Specifications for Low Carbon Building Materials and Reuse

Alameda County
Green Purchasing Roundtable
December 11, 2025

Welcome! Introduce Yourself

- **Rename yourself in Zoom**
  (name + agency name)

- **Sign in on the Google Doc** and answer our question:
  - For major construction projects, what type of project delivery process does your agency typically use?
    1. **Design-build**: Contractor and Architect are hired as one entity to complete design and construction collaboratively.
    2. **Design-bid-build**: Contractor is hired after design is complete
    3. **I don't know**: ¯_(ツ)_/¯

Alameda County SUSTAINABILITY
Local Action, Global Impact.

Agenda

- *Welcome and Housekeeping*
- ***Presentation:***
  Low-Carbon Building Materials
- *Q&A*
- ***Presentation:***
  Material Reuse and Deconstruction
- *Q&A*
- *Breakout groups – self select by role*
- *Resource Reminders and Links*
- *Evaluations and Close*

Photo credit Jeffrey Robb, Pexels

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Introducing Our Presenters

Karen Cook
Alameda County General Services Agency

Frances Yang
Arup

Spencer Schrandt
Arup

Maggie Smith
Arup

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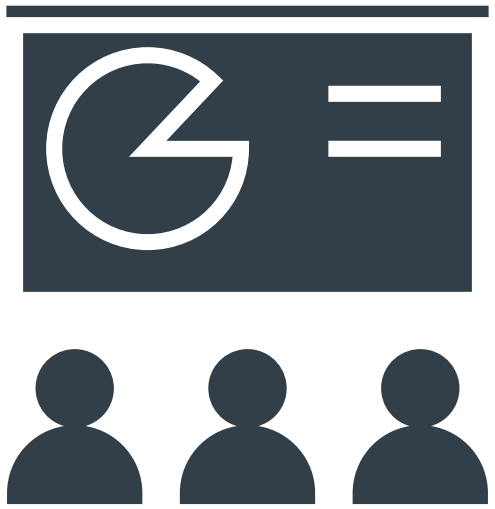
Housekeeping



- **Participate!**
- **Use the “raise hand” feature or chat to ask or answer questions**
- Feel free to enable video
- Stay on mute if not speaking
- We will record. Presentation recording will be shared.
- Change Zoom name to: Name – Agency Name

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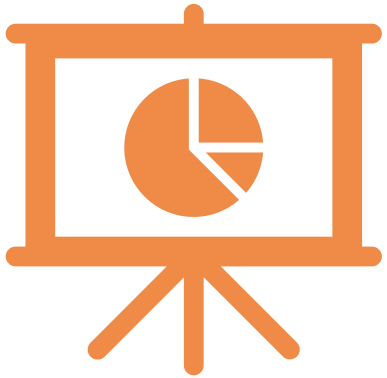
We Will Share Links to Resources

Already sent:

- DRAFT Specifications for Low-Carbon Building Materials and Material Reuse and Deconstruction

To be posted at www.acsustain.org:

- Recording
- Slides



An email with links will be sent to all registrants!

Alameda County SUSTAINABILITY
Local Action, Global Impact.

Construction Performance Specs Project Overview

Alameda County Climate Action Plan
for Government Services and Operations Through 2026

BE 7: Minimize Life Cycle Carbon Emissions of Construction and Building Materials

Minimize greenhouse gas emissions generated throughout the entire building life cycle through design optimization, material selection, and construction practices.

SMM 7: Construction and Demolition

Advance circular economy principles in the built environment by diverting the maximum amount of material with a focus on salvaging for reuse during demolition and seeking opportunities to use recovered materials in new construction in project-appropriate ways.

CITY OF DUBLIN

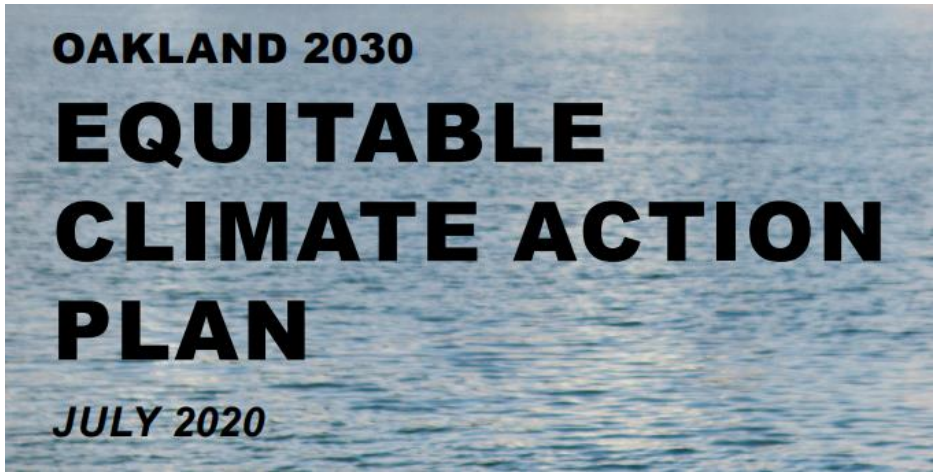
CLIMATE ACTION PLAN 2030 AND BEYOND

Building Thriving and Resilient Neighborhoods for All

September 2020

Measure MM-2: Reduce the Embodied GHG Emissions Associated with Building Materials

The City of Dublin will require the use of low carbon concrete in new construction projects to reduce lifecycle GHG emissions and the embodied carbon associated with construction projects.



B-4

Reduce Lifecycle Emissions from Building Materials

MCW-6

Establish a Deconstruction Requirement

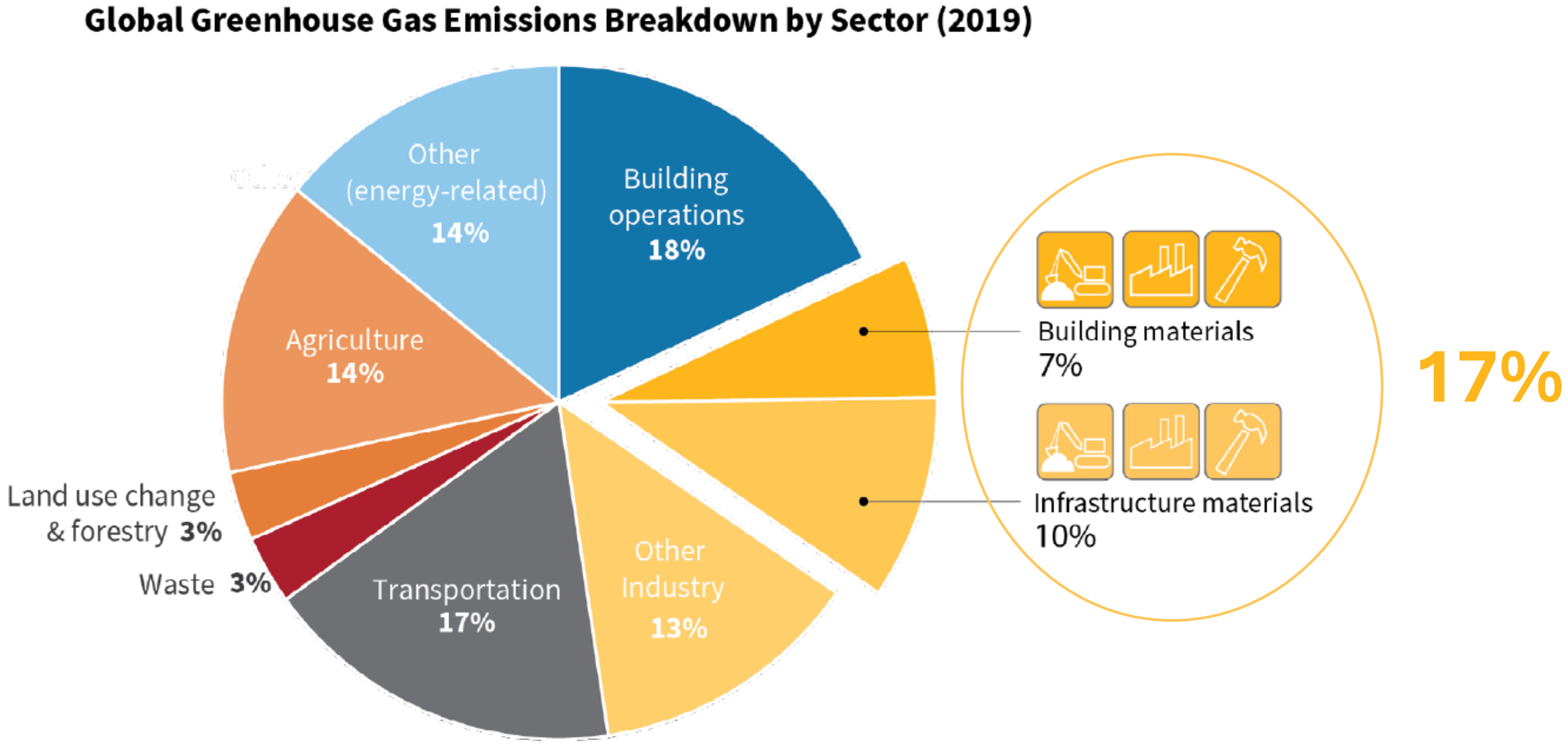


Figure 2. Global end-use greenhouse gas emissions breakdown by sector in 2019. Emissions from building and infrastructure materials comprise 17% of global greenhouse gas emissions.

CLF Carbon Leadership Forum

Reducing Embodied Carbon

1. Low-Carbon Materials

2. Material Reuse and Deconstruction

Carbon Leadership Forum

Project Partners

Plan, build, and maintain County facilities	Project consultant	Project funder

Outreach and Feedback

BAY AREA SUSTAINABLE CONSTRUCTION LEADERS

Contractor Technical Assistance Program
Alameda County

Green Purchasing Roundtable

Large contractors September 10 meeting	Small contractors November 18 webinar	Bay area public agencies December 11 webinar

Proposed Implementation Timeline
for Design-Build Project Delivery Process

AGENCY ISSUES RFP → **DESIGN BUILDER (PRIME)** → **SUBCONTRACTORS**

- **Set minimum performance requirements**:
  - Low embodied carbon construction materials
  - Material reuse and deconstruction (if applicable)
- **Include in RFP** the template compliance forms for use by prime and subcontractors

- **Make a plan** for meeting the requirements and identify potential suppliers
- **Incorporate into the technical specifications** the requirements and reporting and compliance forms
- **Complete a draft** of the compliance forms for owner acceptance at:
  - 90% SD (acknowledge)
  - 90% DD (preliminary design)
  - 90% CD (final design)

- **Source products** meeting the minimum performance spec
- **Submit the preliminary compliance forms** within 30 days of bid award for compliance check before proceeding
- Within 6 weeks of completion of all work with covered materials, **submit the final AS-BUILT compliance forms** and all supporting documentation for each product used

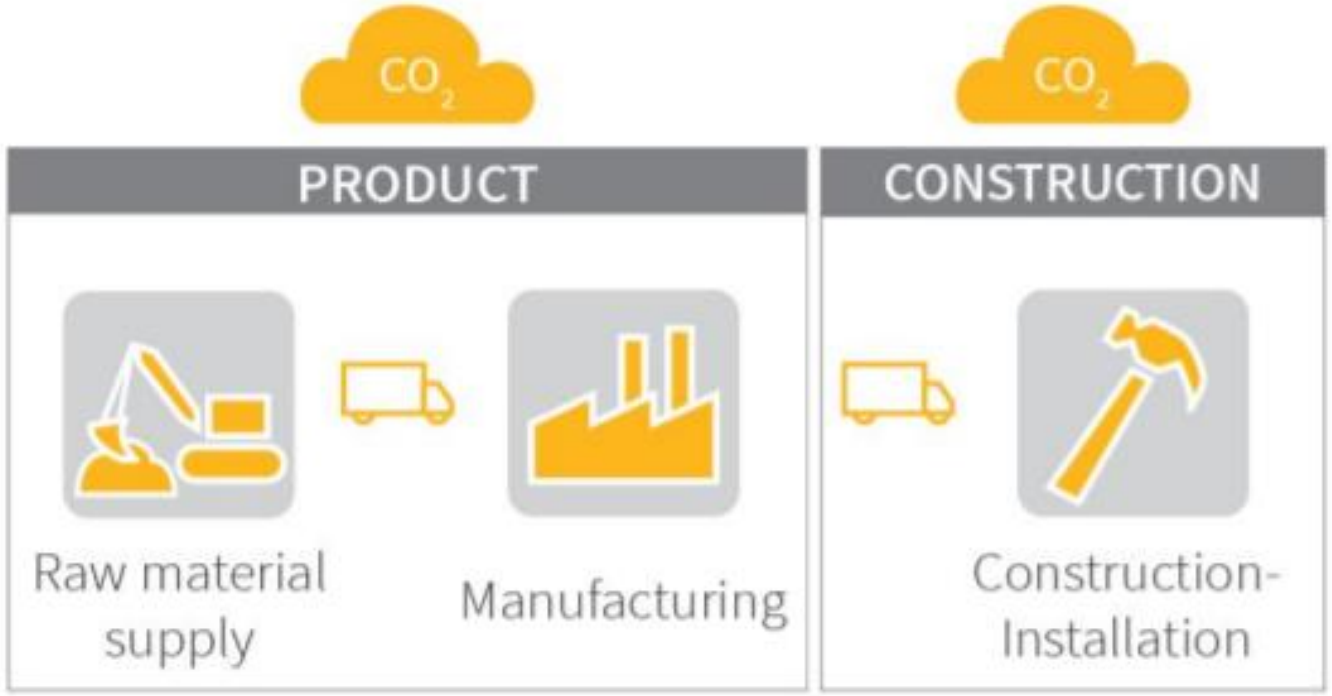
Low-Carbon Materials Performance Specification

