W. R. MEADOWS®

HRM 714

HRM 714 hot-applied rubberized asphalt waterproofing is a 100% solids blend of asphalts, synthetic rubber polymers, and fillers formulated to provide a tough, seamless membrane with flexibility and low water-vapor permeance.

Performance dashboard

Features & functionality

Excellent combination of toughness and low temperature flexibility

Very low water absorption and vapor permeance

Resistant to chemicals, acid, fertilizer, and salt water

Visit W.R. MEADOWS for more product information:

HRM 714

Environment & materials

Improved by:

Made in the United States

USGBC member

CAGBC member

0 g/L VOC

Certifications, rating systems & disclosures:

Health Product Declaration

Recycled Content: 12% post-consumer

Build America, Buy America Act compliant

MasterFormat® 07 14 13
HRM 714 Technical data sheet, Guide spec

For spec help, contact us or call 800-342-5976.

See LCA, interpretation & rating systems

USGBC MEMBER | CAGBC MEMBER | BUILD AMERICA BUY AMERICA | hpdc

SM Transparency Report (EPD)™

VERIFICATION	LCA
3rd-party reviewed	✓
	Transparency Report (EPD)
3rd-party reviewed	✓

Validity: 06/22/26 – 06/22/30
SM-WRM – 06222026 – 001

This Environmental Product Declaration (EPD) was externally verified by Lindita Bushi, PhD, Senior Research Associate at Athena, in accordance with Sustainable Minds (2026) Product Category Rules (PCR) for Part B: Product group definition | Water-Resistive and Air Barriers | Part B #26-002

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Athena Sustainable Materials Institute

SUMMARY

Reference PCR
SM Part B: PCR for Water-Resistive and Air Barriers

Regions; system boundaries
North America; Cradle-to-gate

Declared unit: 1 m^2

LCIA methodology: TRACI 2.2

LCA software; LCI database
SimaPro Developer 10.2.0.2; ecoinvent v3.11, US-EI 2.2

Public LCA:
LCA of W. R. MEADOWS Waterproofing Membrane

In accordance with ISO 14044 and the reference PCR, this life cycle assessment was conducted by Sustainable Minds and reviewed by Lindita Bushi, PhD, Senior Research Associate, at Athena.

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LCA results & interpretation

HRM 714

HRM 714 | EPD additional content

Scope and summary

✔ Cradle to gate ○ Cradle to gate with options ○ Cradle to grave

Application

HRM 714 fluid-applied rubberized asphalt waterproofing is a 100% solids blend of asphalts, synthetic rubber polymers, and fillers formulated to provide a tough, seamless membrane with flexibility and low water-vapor permeance.

Declared unit

Product density: 10.67 lbs/gal = 1.278 kg/L
Reference flow (kg/m^2) = 6 kg/m^2

Manufacturing data

Reporting period: January 2025 – December 2025
Locations: Fort Worth, TX and Hampshire, IL

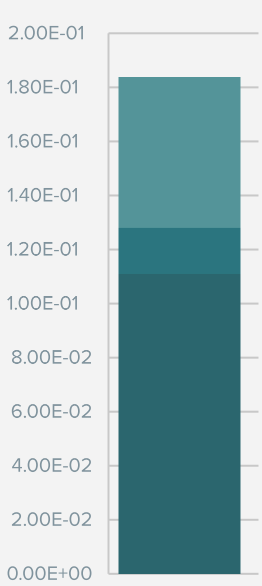
Embodied carbon

Embodied carbon can be defined as the cradle-to-gate (A1-A3) global warming potential impacts. HRM 714 is manufactured at two facilities, and the facility-specific embodied carbon is 3.81E+00 kg CO_2-eq for Fort Worth, TX and 3.24E+00 kg CO_2-eq for Hampshire, IL.

