IEQ</b>	Indoor Environmental Quality	2	8	15	1 point	1 point
<b>ID</b>	Innovation in Design	0	2	6	3 points	3 points
<b>RP</b>	Regional Priority	0	2	4	3 points	3 points
<b>Total</b>		8	36	110	Up to 11 points (NC)	Up to 11 points (CS)

\* It is important to consider that the total amount of possible points reflects the number of achievable points in each credit category. The product by itself cannot achieve this score, as defined above, but is considered as a beneficial element in order to achieve LEED® credits.





## About the Company

MARFAB is a leading manufacturer of metal products for the commercial and industrial building industry. They offer a wide range of standard and made-to-order products for the plumbing, mechanical and electrical trades and their products can be seen in hi-rise and multi unit residential buildings throughout North America. For over 20 years, they have been supplying custom metal components to leading manufacturers of HVAC equipment and Fire & Safety Products. MARFAB demonstrates its commitment to its customers through continued innovation and the development of products that offer functional advantages, durability and great value.

## Environmental Commitment

### REDUCING LIGHTING ELECTRICAL CONSUMPTION

MARFAB has shown a marked interest in developing and selecting products that have less adverse effects on the environment. The company recently undertook lighting retrofits in order to use more efficient lighting technology in its facilities. As a result,



MARFAB has reduced its carbon footprint and significantly decreased its lighting electrical consumption. All the old lamps, light fixtures and ballasts were recycled in accordance with the environmental laws. The new light fixtures have an extended life expectancy that reduces the environmental impact by having to replace the lamps less often.

### LOW VOC FINISHES

MARFAB finished products are powder coated. Electrostatic powder coating is a clean process that is HAPs (hazardous air pollutants) Free. Powder coatings contain no solvents and therefore emit negligible, if any, polluting VOCs into the surrounding air.

### MANUFACTURING EFFICIENCIES and PRODUCT INNOVATION

Equipped with the most advanced manufacturing technology, MARFAB produces maximum product yields with less energy use and material waste. Some products are processed overnight, by fully automated, CNC machinery. These "Lights Out" operations eliminate the need for lighting and facility climate control, while drawing electricity during "off peak" hours. MARFAB couples technology with fabrication ingenuity and innovative design changes that streamline the operations and sequences required to make their parts. The result is superior products made in the most efficient way possible.



### REUSE and RECYCLE

MARFAB utilizes recycled metal and recycles any waste material generated by fabrication of products. All corrugated packaging is made of recycled material and any packaging from incoming supplies is reused. MARFAB has also implemented a facility wide recycling program for paper as well as plastic and glass bottles.

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POTENTIAL CONTRIBUTION FOR LEED® CANADA-NC & CS 2009 REQUIREMENTS

CREDITS SUSTAINABLE STRATEGIES POTENTIAL POINTS CREDIT RELEVANCE

CONTRIBUTION AND COMPLIANCE\* DATA COMMUNICATION BLACKBOX WITH COVER (12/14)

MR 4	Recycled Content	1-2 points	Direct
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**Requirements**

Use materials with **recycled content** such that the sum of **post-consumer recycled content** plus 1/2 of the **pre-consumer recycled content** constitutes at least **10%** (1 point) or **20%** (2 points), based on cost, of the total value of the materials in the project. The recycled content value of a material assembly is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

COMMENTS

The Data & Communication Blackbox with Cover (**DATA-12** and **DATA-14**) from **MARFAB METAL** can contribute to this credit because they have **pre-consumer** and **post-consumer** recycled content, as displayed in the table below:

Product	Data & Communication Blackbox with Cover	
	% Pre-consumer	% Post-consumer
Data 12x12	9.32%	24.08%
Data 14x14	9.32%	24.09%

In a LEED project, **MARFAB METAL** can provide all the required recycled content information for its products.

MATERIALS AND RESOURCES (MR)

MR 5	Regional Materials	1-2 points	Direct
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**Requirements**

Use building materials or products that have been **extracted, harvested, recovered and processed** within **800 km** (500 miles) (**2,400 km** if shipped by rail or water) of the **final manufacturing site**.

Demonstrate that the **final manufacturing site** is within **800 km** (500 miles) (**2,400 km** if shipped by rail or water) of the **project site** for these products.

If only a **fraction of a product** or material is **extracted, harvested, recovered, processed and manufactured locally**, then only that percentage (by weight) must contribute to the regional value. The minimum percentage of regional materials for each point threshold is **20%** (1 point) or **30%** (2 points).

COMMENTS

The Data & Communication Blackbox with Cover (**DATA-12** and **DATA-14**) from **MARFAB METAL** can contribute to this credit as a percentage of its components are **extracted, collected, recovered and processed** within **800 km** (by road) or **2,400 km** (by rail or water) of the final manufacturing site, as displayed in the table below:

Product	Data & Communication Blackbox with Cover
	% by weight
Data 12x12	66.69%
Data 14x14	66.71%

The percentage calculation was performed by considering the requirements for Credit **MR 5** and the maximum distance radius (which depends on the means of transportation used).

The **DATA-12** and **DATA-14**'s final place of manufacturing is located in **Concord, Ontario** (L4K 4Y2).