Materials and Quantity Minimums

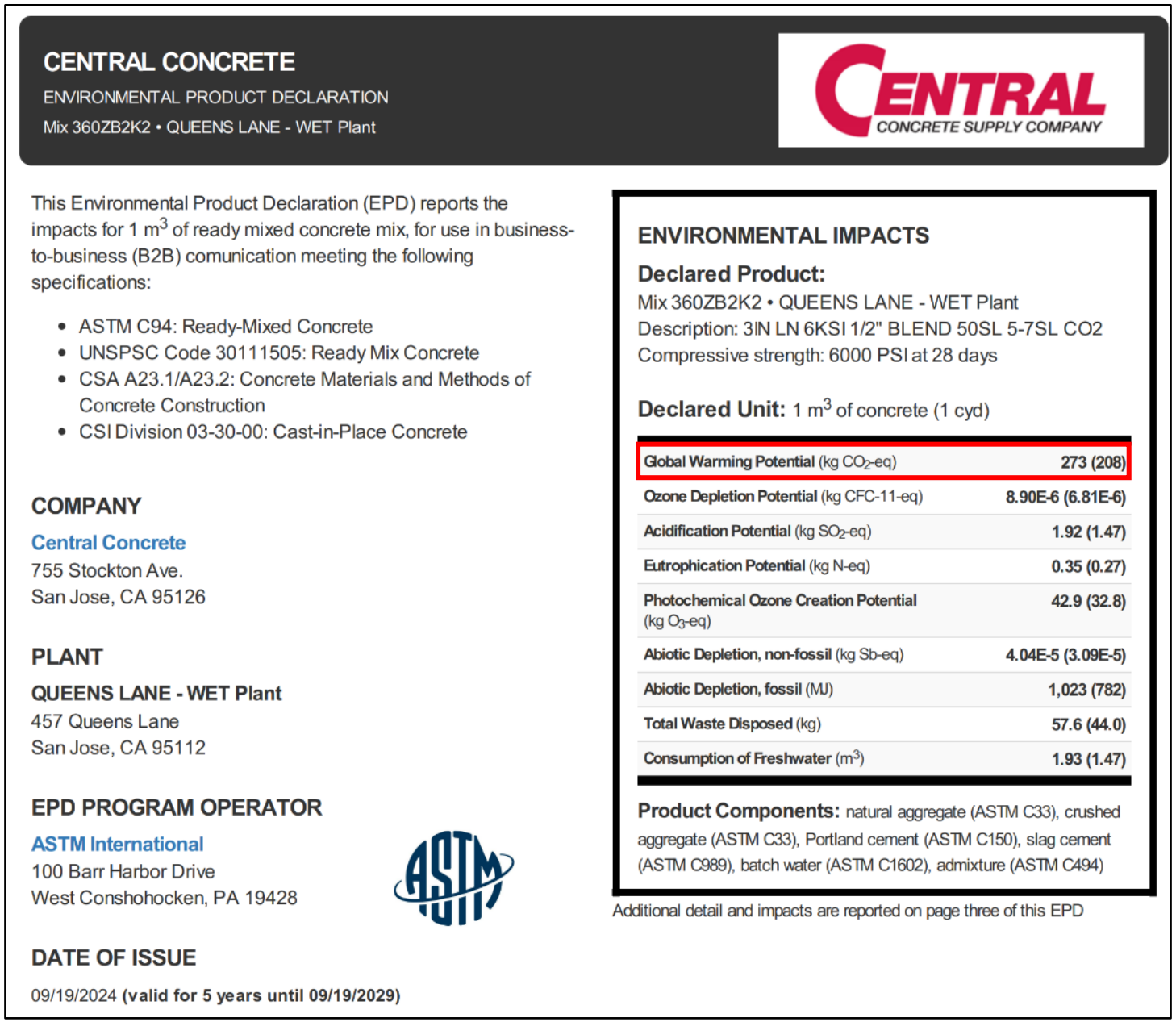
Product Type	Quantity Minimum		Quantity Comparison
Asphalt	10	cyd per mix	1 concrete truck
Flat glass (annealed, uncoated)	2,000	sf per manufacturer	3 floors 50’x50’ ground floor parking wall infill
CMU	2,000	sf	10’ high, 50’x50’ ground floor parking wall infill
Concrete (precast)	2,000	sf per manufacturer	10’ high, 50’x50’ perimeter tilt-up wall
Concrete (cast-in-place)	50	cyd per mix	5 concrete trucks
Below grade insulation	4,000	sf per manufacturer	2 floors 50’x50’ or single floor 100’x150’ with WWR < 0.4
Curtainwall spandrel insulation	4,000		
Exterior continuous insulation	4,000		
Exterior stud wall cavity insulation	4,000		
Roof insulation	4,000		
Hot-rolled structural steel sections	5,000	lbs per mill	300 sf of new steel framed construction or 8 beams for retrofit
Hollow structural sections	5,000		
Steel plate	5,000		
Steel deck	30,000		1,800 sf of new steel framed construction or 48 beams for retrofit
Rebar	20,000		4,000 sf assuming 2% reinforced 6” SOG

Global Warming Potential (GWP)

The total greenhouse gas emissions directly associated with the production of a product. This includes the upstream activities of extraction and transport of raw materials. Can be thought of as the carbon footprint of a product.



Environmental Product Declaration (EPD)



CENTRAL CONCRETE

ENVIRONMENTAL PRODUCT DECLARATION

Mix 360ZB2K2 • QUEENS LANE - WET Plant

CENTRAL CONCRETE SUPPLY COMPANY

This Environmental Product Declaration (EPD) reports the impacts for 1 m^3 of ready mixed concrete mix, for use in business-to-business (B2B) comunication meeting the following specifications:

- ASTM C94: Ready-Mixed Concrete
- UNSPSC Code 30111505: Ready Mix Concrete
- CSA A23.1/A23.2: Concrete Materials and Methods of Concrete Construction
- CSI Division 03-30-00: Cast-in-Place Concrete

COMPANY

Central Concrete
755 Stockton Ave.
San Jose, CA 95126

PLANT

QUEENS LANE - WET Plant
457 Queens Lane
San Jose, CA 95112

EPD PROGRAM OPERATOR

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428

DATE OF ISSUE

09/19/2024 **(valid for 5 years until 09/19/2029)**

ENVIRONMENTAL IMPACTS

Declared Product:
Mix 360ZB2K2 • QUEENS LANE - WET Plant
Description: 3IN LN 6KSI 1/2" BLEND 50SL 5-7SL CO2
Compressive strength: 6000 PSI at 28 days

Declared Unit: 1 m^3 of concrete (1 cyd)

Global Warming Potential (kg CO_2-eq)	**273 (208)**
Ozone Depletion Potential (kg CFC-11-eq)	**8.90E-6 (6.81E-6)**
Acidification Potential (kg SO_2-eq)	**1.92 (1.47)**
Eutrophication Potential (kg N-eq)	**0.35 (0.27)**
Photochemical Ozone Creation Potential (kg O_3-eq)	**42.9 (32.8)**
Abiotic Depletion, non-fossil (kg Sb-eq)	**4.04E-5 (3.09E-5)**
Abiotic Depletion, fossil (MJ)	**1,023 (782)**
Total Waste Disposed (kg)	**57.6 (44.0)**
Consumption of Freshwater (m^3)	**1.93 (1.47)**

Product Components: natural aggregate (ASTM C33), crushed aggregate (ASTM C33), Portland cement (ASTM C150), slag cement (ASTM C989), batch water (ASTM C1602), admixture (ASTM C494)

Additional detail and impacts are reported on page three of this EPD

A standardized report that discloses a product's Life Cycle Assessment (LCA) – from raw material extraction to end-of-life disposal.

GWP is included in the EPD.

Product-specific: Manufacturer specific assessment for specific product

Industry-wide: Average environmental footprint across multiple manufactures within the industry

We set low-carbon targets using **GWP limits** and use **EPDs to disclose and verify** those values.

Setting Material Standards

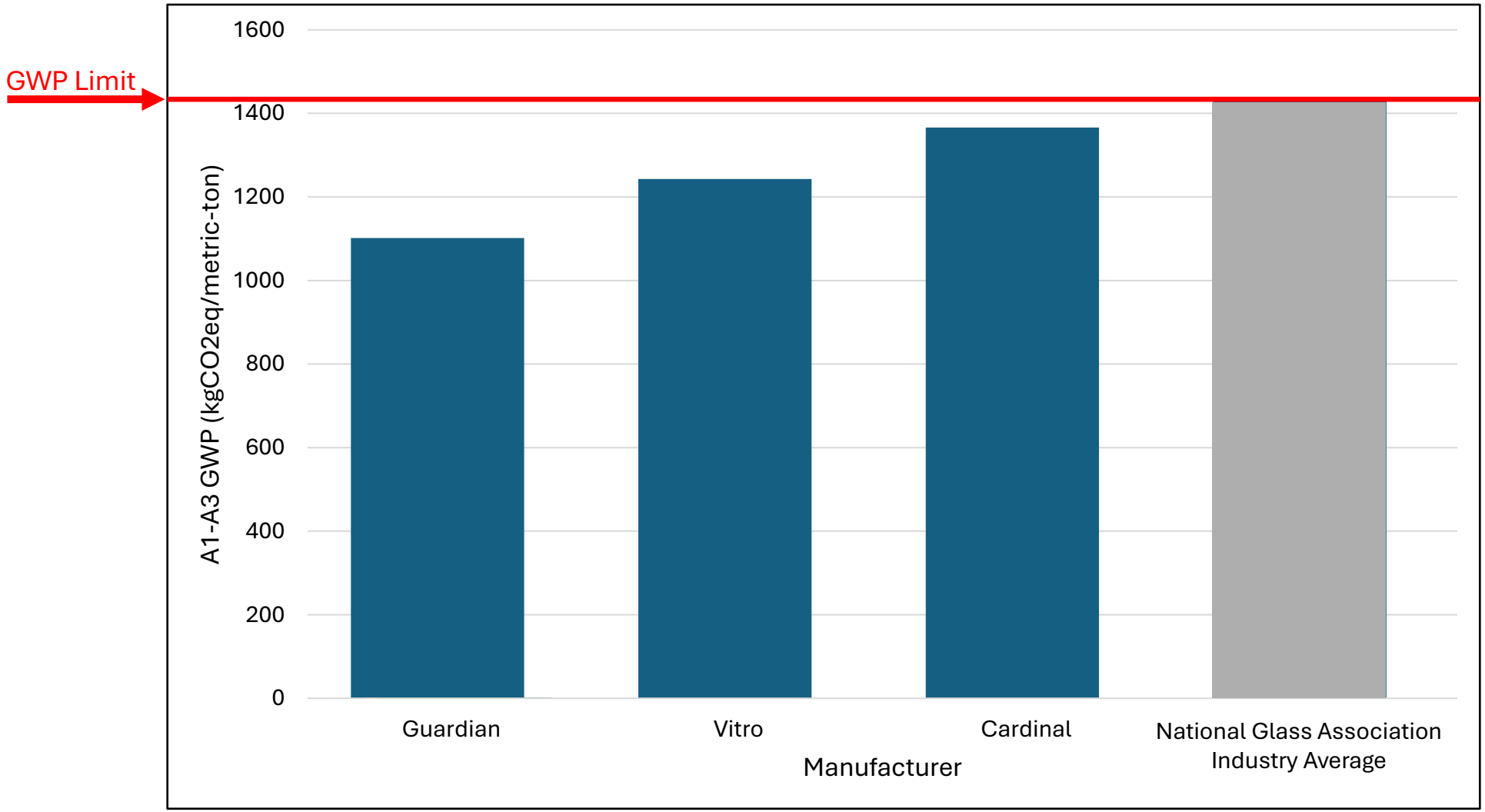
- ✓Align with state and/or local thresholds
- ✓Align with LEED requirements
- ✓Available in the local marketplace
- ✓Preparing for future reach codes

GWP Limits & Compliant Product Availability

Product Type	GWP Limits		Number of Compliant Products, %, and Suppliers
Asphalt	No limit	-	n/a
Flat glass (annealed, uncoated)	1.430	kg CO2e/kg	5 [100%], Vitro, Guardian, Cardinal
CMU	See next slides		
Concrete (cast-in-place)	See next slides		
Concrete (precast)	No limit	-	n/a
Below grade insulation	12.0	kg CO2e/m2 @ RSI-1	7 [70%], Owens Corning, Kingspan, Soprema
Curtainwall spandrel insulation	3.6		17 [17%], Knauf, CertainTeed, Johns Manville, Owens Corning
Exterior continuous insulation	2.2		57 [77%], GAF, Kingspan, Owens Corning, DuPont
Exterior stud wall cavity insulation	7.9		56 [87.5%], Owens Corning, Knauf
Roof insulation	8.5		47 [76%], Owens Corning, Aeroflex, Saudi Rock Wool, DuPont, GAF
Hot-rolled structural steel sections	1.25	kg CO2e/kg	14 [82%], Nucor, Gerdau, Steel Dynamics
Hollow structural sections	2.14		34 [68%], Nucor, Mariuchi, Atlas Tube, Alliance, Bull Moose Tube
Steel plate	1.84		11 [52%], Nucor, Alliance Steel Fabrication, Cleveland-Cliffs
Steel deck	2.90		27 [96%], Nucor, Canam, New Millennium, AEP Span, ASC Steel Deck
Rebar	0.94		4 [80%], Nucor, Cascade, Gerdau

Flat Glass: Manufacturers Comparison

Annealed, Un-Coated



Low-Carbon Concrete

Cast-in-place

Table of Concrete GWP Limits		
Minimum specified compressive strength f'_c (psi) at X days[1]	GWP Limit kg CO2e/m3	EPD count [% compliant]
up to 2500	260	152 [43%]
3000	289	837 [55%]
4000	313	1,405 [51%]
5000	338	1,683 [52%]
6000	356	573 [43%]
7000	394	160 [44%]
7500 and above	433	124 [60%]
up to 3000 LW	578	66 [97%]
4000 LW	626	169 [96%]
4500 LW and above	675	44 [98%]

Suppliers:

- Central
- Cemex
- GraniteRock

Concrete Masonry Unit (CMU)

CMU GWP is based on the assembly, which includes block and grout.