Material composition by wt%

MATERIAL	%WT.
Mastic asphalt	50-70%
Limestone	10-20%
Synthetic rubber	10-20%
Oils	5-10%
Polymers	<5%
Packaging, plastic	<1%

Average plant impacts by life cycle stage [mPts/decl unit]



LIFE CYCLE STAGE	MPTS/DECL. UNIT
Raw material acquisition	1.11E-01
Transportation	1.64E-02
Manufacturing	5.60E-02
	Total impacts = 1.83E-01 mPts

What's causing the greatest impacts

All life cycle stages

The raw material acquisition stage dominates the results, accounting for over 73% of the total impacts for nine out of ten TRACI 2.2 impact categories, followed by the manufacturing stage. For global warming, eutrophication, carcinogens, and non-carcinogens, manufacturing accounted for the second-highest contributor and over 17% of the total results. Among the raw materials, the industrial oil was the largest contributor to the total results.

Raw material acquisition

The raw material acquisition (A1) stage has the most significant contribution to most impact categories, primarily due to the industrial oil. Mastic asphalt contributes the highest weight percentage to the material composition.

Transportation

The transportation (A2) of raw materials is the least impactful contributor to the total results. Materials are sourced from within America and transported via semi-truck to the manufacturing facility.

Manufacturing

Manufacturing (A3) is the second highest contributor to most impact categories. The primary driver of environmental impacts within the manufacturing stage is the energy required to produce the product. However, impacts from the manufacturing stage dominate the results for global warming, ozone depletion, and fossil fuel depletion, stemming primarily from the use of electricity and natural gas. Activities in this stage also include final product packaging and manufacturing waste disposal.

Sensitivity analysis

Sensitivity analyses were performed to assess the robustness of the results in areas where the highest potential environmental impacts occur. Since there were two raw materials that contributed the most to total impacts, sensitivity analyses were conducted on their usage to assess the impact of decreasing their presence in these products. A sensitivity analysis assessed a 10% reduction of oil present in the product, using the Fort Worth location as a baseline.

Decreasing the amount of oil by 10% could reduce global warming potential by 4%, which shows that these products are relatively sensitive to the amount of oil present.

How we're making it greener

- W. R. MEADOWS utilizes OEE (Overall Equipment Effectiveness) to optimize manufacturing processes and reduce energy consumption.
- OEE identifies inefficiencies and wasted energy: By monitoring equipment performance, it uncovers downtime, slow speeds, and quality defects.
- Energy-saving improvements through OEE: Meadows has achieved streamlined processes, better scheduling, reduced machine wear, and lower energy costs.
- Reduction in scrap and waste: OEE insights help identify performance issues, reducing defects, delays, and material waste while enhancing product quality.
- Supports sustainability and environmental goals: By lowering energy use and cutting carbon footprints, OEE fosters more sustainable manufacturing practices.

See how we make it greener

LCA results

LIFE CYCLE STAGE	RAW MATERIAL ACQUISITION	TRANSPORT	MANUFACTURING
	(X) A1 Raw material acquisition	(X) A2 Transport	(X) A3 Manufacturing
Information modules: **Included (X)** | Excluded (MND)* *Modules A4, A5, B, C, and D are excluded.			

SM Single Score

Learn about SM Single Score results

Impacts per declared unit	1.11E-01 mPts	1.64E-02 mPts	5.61E-02 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Extraction and preprocessing of polymers, mastic asphalt, and other raw materials.	Truck transportation to manufacturing facility.	Electricity and natural gas consumption during the manufacturing process.

Life cycle impact assessment results per declared unit (Fort Worth, TX)

LIFE CYCLE STAGE		RAW MATERIAL ACQUISITION	TRANSPORT	MANUFACTURING

Ecological damage

Impact category	Unit			
Total global warming potential, GWP_{TOTAL}	**kg CO_2 eq**	2.39E+00	3.73E-01	1.05E+00
Global warming potential from biogenic, $GWP_{BIOGENIC}$	**kg CO_2 eq**	2.68E-02	2.28E-05	2.54E-02
Global warming potential from fossil fuels, GWP_{FOSSIL}	**kg CO_2 eq**	2.36E+00	3.73E-01	1.02E+00
Global warming potential from land use and land use change, GWP_{LULUC}	**kg CO_2 eq**	1.19E-03	1.99E-05	3.28E-03
Ozone depletion	**kg CFC-11 eq**	1.68E-07	5.05E-09	2.11E-08
Acidification	**kg SO_2 eq**	9.63E-03	5.11E-04	5.70E-03
Eutrophication: freshwater	**kg P eq**	6.84E-05	1.19E-06	2.17E-05
Eutrophication: marine	**kg N eq**	1.07E-03	6.30E-05	9.46E-04