*MARFAB METAL has all required documents regarding LEED® and can rapidly provide information for your LEED project.*

Vertima's interpretation regarding potential contribution and compliance of the product and/or system to the LEED® credits are based on information given by the clients and their suppliers, who are responsible for its veracity and integrity. Vertima documents, analyses and validates the supporting documentation in compliance with the CAN/CSA ISO 14021 standard. Therefore, Vertima cannot be held responsible for false or misleading information. **VERTIMA INC.** ensures an annual review of the technical data enclosed in this document in collaboration with its clients in order to maintain a high quality standard.

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**POTENTIAL CONTRIBUTION FOR LEED® CANADA-NC & CS 2009 REQUIREMENTS**

**CREDITS      SUSTAINABLE STRATEGIES      POTENTIAL POINTS      CREDIT RELEVANCE**

**CONTRIBUTION AND COMPLIANCE\* DATA COMMUNICATION BLACKBOX WITH COVER (12/14)**

**IEQ 3.2  
Option 2**

**Construction IAQ  
management plan:  
Before occupancy**

**1 point**

**Indirect**

**COMMENTS**

**Requirements**

Develop an **IAQ** management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy.

**Option 2 - Air Testing**

Conduct baseline IAQ testing, after construction ends and **prior to occupancy**, using testing protocols consistent with the United States Environmental Protection Agency Compendium of Methods for the Determination of Air Pollutants in Indoor Air and as additionally detailed in the LEED® Canada Reference Guide for Green Building Design and Construction.

The Data & Communication Blackbox with Cover (**DATA-12** and **DATA-14**) from **MARFAB METAL** are manufactured offsite. **MARFAB METAL** selects the most environmentally friendly products and components, which indirectly promotes a better **IAQ**.

The use of low-emission paints and coatings in the manufacturing process of this product helps complying to the requirements for **IEQ Credit 3.2 Option 2: Air Testing**.

**IEQ 4.2**

**Low-Emitting Materials:  
Paints & Coatings**

**Non applicable**

**Direct**

**COMMENTS**

**Requirements**

Paints and coatings used on the interior of the building (i.e., inboard side of the weatherproofing system and applied on-site) must comply with the following criteria as applicable to the project scope:

- Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, First Edition, May 20, 1993.
- Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti-Corrosive Paints, Second Edition, January 7, 1997.
- Clear wood finishes, floor coatings, stains, primers, and shellacs applied to interior elements must not exceed the VOC content limits established in **South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.**

The credit **IEQ 4.2** only applies to paints and coatings used on the construction site and on the interior of the building.

The paints and coatings used in the manufacturing of **DATA-12** and **DATA-14** are applied in shop and therefore are not subject to this credit requirements. However, **MARFAB METAL** considers that minimizing the **VOC** content of their products is very important and the paints and coatings applied in factory are low in VOCs.

In a LEED® project, **MARFAB METAL** can provide all the documentation required for this credit.

*MARFAB METAL has all required documents regarding LEED® and can rapidly provide information for your LEED project.*

**INDOOR ENVIRONMENTAL QUALITY (IEQ)**







**POTENTIAL CONTRIBUTION FOR LEED® CANADA-NC & CS 2009 REQUIREMENTS**

**CONTRIBUTION AND COMPLIANCE\* DATA COMMUNICATION BLACKBOX WITH COVER (12/14)**

INNOVATION IN DESIGN (ID)

CREDITS	SUSTAINABLE STRATEGIES	POTENTIAL POINTS	CREDIT RELEVANCE
ID path 2	Innovation in design	1-3 points	Direct

**COMMENTS**

**Requirements**

Path 2: Exemplary Performance

Achieve exemplary performance in an existing LEED 2009 for New Construction and Major Renovations credit that allows exemplary performance as specified in the **LEED Reference Guide for Green Building Design & Construction, 2009 Edition**. An exemplary performance point may be earned for achieving double the credit requirements and/or achieving the next incremental percentage threshold of an existing credit in LEED.

One point is awarded for each exemplary performance achieved. No more than 3 points under ID credit 1 may be earned through PATH 2— Exemplary Performance.

The Data & Communication Blackbox with Cover (DATA-12 and DATA-14) from MARFAB METAL contain, in their assembly, high percentages of regional materials, which could contribute to exemplary performance strategies for the following credit:

**MR 5** - Innovation and exemplary performance if the project achieves 40% or more regional material.

The Data & Communication Blackbox with Cover (DATA-12 and DATA-14) from MARFAB METAL contributes to the MR 5 Credit and can thus contribute to exceed the requirements of this credit.

REGIONAL PRIORITY (RP)

RP 2	Regional Priority	1-3 points	Direct/ Indirect
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**COMMENTS**

**Requirements**

Up to 3 points for Regional Priority Credit 2 may be proposed for this credit that is intended to allow adding point emphasis to recognize one **OR** more issues that have additional regional environmental importance.

To achieve a Regional Priority credit, the applicant must identify LEED® credits which have additional regional environmental importance.

**A project must achieve the base credit and then propose that credit as a Regional Priority credit.**

Please refer to the Advantages and Aspects to Consider section of the Regional Priority credit in the LEED Reference Guide.

For a list of applicable credits, please refer to the CaGBC website [www.cagbc.org](http://www.cagbc.org), under the LEED® tools section for the LEED® Canada-NC & CS 2009 Rating Systems.



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POINTS

<b>TOTAL</b>	<b>UP TO 11 POSSIBLE POINTS</b>	<b>The DATA-12 and DATA-14 from MARFAB METAL can contribute up to a total of eleven (11) points for a LEED® Canada-NC &amp; CS 2009 project.</b>
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