This means that by picking a low embodied carbon block, contractors may have more options available to pick from when looking for grout, and vice versa.

CMU GWP = (%Block in assembly * Block GWP) + (%Grout in assembly * Grout GWP)

%Block in assembly = 1- %Grout in assembly

Excludes rebar, mortar, and misc materials

Insulation

Five unique categories of insulation

Categories per IBC	Industry-wide Benchmark	Roof insulation	Ext continuous insulation	Ext stud wall cavity insulation	Curtainwall spandrel insulation	Below grade
	kg CO2e/m2 @ RSI-1					
Light density mineral wool (assuming batt)	2.68			x	x	
Heavy-density mineral wool (assuming board)	6.82	x	x		x	
EPS Type I	2.53	x	x			x
Polyiso - wall	4.1		x			x
Polyiso - roof - GRF facer	2.11	x	x			
Polyiso - roof - CFG facer	2.95	x	x			
XPS⁺	22.26	x	x			x
Fiberglass board	5.02					
Fiberglass blanket unfaced	1.01			x	x	
Fiberglass blanket faced	1.06			x	x	
Closed cell spray polyurethane foam - medium density	3.47		x	x		
Closed cell spray polyurethane foam - roofing	4.05	x				
Closed cell spray polyurethane foam - 2K-LP	3.12			x		
Open-cell spray polyurethane foam	1.05			x		
Loose-fill cellulose	0.487			x		
Loose-fill mineral wool	1.89			x		
Loose-fill fiberglass	0.988			x		
Phenolic foam	3	*	*			*
Timber board	-8.5	*	*	*		
Loose fill timber	1.52			*		
	Average	6.8	6.3	1.8	2.9	9.6
	125% over	**8.5**	**7.9**	**2.2**	**3.6**	**12.0**

⁺GWP from CLF Material Baseline Report due to lack of industry average EPD

Legend

x *Product is applicable to this category and is used in determining average GWP*

* *Product is applicable to this category but is NOT used in determining average GWP*

GWP avg. based on relevant insulation types

01 81 14 Low Carbon Materials

PART 1 - GENERAL

- 1.1 Summary
- 1.2 References
- 1.3 Definitions
- 1.4 Design Builder's Responsibilities
- 1.5 Low Carbon Materials Requirements – *what is included in submittals, when to submit compliance forms, documentation requirements (EPDs)*

PART 2 - PRODUCTS

- 2.1 Covered products (GWP reporting vs GWP limits) – *Includes quantity minimums*

The following sections provide GWP limits for each material and any other guidance:

- 2.2 Concrete
- 2.3 Concrete Masonry Unit
- 2.4 Flat glass
- 2.5 Insulation
- 2.6 Steel

ATTACHMENTS:

Low Carbon Materials Compliance Form

ACRONYMS:

EPD: Environmental Product Declaration

GWP: Global Warming Potential

WWR: Window to Wall Ratio

PROPOSED PROJECT TIMELINE: Low Carbon Materials

AGENCY ISSUES RFP → **DESIGN BUILDER (PRIME)** → **SUBCONTRACTORS**

- Set minimum performance requirements for using low embodied carbon construction materials
- Include in RFP a template Low Carbon Materials Compliance Form for use by Prime and subcontractors

- Make a plan for meeting the requirements and identify potential suppliers
- Incorporate GWP limits and reporting requirements into the technical specifications
- Complete a draft of the Preliminary Compliance Check on the Low Carbon Materials Compliance Form

- Source products meeting the minimum performance spec
- Submit the Low Carbon Materials Compliance Form within 30 days of bid award for compliance check before proceeding
- Within 6 weeks of completion of all work with covered materials, submit the final Form and EPDs for each product used

PRELIMINARY COMPLIANCE CHECK								AS-BUILT COMPLIANCE CHECK				
Mix name	Design strength, f'c **per spec** (psi)	Early strength?	GWP Limit **per Code** ($kgCO_2e/m^3$)	Used for (e.g. foundation, retaining wall, shotcrete, etc.)	Volume Estimated (cyd)	Link to EPD	Max GWP **per spec** ($kgCO_2e/m^3$)	Volume Supplied (cyd)	Concrete Supplier Name	Concrete Batch Code	Link to EPD	GWP **reported on EPD** ($kgCO_2e/m^3$)
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(12)*	*(7)*	*(8)*	*(9)*	*(10)*	*(12)*	*(11)*
A	*4000*	*Y*	*407*	*Foundation*	*35*		*290*	*37*	*ABC*	*1234*		*268*
			0				0	0				0
			0				0	0				0

Prime contractor completes draft with assumed quantities and potential materials during design

Sub-contractor updates final product information within 30 days of contract award; submits EPDs

Sub-contractor completes As-Built information within 6 weeks after construction; submits EPDs

PRELIMINARY COMPLIANCE CHECK								AS-BUILT COMPLIANCE CHECK				
Mix name	Design strength, f'c **per spec** (psi)	Early strength?	GWP Limit **per Code** ($kgCO_2e/m^3$)	Used for (e.g. foundation, retaining wall, shotcrete, etc.)	Volume Estimated (cyd)	Link to EPD	Max GWP **per spec** ($kgCO_2e/m^3$)	Volume Supplied (cyd)	Concrete Supplier Name	Concrete Batch Code	Link to EPD	GWP **reported on EPD** ($kgCO_{2e}/m^3$)
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(12)*	*(7)*	*(8)*	*(9)*	*(10)*	*(12)*	*(11)*
A	*4000*	*Y*	*407*	*Foundation*	*35*		*290*	*37*	*ABC*	*1234*		*268*
			0				0	0				0
			0				0	0				0

Q & A

Questions for you

- Is this a viable approach for you to use low-carbon materials on your municipal construction projects?

- Is this helpful for you as a starting point? What else might you need to get started?

Break

Material Reuse and Deconstruction Performance Specification

Material Reuse

Onsite Reuse Pathways

1. Deconstruction instead of demolition

Offsite Reuse Pathways

2. From a different location by same owner
3. Furnished by the contractor or subcontractor
4. Purchased at reuse warehouse or outlet
5. Sourced by a full-service reclaimed material supplier

Minimum requirements

1. Create a plan for incorporating reclaimed materials into the project and, if deconstruction of an existing building is part of the project, a plan for deconstruction.
2. Document a minimum of 15% reuse of one material type or a combination of material types.

LIVING BUILDING CHALLENGE℠

Targeted material types

Material type	Unit
Carpeting	Surface area
Ceilings	Surface area
Furniture (ancillary and systems)	Pieces, weight, volume, or floor area
Interior walls	Linear or surface area
Dimensional lumber	Board foot or linear
Doors	Count
Casework	Linear
Floor-covering materials (not including carpet)	Surface area
Lighting fixtures	Count
Plumbing fixtures	Count
Mechanical equipment	Count
Door hardware	Count

15% Minimum Material Reuse Requirement Example
If there are 100 doors on a project, this requirement could be met by sourcing 15 of the doors from reclaimed sources.

Or, could source 10% of the doors from reclaimed sources, and 5% of the carpeting (by area).

Market availability

All Material Types

- The Reuse People – Oakland
- Building ReSources - San Francisco
- Bay Area Reuse Marketplace (Rheaply) – Online
- Salvage from the deconstruction of an existing building

Dimensional Lumber

- Lumber Baron – Albany/Richmond
- Pacific Reclaimed Lumber – Online marketplace

Furniture

- Reseat – San Jose, online ordering
- Formr – San Francisco

01 95 00 Material Reuse

PART 1 – GENERAL

- 1.1 Summary
- 1.2 References
- 1.3 Definitions – *Define types of material reuse*
- 1.4 Design Builder's responsibilities
- 1.5 Material Reuse Requirements – *Describe required submittals (Material Reuse & Decon Plan + Min Material Reuse Worksheet), product performance requirements*

PART 2 – PRODUCTS

- 2.1 On-site material reuse – *Products identified in the Pre-audit shall be considered for on-site material reuse*
- 2.2 Off-site material reuse – *List of suggested products to consider for off-site reuse and organizations to contact*
- 2.3 Minimum Material Reuse Requirement – *Achieve at least one LEED point for Building & Material Reuse Credit; or demonstrate reuse of at least 15% for one material type (or a combination).*

ATTACHMENTS:

Deconstruction Pre-Audit (Provided by County)

Material Reuse and Deconstruction Plan Template & Minimum Material Reuse Worksheet (both provided in one Excel sheet)

PROPOSED PROJECT TIMELINE: Material Reuse

AGENCY ISSUES RFP → **DESIGN BUILDER (PRIME)** → **SUBCONTRACTORS**

- If there is an existing building within project scope, the County provides the results of a Deconstruction Pre-Audit (details on materials in the building that could be reused)

Deconstruction Pre-Audit Template: Completed form is provided in RFP

Date:
Project:

Consider: structure, concrete, interior finishes, shelving, lighting, interior doors, interior glass, site finishes, landscape materials, plantings, anything else

Item / type	Quantity # or estimated LF or volume	Condition excellent, good, damaged, other	Current location	Photo? y/n	Photo location	Total Weight	Description of material handling needs

PROPOSED PROJECT TIMELINE: Material Reuse

AGENCY ISSUES RFP → **DESIGN BUILDER (PRIME)** → **SUBCONTRACTORS**

- If there is an existing building within project scope, the County provides the results of a Deconstruction Pre-Audit (details on materials in the building that could be reused)

- Design Builder develops the Material Reuse and Deconstruction Plan and Minimum Material Reuse Worksheet and submits it at 90% SD (acknowledgement), 90% DD, and 90% CD.
- Design Builder modifies technical specifications as needed to allow for material reuse and ensure quality control.

- Material Reuse and Deconstruction Plan is shared with subs and DBE monitors performance.

Material Reuse and Deconstruction Plan: For sourcing salvaged materials (Paths 1-5) or deconstructing materials in existing building (Paths 6-7)

Product Category	Item	Photo	Path	Current location	Storage location	New install location	Current condition	Scope of work	Entity to receive + contact information	Comments	LEED credit contribution	Pre-purchase notes	Contractor Responsibilities
			(1)				(2)	(3)		(4)	(5)	(6)	(7)
Casework	*Kitchen Cabinets*		*Path 1 – Sourced from deconstruction at same location*	*Unit #1 kitchen*	*[TBD decon contractor]*	*Community room*	*Good, fully functional, minor nicks in face frame*	*Clean all surfaces, install new hardware*					*Deconstruct, store, improve/adapt, install*
			Path 2 – Reuse by Owner source from different location (e.g. campus)										Improve/adapt, and install (as needed)
			Path 3 – Reclaimed product or material furnished by Contractor										Improve/adapt, install (as needed)
			Path 4 – Reclaimed product from reuse warehouse or outlet										Improve/adapt, install (as needed)
			Path 5 – Reclaimed product provided by full-service supplier										Install (as needed)
			Path 6 – Deconstruction contractor removes material										Deconstruct and remove from site (as needed)
			Path 7 – Deconstruct and prepare for manufacturer take-back										Deconstruct (as needed) and palletize for shipm pickup (as needed)

PROPOSED PROJECT TIMELINE: Material Reuse

AGENCY ISSUES RFP → DESIGN BUILDER (PRIME) → SUBCONTRACTORS

- If there is an existing building within project scope, the County provides the results of a Deconstruction Pre-Audit (details on materials in the building that could be reused)

- Design Builder develops the Material Reuse and Deconstruction Plan and Minimum Material Reuse Worksheet and submits it at 90% SD (acknowledgement), 90% DD, and 90% CD.
- Design Builder modifies technical specifications as needed to allow for material reuse and ensure quality control.

- Material Reuse and Deconstruction Plan is shared with subs and DBE monitors performance.
- Submit as-built Minimum Material Reuse Worksheet after installation of all salvaged materials.

Minimum Material Reuse Worksheet: Documents a minimum of 15% reuse of one material type (or a combination up to 15%)

			FOR 90% DD SUBMISSION			FOR 90% CD SUBMISSION			FOR AS-BUILT SUBMISSION		
Material Type	If Material Type is "Other", define here	Units	Total material quantity on project	Material quantity from reused sources	Percent reused	Total material quantity on project	Material quantity from reused sources	Percent reused	Total material quantity on project	Material quantity from reused sources	Percent reused
	(1)	(2)									
Carpeting			110	10	9%	90	15	17%	90	15	17%
Plumbing fixtures			100	10	10%	100	5	5%	100	5	5%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
					0%			0%			0%
				Total percent reused	19%		Total percent reused	22%		Total percent reused	22%
				Required percent reused	15%		Required percent reused	15%		Required percent reused	15%
				In compliance?	Yes		In compliance?	Yes		In compliance?	Yes

Q & A

Questions for you

- Is this a viable approach for you to use low-carbon materials and reused materials on your municipal construction projects?