Human health damage

Impact category	Unit			
Smog	**kg O_3 eq**	1.24E-01	7.33E-03	1.07E-01
Respiratory effects	**kg $PM_{2.5}$ eq**	1.42E-03	1.13E-04	1.49E-03

Additional environmental information

Impact category	Unit			
Carcinogenics	**CTU_h**	62.57%	0.62%	36.81%
Non-carcinogenics	**CTU_h**	27%	9.69%	63.31%
Ecotoxicity	**CTU_e**	36.81%	32.13%	31.07%

Life cycle impact assessment results per declared unit (Hampshire, IL)

LIFE CYCLE STAGE		RAW MATERIAL ACQUISITION	TRANSPORT	MANUFACTURING

Ecological damage

Impact category	Unit			
Total global warming potential, GWP_{TOTAL}	kg CO_2 eq	2.39E+00	2.87E-01	5.63E-01
Global warming potential from biogenic, $GWP_{BIOGENIC}$	kg CO_2 eq	2.68E-02	1.75E-05	1.92E-02
Global warming potential from fossil fuels, GWP_{FOSSIL}	kg CO_2 eq	2.36E+00	2.87E-01	5.43E-01
Global warming potential from land use and land use change, GWP_{LULUC}	kg CO_2 eq	1.19E-03	1.53E-05	1.02E-03
Ozone depletion	kg CFC-11 eq	1.68E-07	3.88E-09	2.18E-08
Acidification	kg SO_2 eq	9.63E-03	3.93E-04	2.04E-03
Eutrophication: freshwater	kg P eq	6.84E-05	9.14E-07	1.54E-05
Eutrophication: marine	kg N eq	1.07E-03	4.85E-05	2.54E-04

Human health damage

Impact category	Unit			
Smog	kg O_3 eq	1.24E-01	5.64E-03	2.73E-02
Respiratory effects	kg $PM_{2.5}$ eq	1.41E-03	8.73E-05	3.45E-04

Additional environmental information

Impact category	Unit			
Carcinogenics	CTU_h	91.02%	0.70%	8.28%
Non-carcinogenics	CTU_h	36.21%	10.07%	53.72%
Ecotoxicity	CTU_e	49.94%	33.68%	16.38%

References

LCA Background Report
LCA of W. R. MEADOWS Water Resistive and Air Barriers, 2025. Developed using the IPCC Sixth Assessment Report (AR6) 100-year time, TRACI v2.2, CML, and Cumulative Energy Demand (LHV) impact assessment methodologies, SimaPro 10.2.0.2 software, and ecoinvent v3.11 and US-EI 2.2 databases.

ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures

ISO 21930:2017, Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services

SM Part B: Water-Resistive and Air Barriers; Version 5.0, April 2026. PCR review conducted for conformance to ISO 14025:2006, ISO 21930:2017, and ACLCA PCR Open Standard v1.0 by the following parties: Thomas Gloria, PhD (chair, t.gloria@industrial-ecology.com); Terrie Boguski (Harmony Environmental); and C. Jason Pierce (Blue Ridge Sustainability).

Download HRM 714 PDF SM Transparency Report [EPD]

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance using EPD information shall consider all relevant information modules over the full life cycle of the products within the building. This PCR allows EPD comparability only when the same functional requirements between products are ensured and the requirements of ISO 21930:2017 §5.5 are met. It should be noted that different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared. LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. These nine impact categories are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development. However, the EPD users shall not use additional measures for comparative purposes. Comparison of the environmental performance of water-resistive and air barriers using EPD information shall be based on the product's use and impacts at the construction works level, and therefore EPDs may not be used for comparability purposes when not considering the construction works energy use phase as instructed under this PCR. Full conformance with the PCR for water-resistive and air barriers allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category Part B PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified life-cycle environmental performance.

LEED BD+C: New Construction | v.5 - LEED v5
MR Credit 4: Building Materials Resources Credit (BPSP)

- [x] Product-specific Type III EPD — Multi-attribute score: 1

LEED BD+C: New Construction | v4.1 - LEED v4.1
Building product disclosure and optimization
Environmental product declarations

- [ ] Industry-wide (generic) EPD
- [x] Product-specific Type III EPD

Green Globes for New Construction and Sustainable Interiors
Materials and resources

- [x] NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell
- [x] NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

BREEAM New Construction 2018
Mat 02 - Environmental impacts from construction products
Environmental Product Declarations (EPD)

- [ ] Industry-average EPD — .5 points
- [ ] Multi-product specific EPD — .75 points
- [x] Product-specific EPD — 1 points

EPD additional content

HRM 714

HRM 714 | EPD additional content

Data

Background This product-specific facility-specific declaration was created by collecting production data from the facility in Hampshire, IL and Fort Worth, TX. All unit processes were modeled using primary data. Secondary data sources include those available in the ecoinvent v3.11 and US-EI 2.2 databases.

Supply chain specificity Per the ACLCA Guidance for Determining EPD Types and Calculating and Communicating Data Specificity Through the Supply Chain v1, this set of EPD results is facility-specific and product-specific with supply-chain-specificity ≥6.00% (Hampshire, IL) and ≥1.56% (Fort Worth, TX).

Allocation The W. R. MEADOWS facility produces multiple types of products each year. To allocate electricity and natural gas consumption accurately to each product, total annual energy consumption was distributed based on the proportion of each product's annual production (by mass) relative to the total facility production. This approach assigns manufacturing activities proportionally to each product type.

All associated manufacturing resources and waste flows were allocated using the same approach. There are no co-products produced during their manufacturing processes. The model used in the LCA ensures that the sum of the allocated inputs and outputs of a unit process shall be equal to the inputs and outputs of the unit process before allocation. This means that no double counting or omissions of inputs or outputs through allocation is occurring.

Cut-off criteria for the inclusion of mass and energy flows are 1% of renewable primary resource (energy) usage, 1% nonrenewable primary resource (energy) usage, 1% of the total mass input of that unit process, and 1% of environmental impacts. The total of neglected input flows per module does not exceed 5% of energy usage, mass, and environmental impacts.

The only exceptions to these criteria are substances with hazardous and toxic properties, which must be listed even when the given process unit is under the cut-off criterion of 1% of the total mass. No known flows are deliberately excluded from this declaration, and no substances considered to be hazardous or toxic according to the Global Harmonized System (GHS) rules for safety data sheets (SDS) are present in the products. Therefore, these criteria have been met. Biogenic carbon is included in reported results.

Quality The precision of the data is considered high. W. R. MEADOWS personnel provided a detailed bill of materials, and facility managers provided utility information for the manufacturing facility. The raw material transportation distances were provided directly by the facility.

The data included is considered complete. The LCA model included all known material and energy flows. As pointed out in that section, no known flows above 1% were excluded and the sum of all excluded flows totals less than 5%, whether evaluated by mass, energy, or potential environmental impact.

The consistency of the model is considered high. Furthermore, the modeling assumptions were consistent throughout the model, with a preference for the ecoinvent v3.11 database.