- Is this helpful for you as a starting point? What else might you need to get started?

Breakouts

- Please select the group most aligned with your role –
- **Room 1 for Sustainability Professionals,**
- **Room 2 for A&E/Project Teams.**

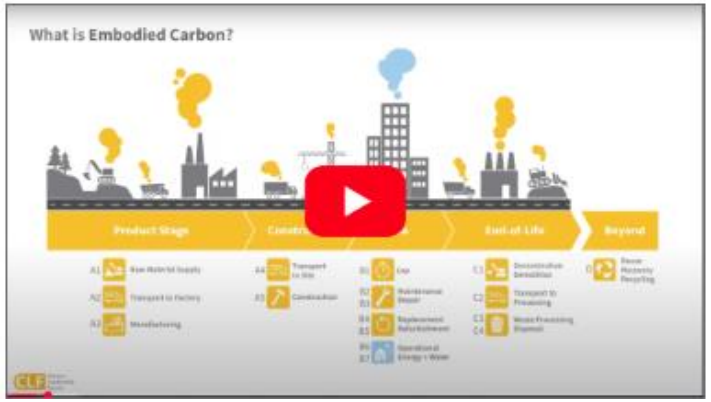
Report Out

- How are the specs aligned with or useful to your process?
- What are some possible changes your group proposed?
- Who are some potential partners?
- What are some potential next steps?

Resources

Embodied-Carbon Videos

- Carbon Leadership Forum:
  - https://carbonleadershipforum.org/
  - https://carbonleadershipforum.org/embodied-carbon-video-training-series/
- BuildWell Project:
  - https://buildwell.site/



Low-carbon Materials Additional Resources

Policies:

- Buy Clean California Act
- Embodied Carbon Policy Tracking Map
- Low Carbon Concrete Code | StopWaste - Home, Work, School

General Guides*

- Carbon Smart Materials Palette – Actions for reducing embodied carbon at your fingertips
- City of Nelson - Materials Guide Final
- EC3 – EPD Database

*Any specific GWP values may be outdated since manufacturers are always changing (and mostly improving!) their products.

Alameda County SUSTAINABILITY
Local Action, Global Impact.

Material Reuse Additional Resources

- Hennepin County, MN – Project Managers Guide to Material Reuse in Commercial Buildings
- All for Reuse – Resources and Bay Area Owners' Alliance working group calls for the public and private sector
- Circular Buildings Toolkit – Resources produced by Arup
- Build Reuse – National non-profit supporting communities on reuse
- StopWaste Projects Supporting Reuse: Contact Heather Larson
  - Construction Materials Working Group for local jurisdictions
  - No-cost salvage assessments for municipal projects

Alameda County SUSTAINABILITY
Local Action, Global Impact.

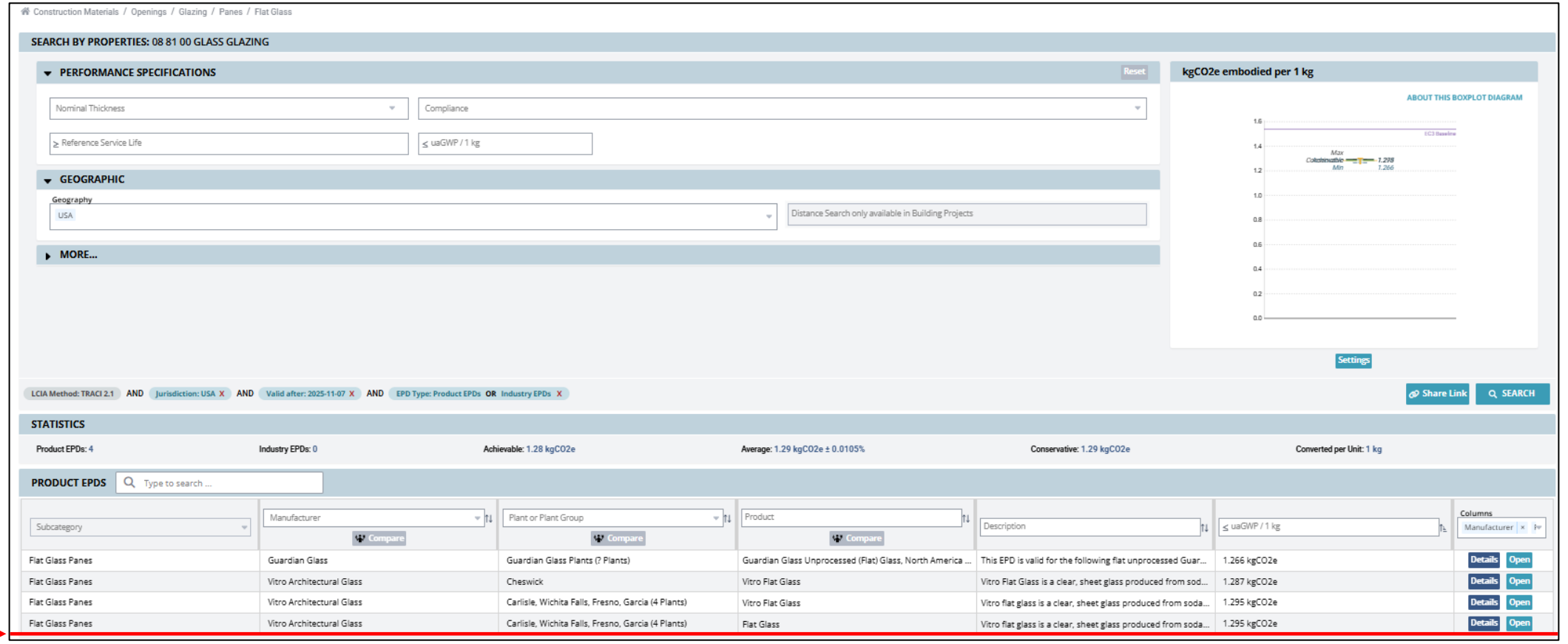
Thank You!

Please fill out our 2-minute evaluation
(and join for future roundtables!)