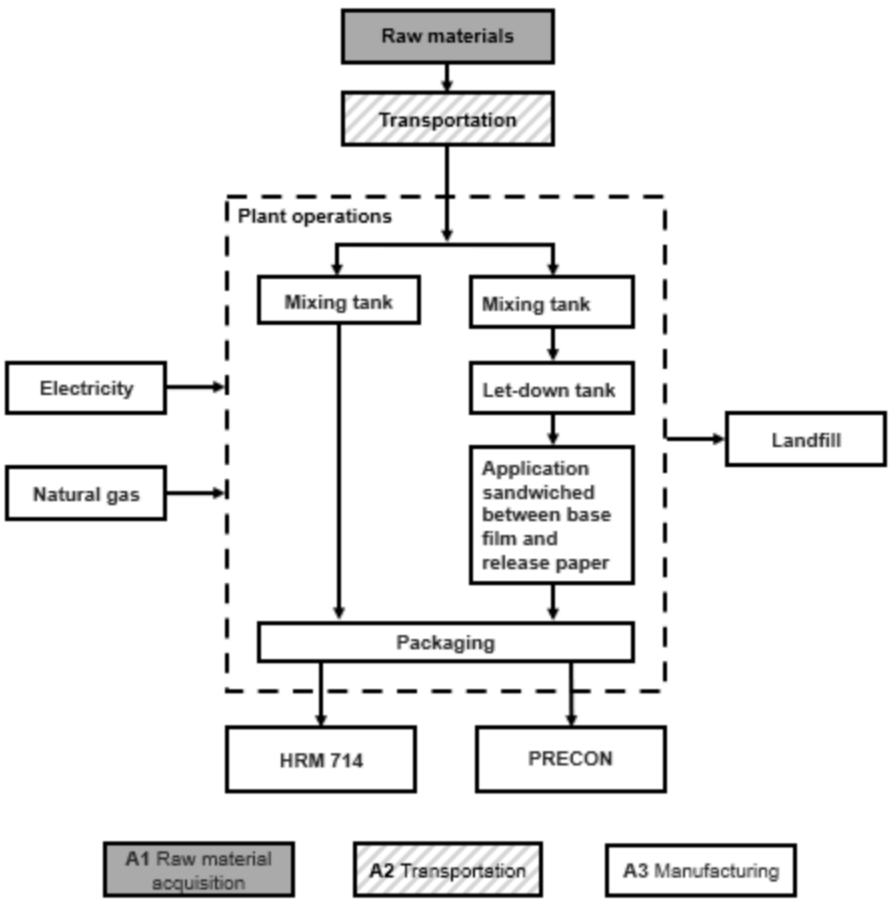
Major system boundary exclusions

- Manufacture and transport of packaging not associated with final product
- Construction of major capital equipment
- Maintenance and operation of support equipment
- Human labor and employee transport
- Disposal of final product, except for biogenic carbon balance reporting

Scenarios and additional technical information

Biogenic carbon disclosure in installation stage [A5] While the impacts from installation are out of the scope of this cradle-to-gate study, ISO 21930:2017 requires that biogenic carbon emissions associated with packaging disposed of after product installation are separately reported. The biogenic carbon removals from packaging in the manufacturing stage (A3) are later accounted for as biogenic carbon emissions in the installation stage (A5). The biogenic carbon emissions associated with packaging of HRM 714 is 3.89E-01 kg CO_2 for Fort Worth, TX and 3.67E-01 kg CO_2 for Hampshire, IL.

Flow diagram



Major assumptions and limitations

- Primary data were modeled based on the information provided by W. R. MEADOWS and supplemented by data contained in the technical and safety data sheets provided. Proxy materials were used when matching secondary data sets were not identified.
- Since energy inputs were not available per product, electricity and natural gas consumption were allocated proportionately based on the annual mass of production for individual products versus total site production.
- Generic data sets used for material inputs, transport, and waste processing are considered good quality, but actual impacts from material suppliers, transport carriers, and local waste processing may vary.
- The impact assessment methodology categories do not represent all possible environmental impact categories.
- Characterization factors used within the impact assessment methodology may contain varying levels of uncertainty.
- LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.
- No "green power" is used in this LCA

LCIA, resource use, output and waste flows, and carbon emissions & removals per declared unit of HRM 714 (Fort Worth, TX)

Parameter	Unit	A1	A2	A3	Total (A1-A3)
LCIA results					
Total global warming potential, GWPtotal	kg CO2 eq	2.39E+00	3.73E-01	1.05E+00	**3.81E+00**
Global warming potential from fossil fuels, GWPfossil	kg CO2 eq	2.36E+00	3.73E-01	1.02E+00	**3.75E+00**
Global warming potential from biogenic, GWPbiogenic	kg CO2 eq	2.68E-02	2.28E-05	2.54E-02	**5.23E-02**
Global warming potential from land use and land use change, GWPluluc	kg CO2 eq	1.19E-03	1.99E-05	3.28E-03	**4.49E-03**
Acidification	kg SO2 eq	9.63E-03	5.11E-04	5.70E-03	**1.58E-02**
Eutrophication: freshwater	kg P eq	6.84E-05	1.19E-06	2.17E-05	**9.12E-05**
Eutrophication: marine	kg N eq	1.07E-03	6.30E-05	9.46E-04	**2.07E-03**
Ozone depletion	kg CFC-11 eq	1.68E-07	5.05E-09	2.11E-08	**1.94E-07**
Smog	kg O3 eq	1.24E-01	7.33E-03	1.07E-01	**2.39E-01**
Respiratory effects	kg PM2.5 eq	1.42E-03	1.13E-04	1.49E-03	**3.02E-03**
Additional environmental information					
Carcinogenics	CTUh	62.6%	0.62%	36.8%	**100%**
Non carcinogenics	CTUh	27.0%	9.69%	63.3%	**100%**
Ecotoxicity	CTUe	36.8%	32.1%	31.1%	**100%**
Resource use indicators					
Renewable primary energy used as energy carrier (fuel)	MJ, NCV	1.77E+00	9.82E-03	6.52E+01	**6.70E+01**
Renewable primary resources with energy content used as material	MJ, NCV	0.00E+00	0	0	**0.00E+00**
Total use of renewable primary resources with energy content	MJ, NCV	1.77E+00	9.82E-03	6.52E+01	**6.70E+01**
Non-renewable primary resources used as an energy carrier (fuel)	MJ, NCV	1.59E+01	5.19E+00	1.63E+01	**3.73E+01**
Non-renewable primary resources with energy content used as material	MJ, NCV	6.53E+01	0	0	**6.53E+01**
Total use of non-renewable primary resources with energy content	MJ, NCV	8.12E+01	5.19E+00	1.63E+01	**1.03E+02**
Secondary materials	kg	0	0	0	**0**
Renewable secondary fuels	MJ, NCV	0	0	0	**0**
Non-renewable secondary fuels	MJ, NCV	0	0	0	**0**
Recovered energy	MJ, NCV	0	0	0	**0**
Use of net freshwater resources	m3	2.94E+00	3.12E-02	1.91E+00	**4.88E+00**
Abiotic depletion (fossil fuels)	MJ, LHV	7.48E+01	4.87E+00	1.43E+01	**9.39E+01**
Output flows and waste category indicators					
Hazardous waste disposed	kg	3.64E-02	0	3.72E-02	**7.75E-02**
Non-hazardous waste disposed	kg	7.33E-01	0	4.30E-01	**1.17E+00**
High-level radioactive waste, conditioned, to final repository	kg	4.21E-06	6.69E-08	3.52E-06	**7.80E-06**
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	2.05E-05	0	1.10E-05	**3.15E-05**
Components for re-use	kg	0	0	0	**0**
Materials for recycling	kg	0	0	0	**0**
Materials for energy recovery	kg	0	0	0	**0**
Exported energy	MJ	0	0	0	**0**
Carbon emissions and removals					
Biogenic Carbon Removal from Product	kg CO2	0	0	0	**0**
Biogenic Carbon Emission from Product	kg CO2	0	0	0	**0**
Biogenic Carbon Removal from Packaging	kg CO2	0	0	-3.67E-01	**-3.67E-01**
Biogenic Carbon Emission from Packaging	kg CO2	0	0	0	**0**
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO2	0	0	0	**0**
Calcination Carbon Emissions	kg CO2	0	0	0	**0**
Carbonation Carbon Removals	kg CO2	0	0	0	**0**
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	kg CO2	0	0	0	**0**

LCIA, resource use, output and waste flows, and carbon emissions & removals per declared unit of HRM 714 (Hampshire, IL)