Appendix

Availability of Compliant Products for each Material Category

Flat Glass

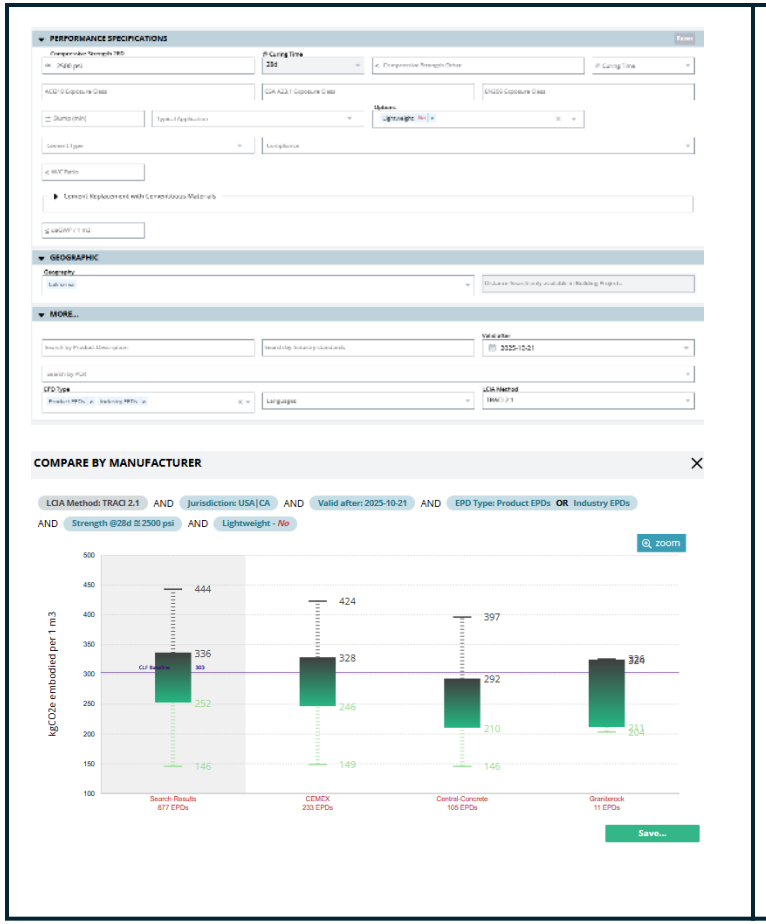


GWP Limit

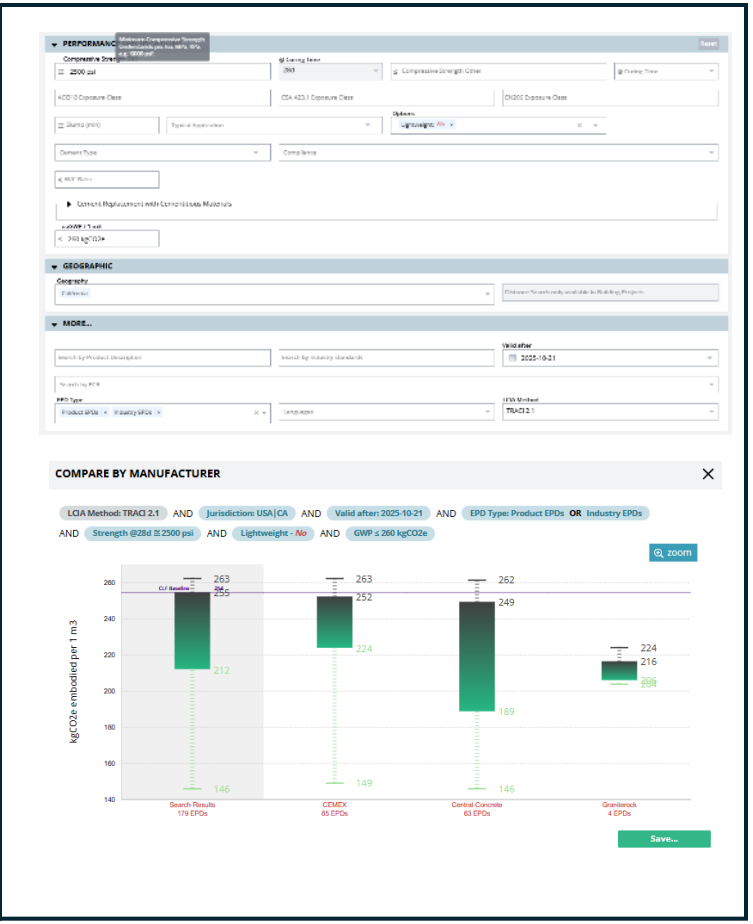
Concrete: ~=2,500 psi, 260 kgCO2e

- Compliant Products: 152
- Total Products: 349

Compliance % = 43.5%



Total Products

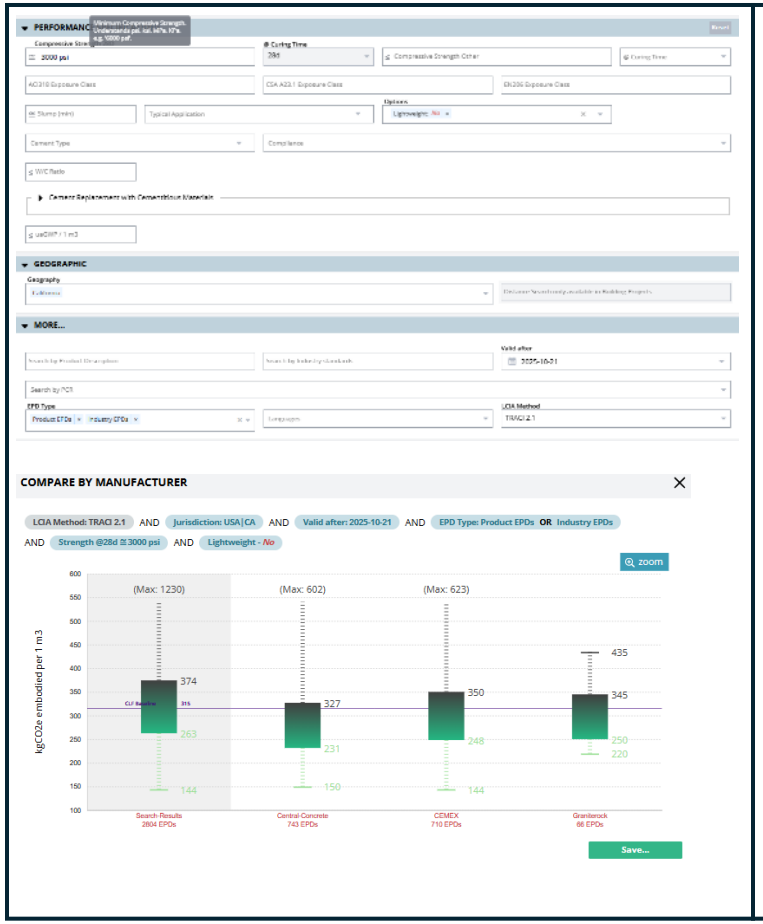


Compliant Products

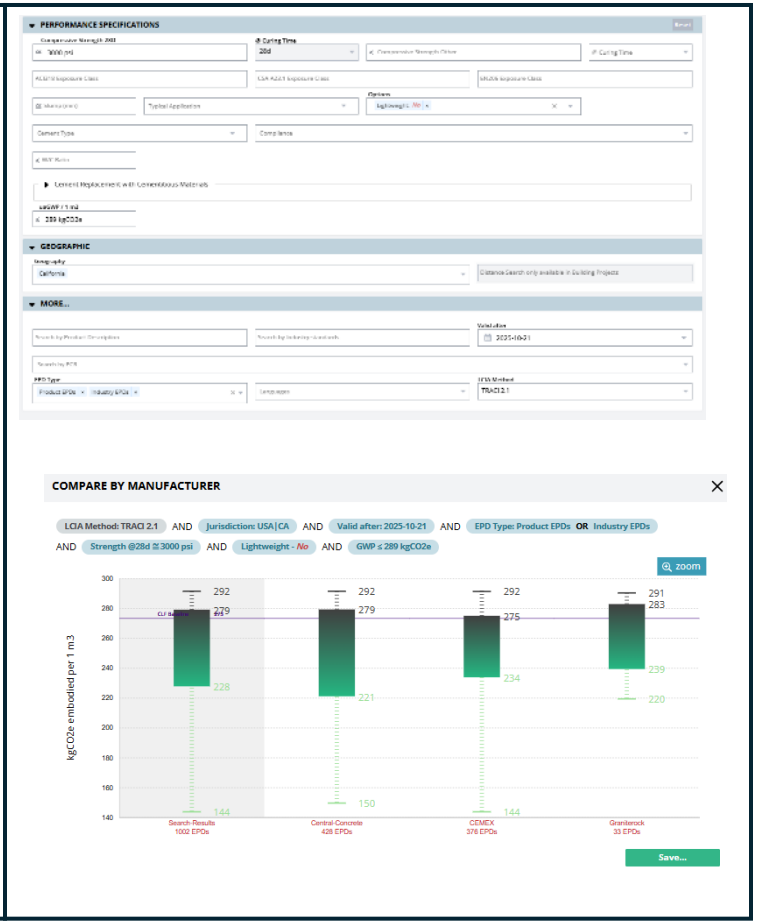
Concrete: ~=3,000 psi, 289 kgCO2e

- Compliant Products: 837
- Total Products: 1,519

Compliance % = 55%



Total Products

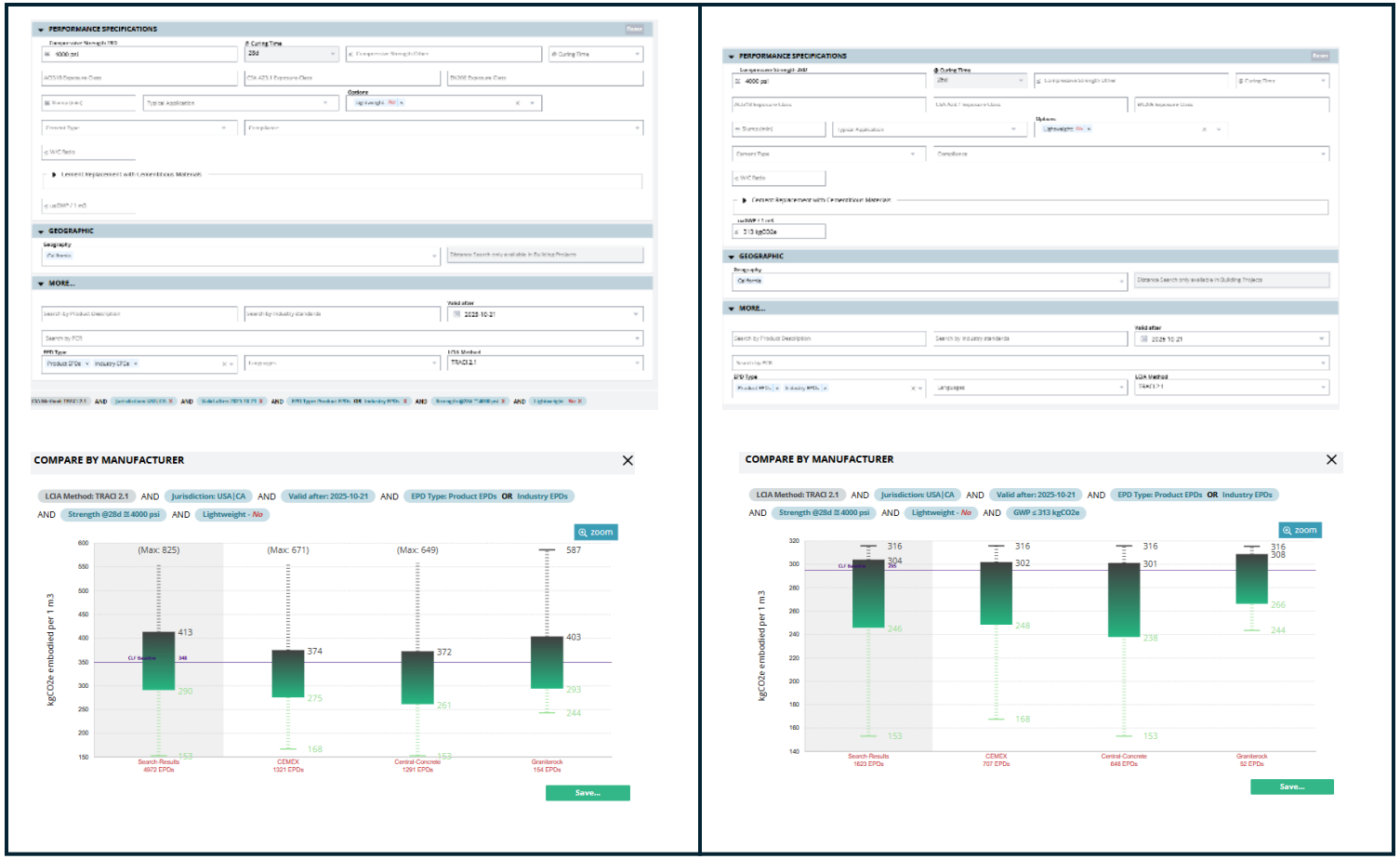


Compliant Products

Concrete: ~=4,000 psi, 313 kgCO2e