Parameter	Unit	A1	A2	A3	Total (A1-A3)
LCIA results					
Total global warming potential, GWPtotal	kg CO2 eq	2.39E+00	2.87E-01	5.63E-01	**3.24E+00**
Global warming potential from fossil fuels, GWPfossil	kg CO2 eq	2.36E+00	2.87E-01	5.43E-01	**3.19E+00**
Global warming potential from biogenic, GWPbiogenic	kg CO2 eq	2.68E-02	1.75E-05	1.92E-02	**4.61E-02**
Global warming potential from land use and land use change, GWPluluc	kg CO2 eq	1.19E-03	1.53E-05	1.02E-03	**2.22E-03**
Acidification	kg SO2 eq	9.63E-03	3.93E-04	2.04E-03	**1.21E-02**
Eutrophication: freshwater	kg P eq	6.84E-05	9.14E-07	1.54E-05	**8.47E-05**
Eutrophication: marine	kg N eq	1.07E-03	4.85E-05	2.54E-04	**1.37E-03**
Ozone depletion	kg CFC-11 eq	1.68E-07	3.88E-09	2.18E-08	**1.94E-07**
Smog	kg O3 eq	1.24E-01	5.64E-03	2.73E-02	**1.57E-01**
Respiratory effects	kg PM2.5 eq	1.41E-03	8.73E-05	3.45E-04	**1.84E-03**
Additional environmental information					
Carcinogenics	CTUh	91.0%	0.70%	8.3%	**100%**
Non carcinogenics	CTUh	36.2%	10.07%	53.7%	**100%**
Ecotoxicity	CTUe	49.9%	33.7%	16.4%	**100%**
Resource use indicators					
Renewable primary energy used as energy carrier (fuel)	MJ, NCV	1.77E+00	7.55E-03	3.79E+00	**5.57E+00**
Renewable primary resources with energy content used as material	MJ, NCV	0.00E+00	0	0	**0.00E+00**
Total use of renewable primary resources with energy content	MJ, NCV	1.77E+00	7.55E-03	3.79E+00	**5.57E+00**
Non-renewable primary resources used as an energy carrier (fuel)	MJ, NCV	1.93E+01	3.99E+00	1.02E+01	**3.36E+01**
Non-renewable primary resources with energy content used as material	MJ, NCV	6.19E+01	0	0	**6.19E+01**
Total use of non-renewable primary resources with energy content	MJ, NCV	8.12E+01	3.99E+00	1.02E+01	**9.54E+01**
Secondary materials	kg	0	0	0	**0**
Renewable secondary fuels	MJ, NCV	0	0	0	**0**
Non-renewable secondary fuels	MJ, NCV	0	0	0	**0**
Recovered energy	MJ, NCV	0	0	0	**0**
Use of net freshwater resources	m3	2.93E+00	2.40E-02	6.43E-01	**3.60E+00**
Abiotic depletion (fossil fuels)	MJ, LHV	7.50E+01	3.74E+00	7.53E+00	**8.63E+01**
Output flows and waste category indicators					
Hazardous waste disposed	kg	3.61E-02	0	4.67E-03	**4.37E-02**
Non-hazardous waste disposed	kg	7.33E-01	0	2.01E-01	**9.39E-01**
High-level radioactive waste, conditioned, to final repository	kg	4.21E-06	5.15E-08	6.03E-06	**1.03E-05**
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	2.61E-05	0	1.10E-05	**3.71E-05**
Components for re-use	kg	0	0	0	**0**
Materials for recycling	kg	0	0	0	**0**
Materials for energy recovery	kg	0	0	0	**0**
Exported energy	MJ	0	0	0	**0**
Carbon emissions and removals					
Biogenic Carbon Removal from Product	kg CO2	0	0	0	**0**
Biogenic Carbon Emission from Product	kg CO2	0	0	0	**0**
Biogenic Carbon Removal from Packaging	kg CO2	0	0	-3.67E-01	**-3.67E-01**
Biogenic Carbon Emission from Packaging	kg CO2	0	0	0	**0**
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO2	0	0	0	**0**
Calcination Carbon Emissions	kg CO2	0	0	0	**0**
Carbonation Carbon Removals	kg CO2	0	0	0	**0**
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	kg CO2	0	0	0	**0**