- Compliant Products: 1,405
- Total Products: 2,766

Compliance % = 50.8%



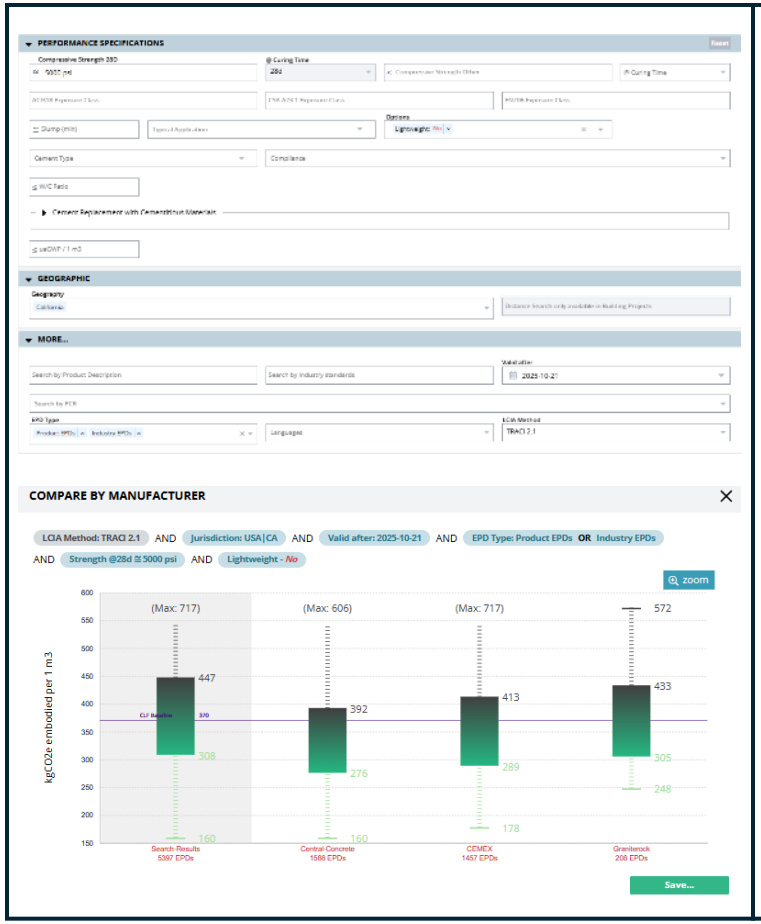
Total Products

Compliant Products

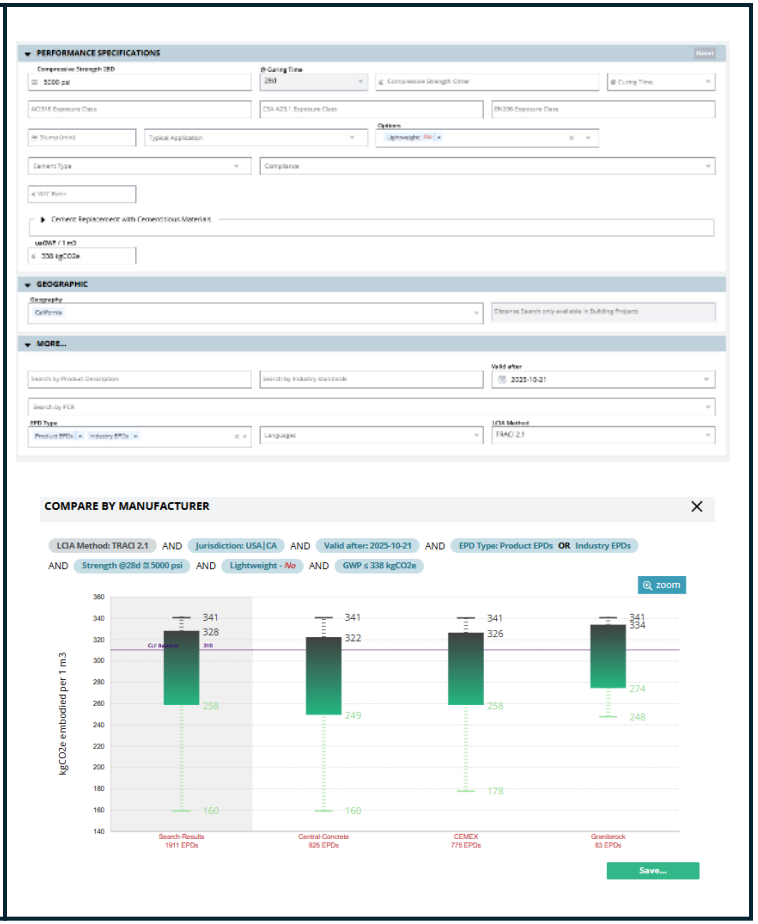
Concrete: ~=5,000 psi, 338 kgCO2e

- Compliant Products: 1,683
- Total Products: 3,253

Compliance % = 51.7%



Total Products



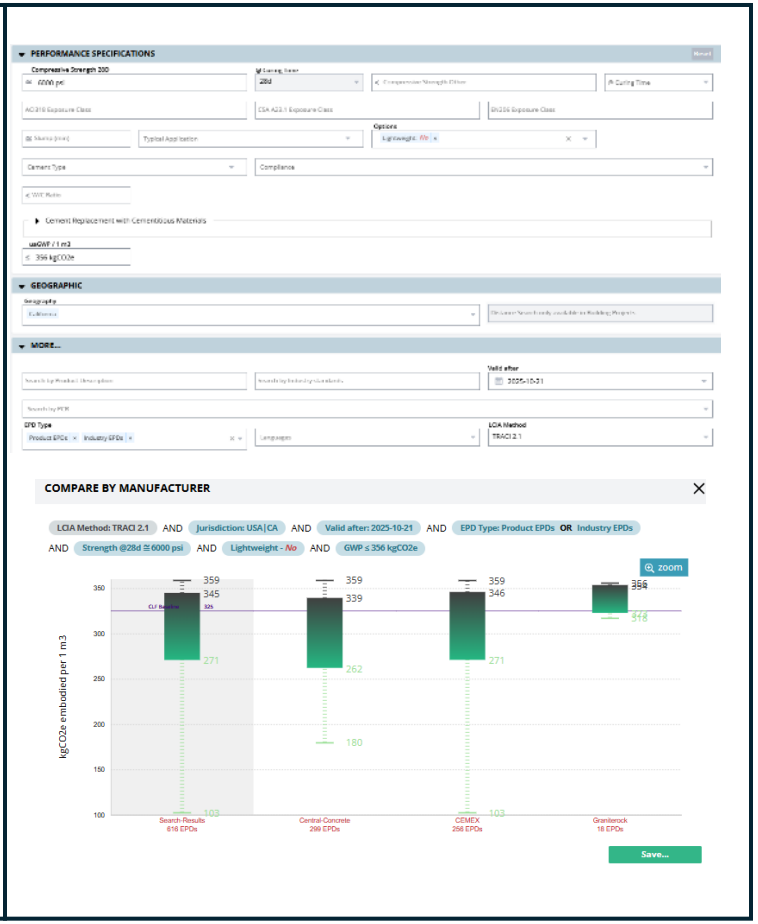
Compliant Products

Concrete: ~=6,000 psi, 356 kgCO2e

- Compliant Products: 573
- Total Products: 1,347

Compliance % = 42.5%

Total Products

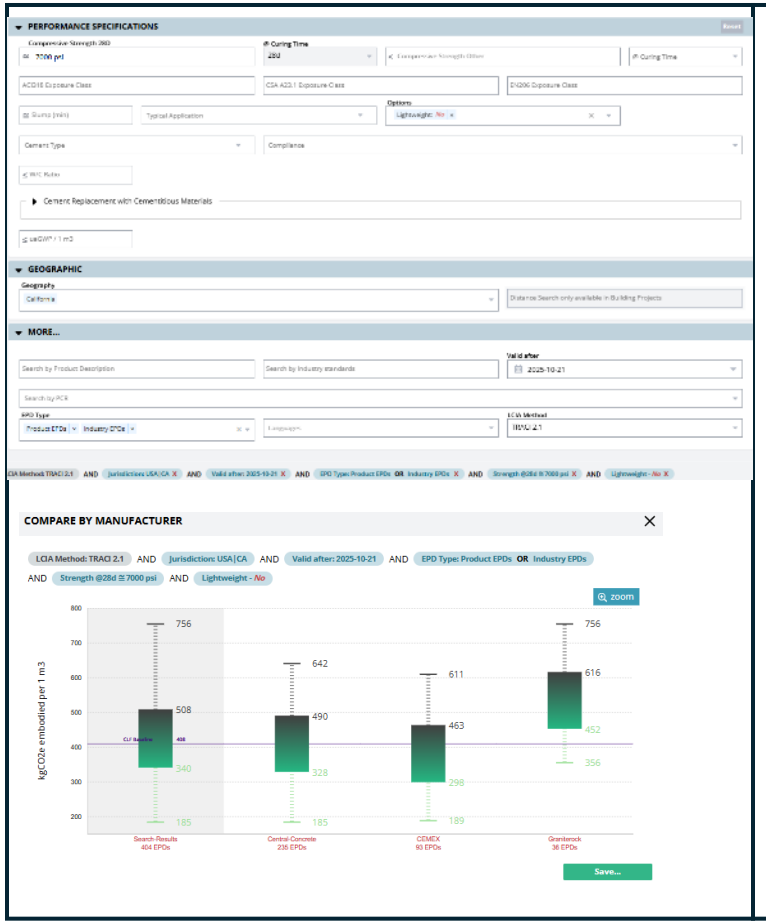


Compliant Products

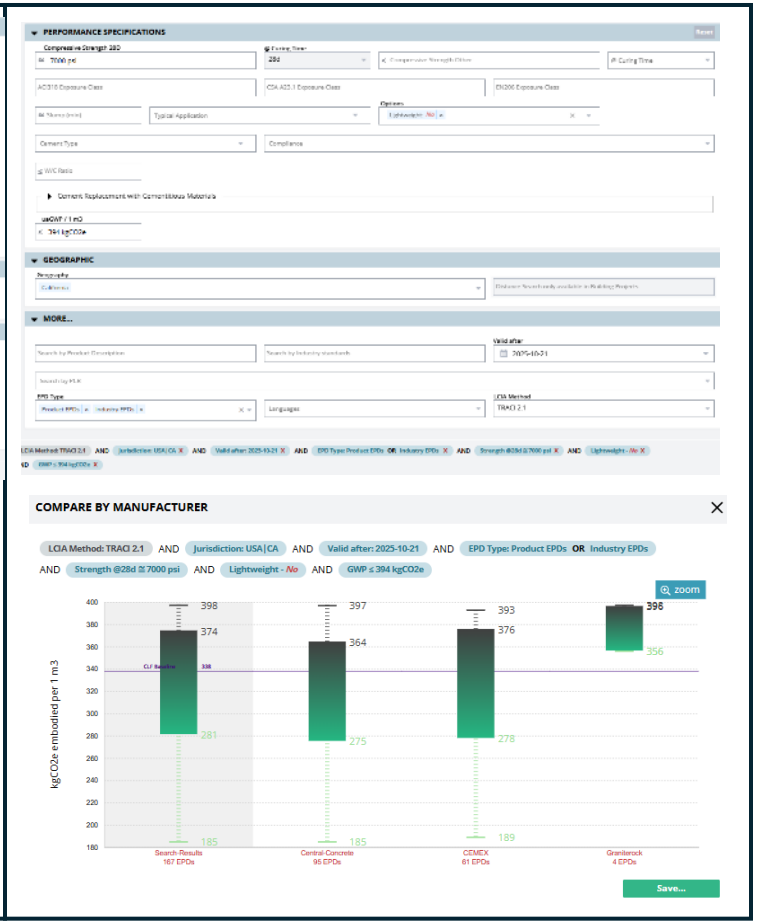
Concrete: ~=7,000 psi, 394 kgCO2e

- Compliant Products: 160
- Total Products: 364

Compliance % = 44%



Total Products

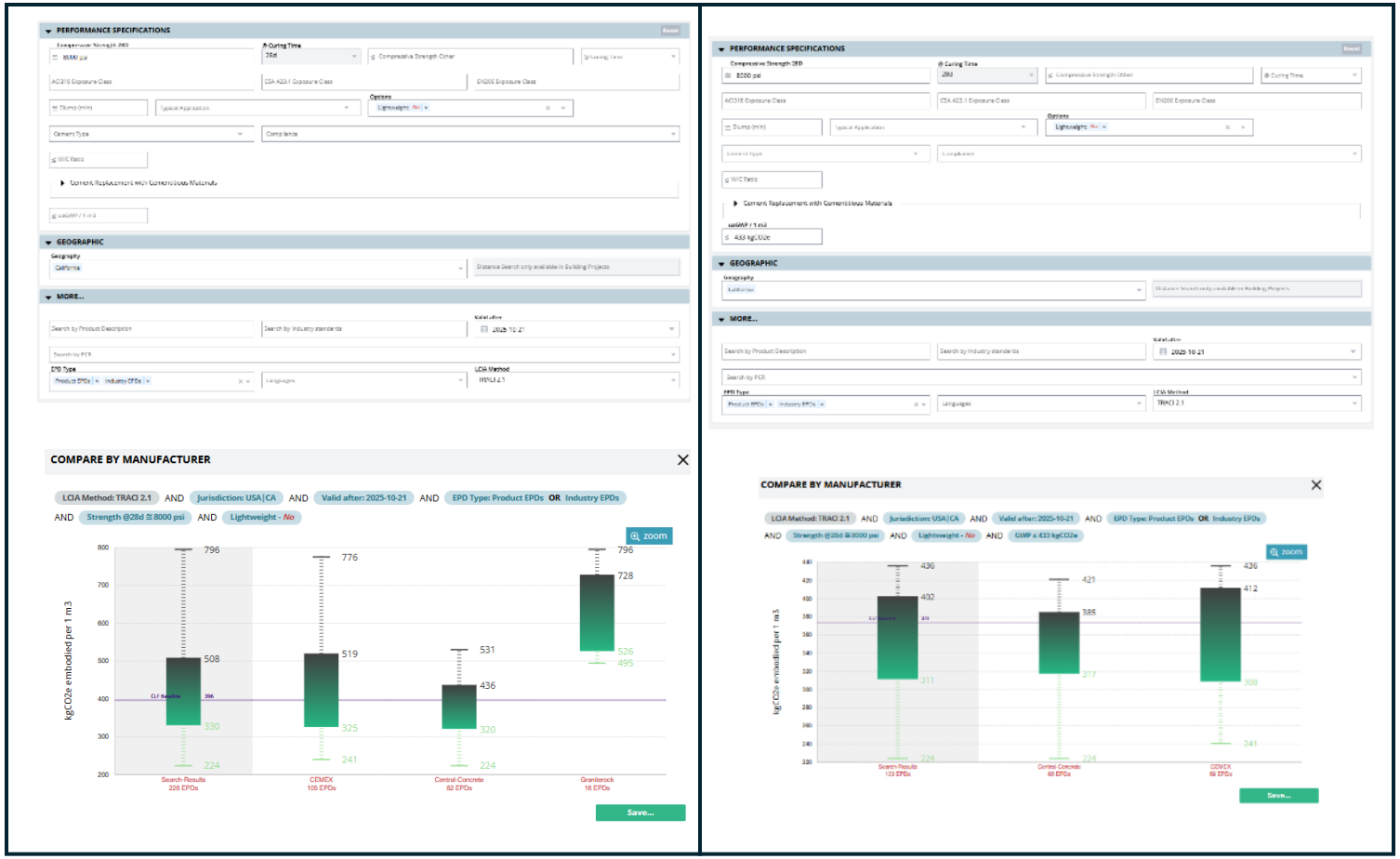


Compliant Products

Concrete: >7,500 psi, 433 kgCO2e

- Compliant Products: 124
- Total Products: 205

Compliance % = 60%



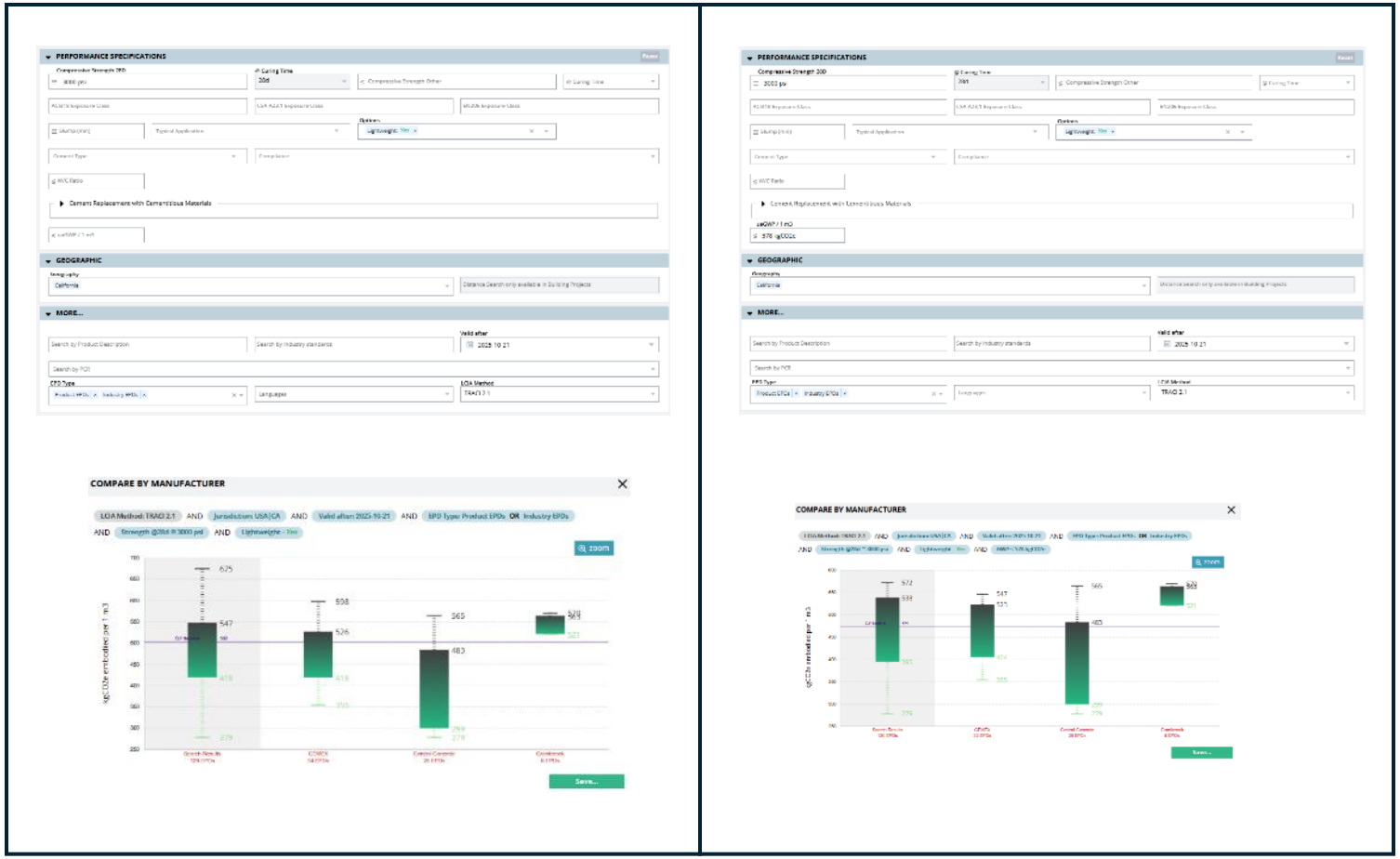
Total Products

Compliant Products

Concrete: >3,000 psi LW, 578 kgCO2e

- Compliant Products: 66
- Total Products: 68

Compliance % = 97%



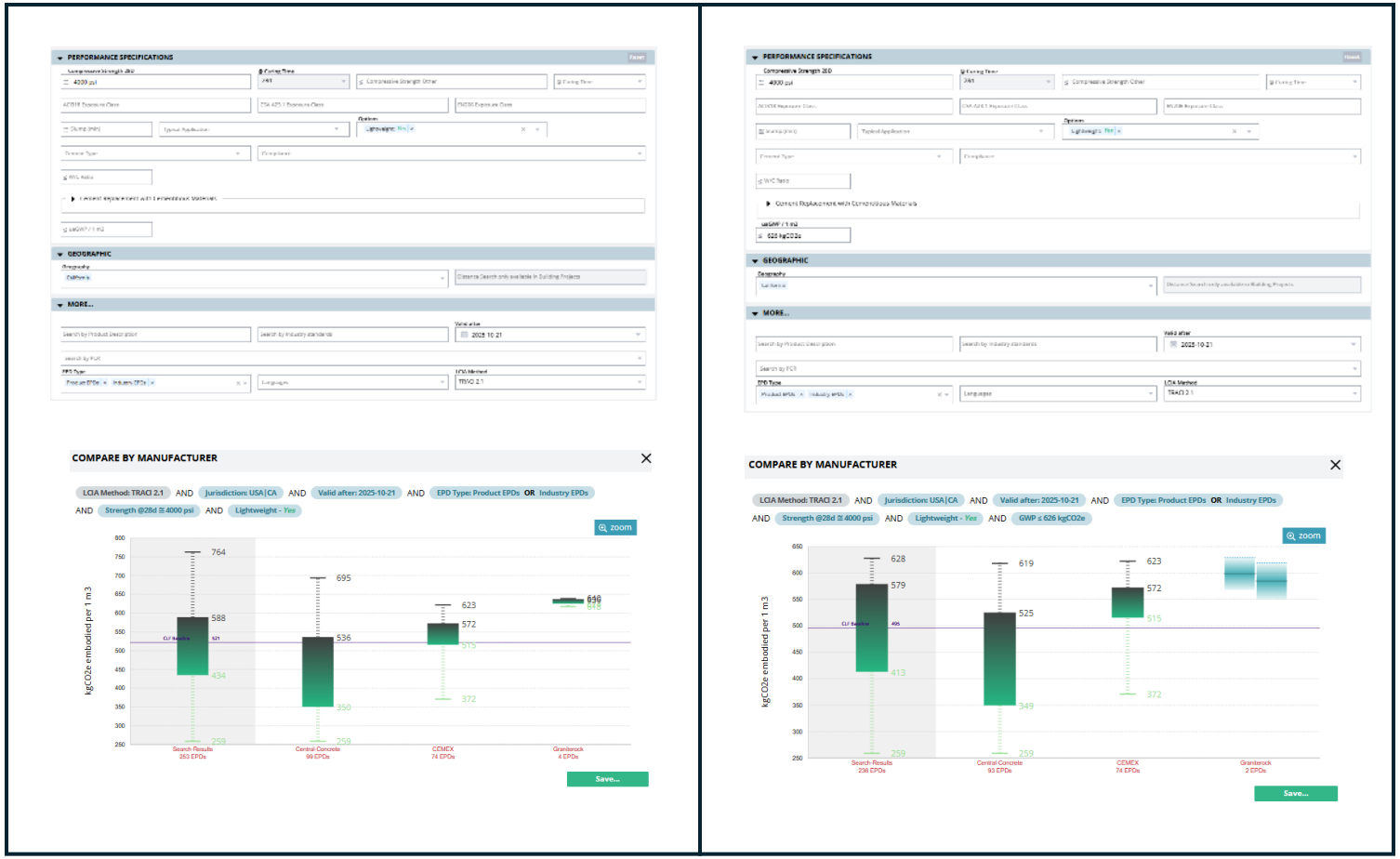
Total Products

Compliant Products

Concrete: >4,000 psi LW, 626 kgCO2e

- Compliant Products: 169
- Total Products: 177

Compliance % = 95.4%