How we make it greener

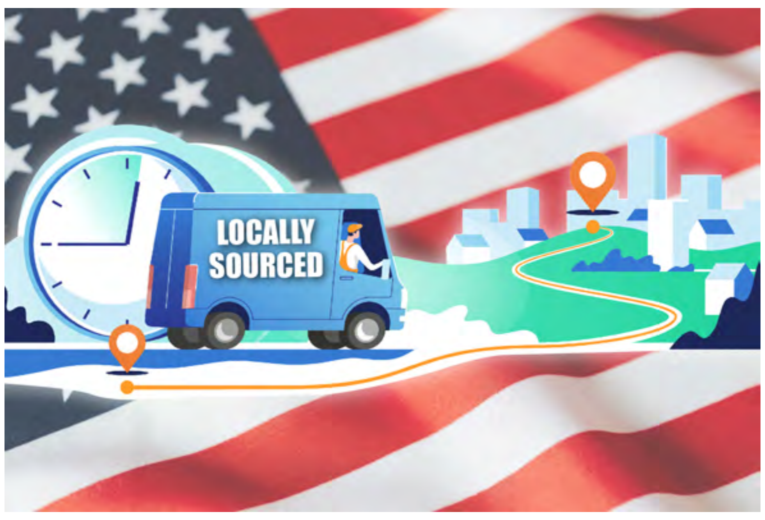
HRM 714

Collapse all

RAW MATERIALS ACQUISITION

W. R. MEADOWS sources many materials domestically. Sourcing materials locally is more sustainable and results in a smaller carbon footprint for several reasons.It reduces transportation emissions by avoiding long-distance and overseas shipping, cutting fuel use and greenhouse gas output.

Supporting domestic industries strengthens local economies and promotes sustainable practices, reducing reliance on global supply chains. Local sourcing ensures efficient logistics, as materials are transported over shorter distances, saving energy in storage and transit. Finally, it eliminates dependence on energy-intensive transport modes like cargo ships and planes, which consume large amounts of fossil fuels. Domestic sourcing supports the environment and creates more resilient, eco-friendly supply chains.



TRANSPORTATION

W. R. MEADOWS manufactures in the USA. Sourcing materials domestically can be more sustainable and result in a lower carbon footprint for several reasons:

- **Reduced transportation emissions:** Local sourcing eliminates the need for long-distance shipping, especially overseas transport, significantly reducing fuel consumption and greenhouse gas emissions.
- **Support for local economies:** Buying domestically strengthens local industries, encourages more sustainable practices, and reduces dependence on global supply chains.
- **Efficient logistics:** With materials sourced nearby, transportation and delivery are quicker and more efficient, requiring less energy for storage and transit.
- **Improved quality control:** Local suppliers are often easier to monitor, ensuring higher standards for sustainability practices in production.
- **Lower reliance on energy-intensive transport modes:** Overseas sourcing often depends on cargo ships and planes, which consume vast amounts of fossil fuels compared to domestic transportation.

In short, domestic sourcing benefits the environment and helps create more resilient and eco-conscious supply chains!

MANUFACTURING

W. R. MEADOWS utilizes Continuous Improvement in its daily standard work for all manufacturing activities.

Front-line supervisors are the champions of OEE (Overall Equipment Effectiveness), which plays a crucial role in reducing energy consumption in manufacturing. It highlights any inefficiencies and directs our efforts to minimize unnecessary energy use. By closely monitoring equipment performance, OEE identifies periods of downtime, slow speeds, and quality defects, which can all lead to wasted energy. Moreover, OEE-driven improvements have led Meadows to more streamlined processes, better scheduling, and reduced machine wear, all of which contribute to lower energy costs and a more sustainable operation. This proactive approach not only decreases energy consumption but also helps manufacturers meet environmental goals and reduce their carbon footprint.

Further, OEE has helped Meadows to identify and reduce scrap by providing insights into equipment performance, highlighting areas where defects or inefficiencies occur during production. With improved equipment efficiency and fewer production delays, OEE ensures that processes run optimally, resulting in fewer errors and reduced waste. Ultimately, this leads to a higher-quality product with less material being wasted during the manufacturing process.

USE & END OF LIFE

We understand the importance of end-of-life disposal. However, these products are meant to remain permanently adhered to their substrates, making them challenging to remove. As a result, they are typically landfilled during deconstruction or demolition.