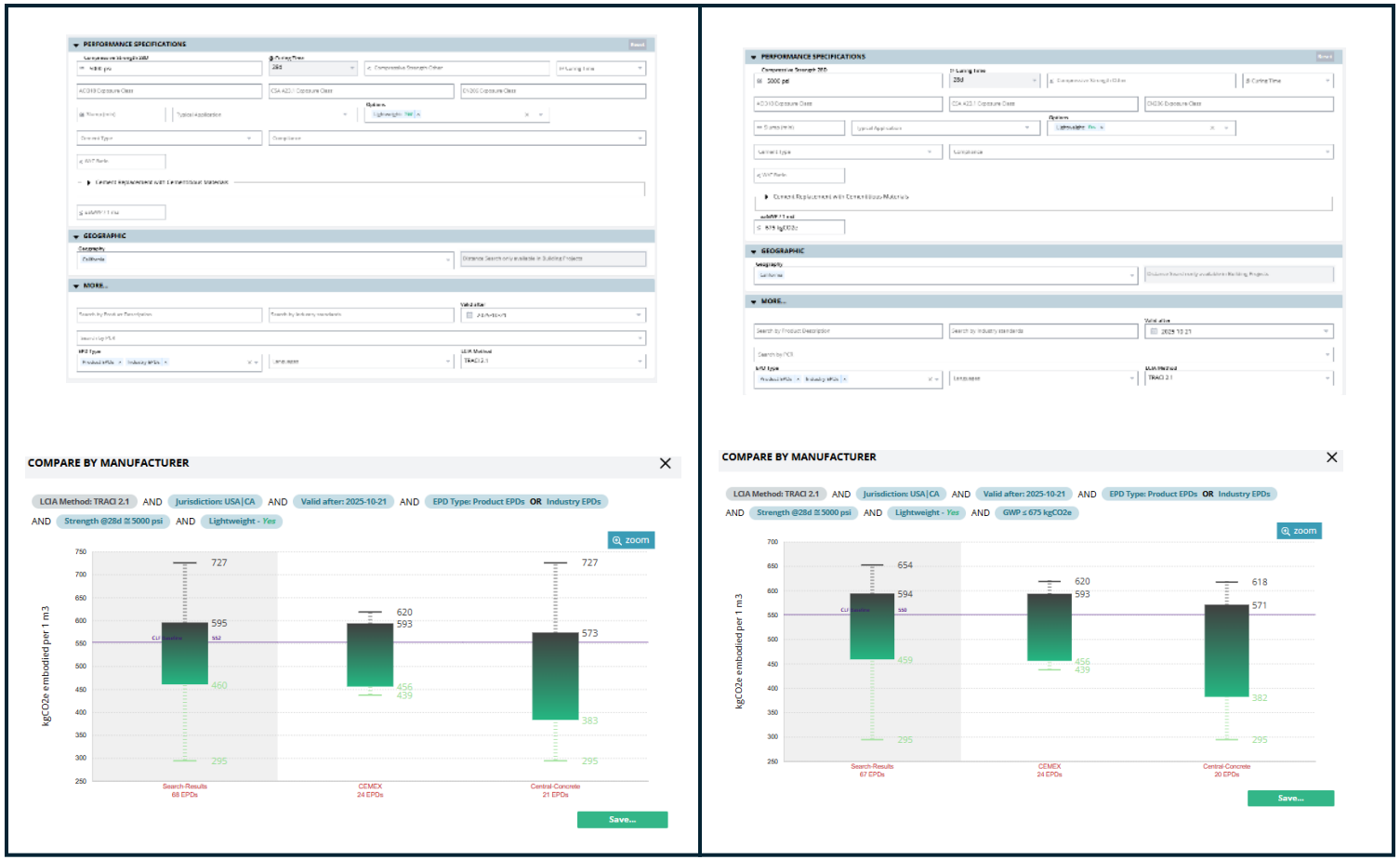
Total Products

Compliant Products

Concrete: >4,500 psi LW, 675 kgCO2e

- Compliant Products: 44
- Total Products: 45

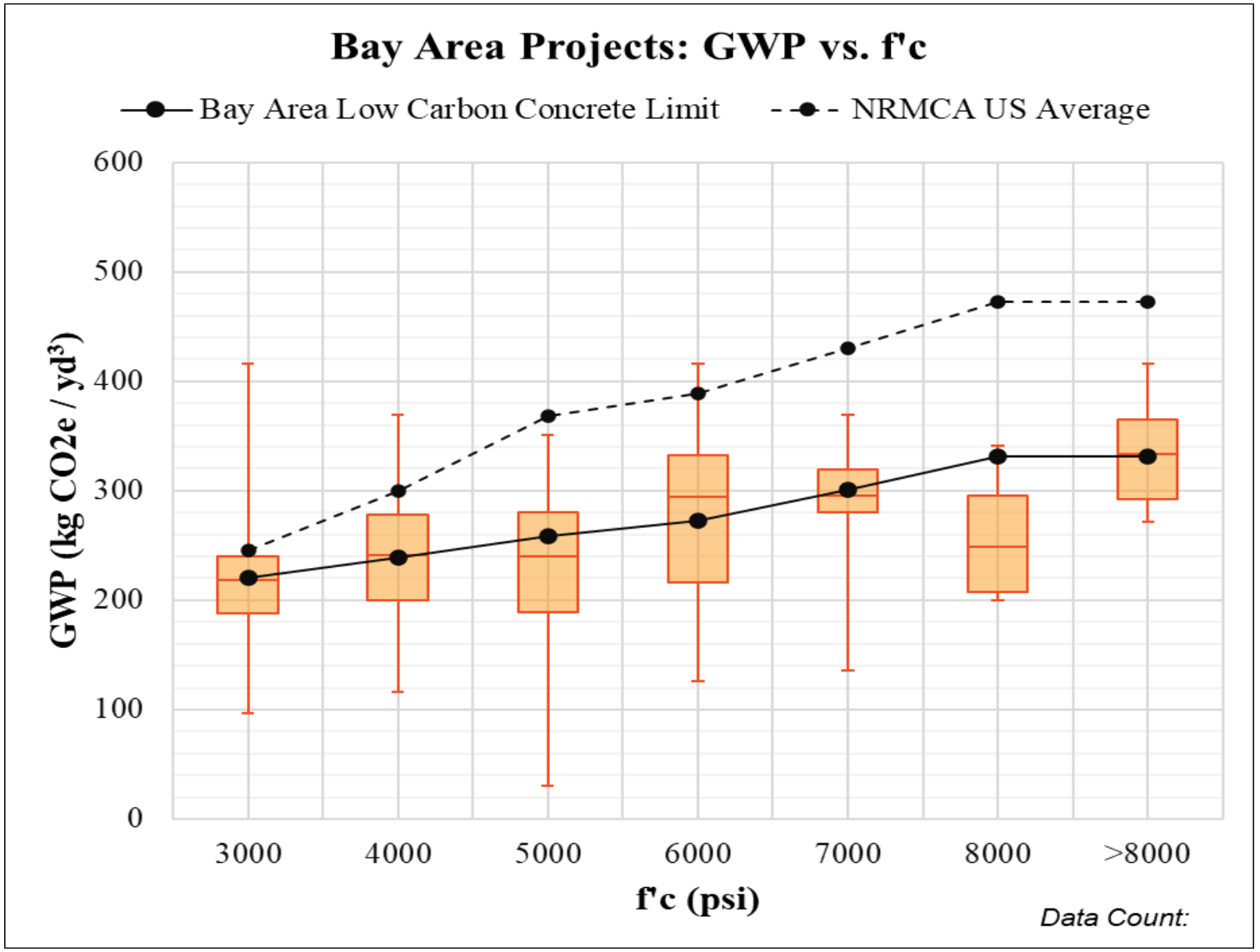
Compliance % = 97.7%



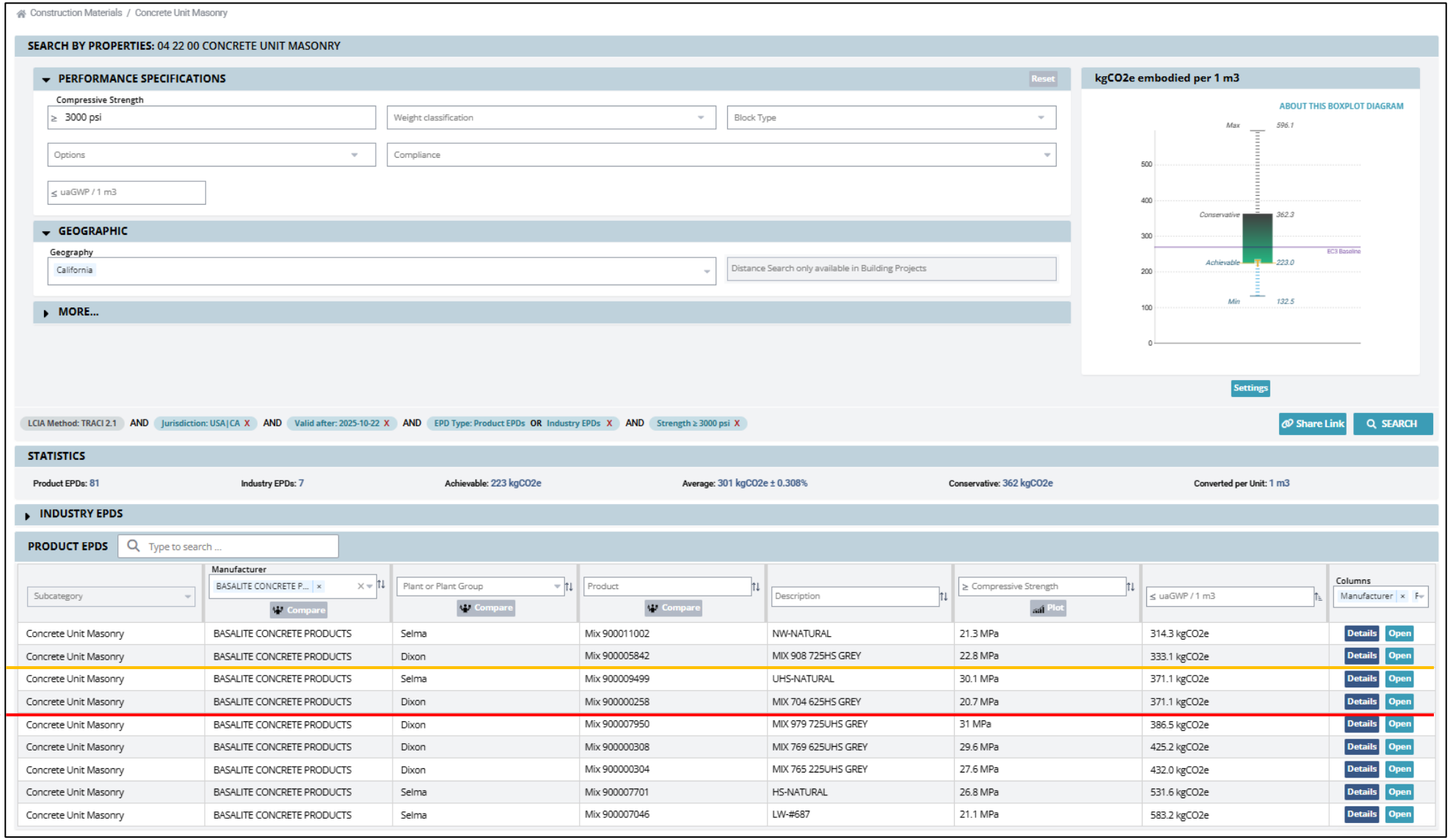
Total Products

Compliant Products

Low Carbon Concrete Limit: Bay Area vs. National Average



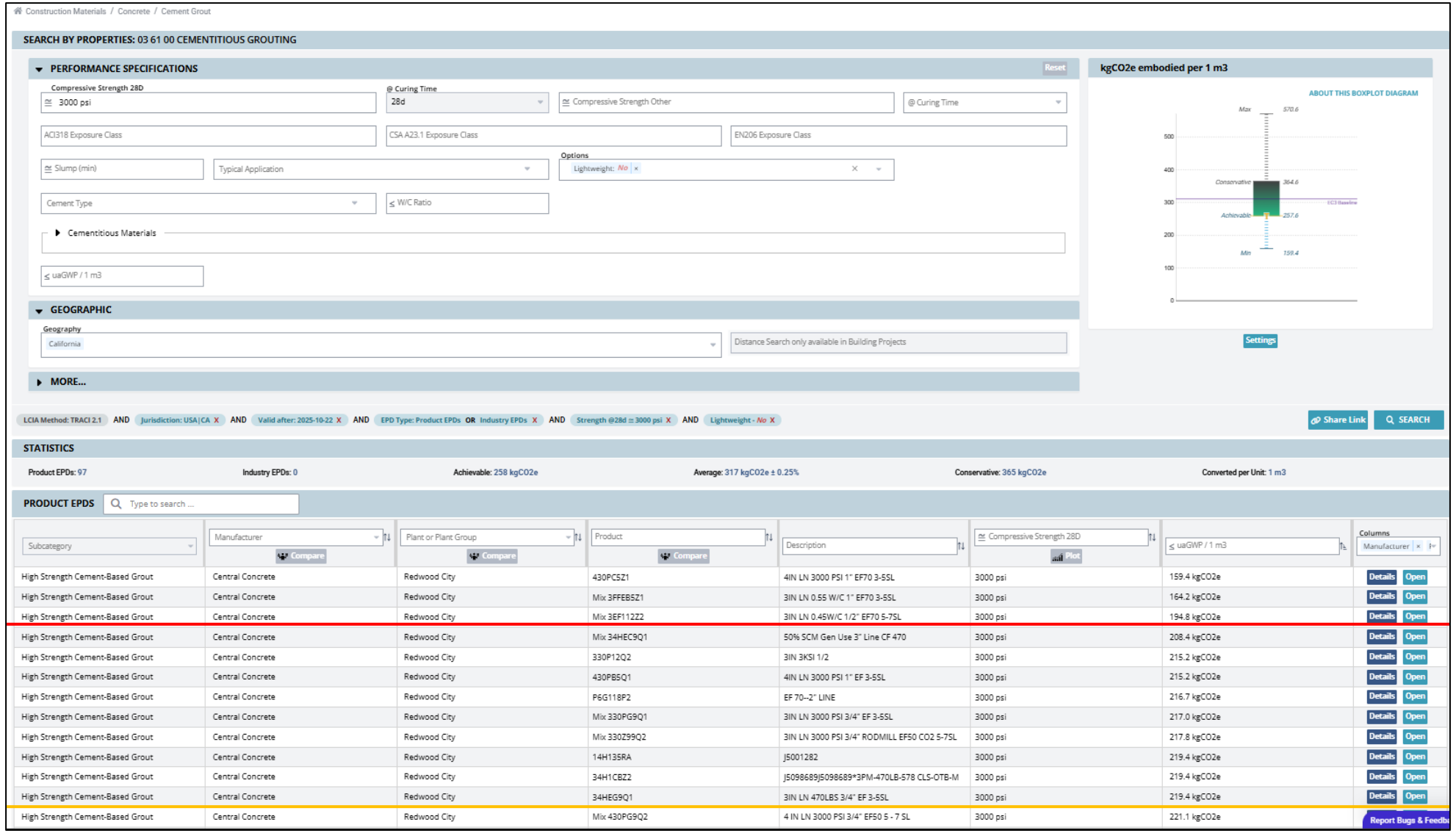
Concrete Masonry Unit (CMU)



Case 1

Case 2

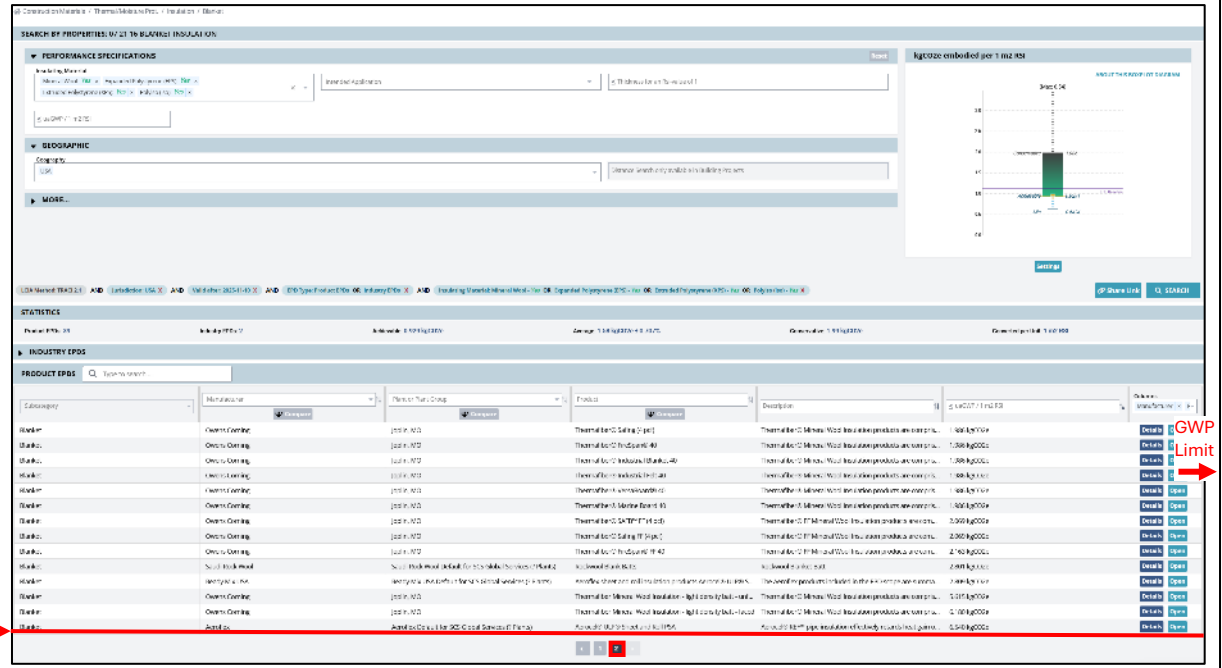
CMU Cement Grout

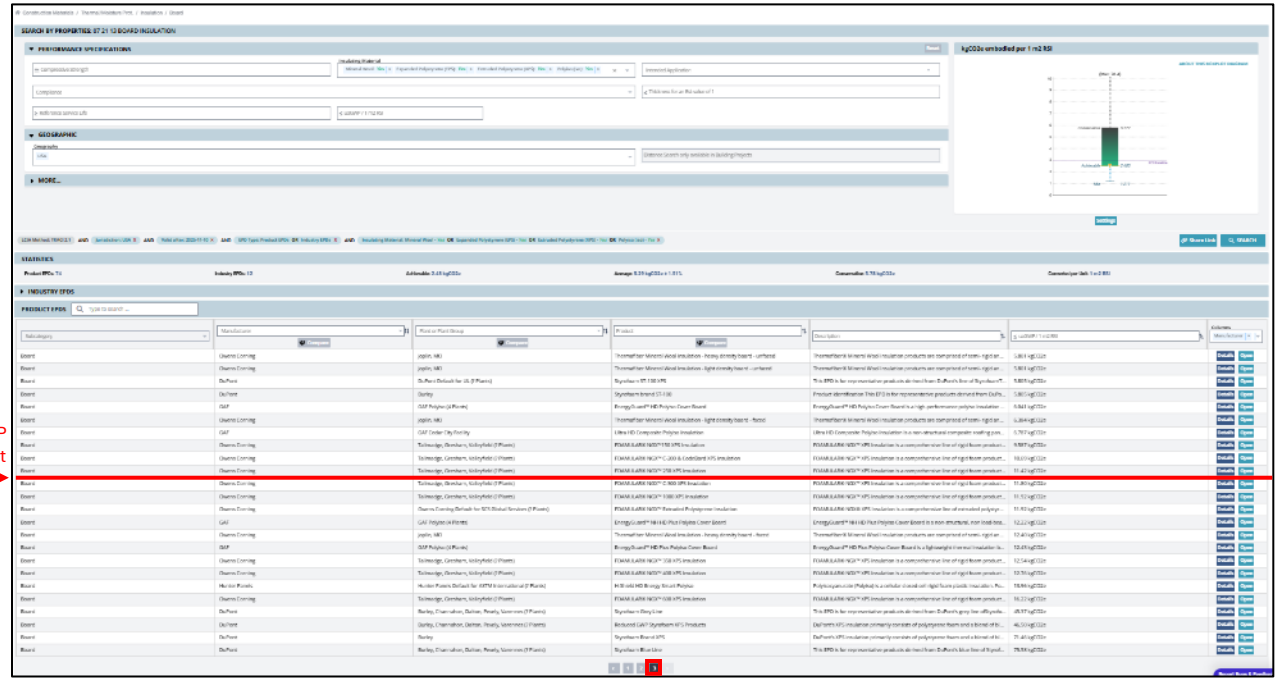


Case 2

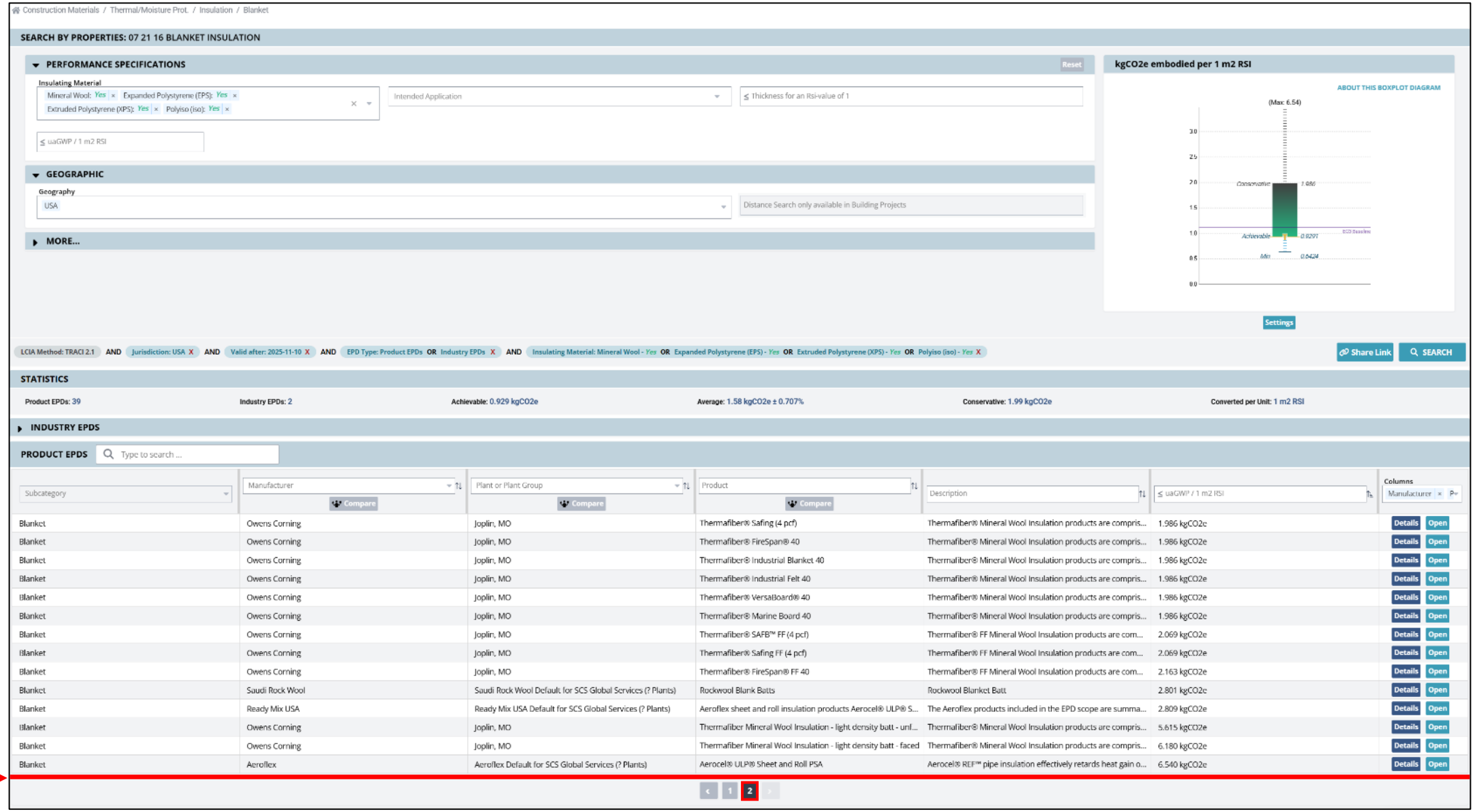
Case 1

Wall & Roof Insulation

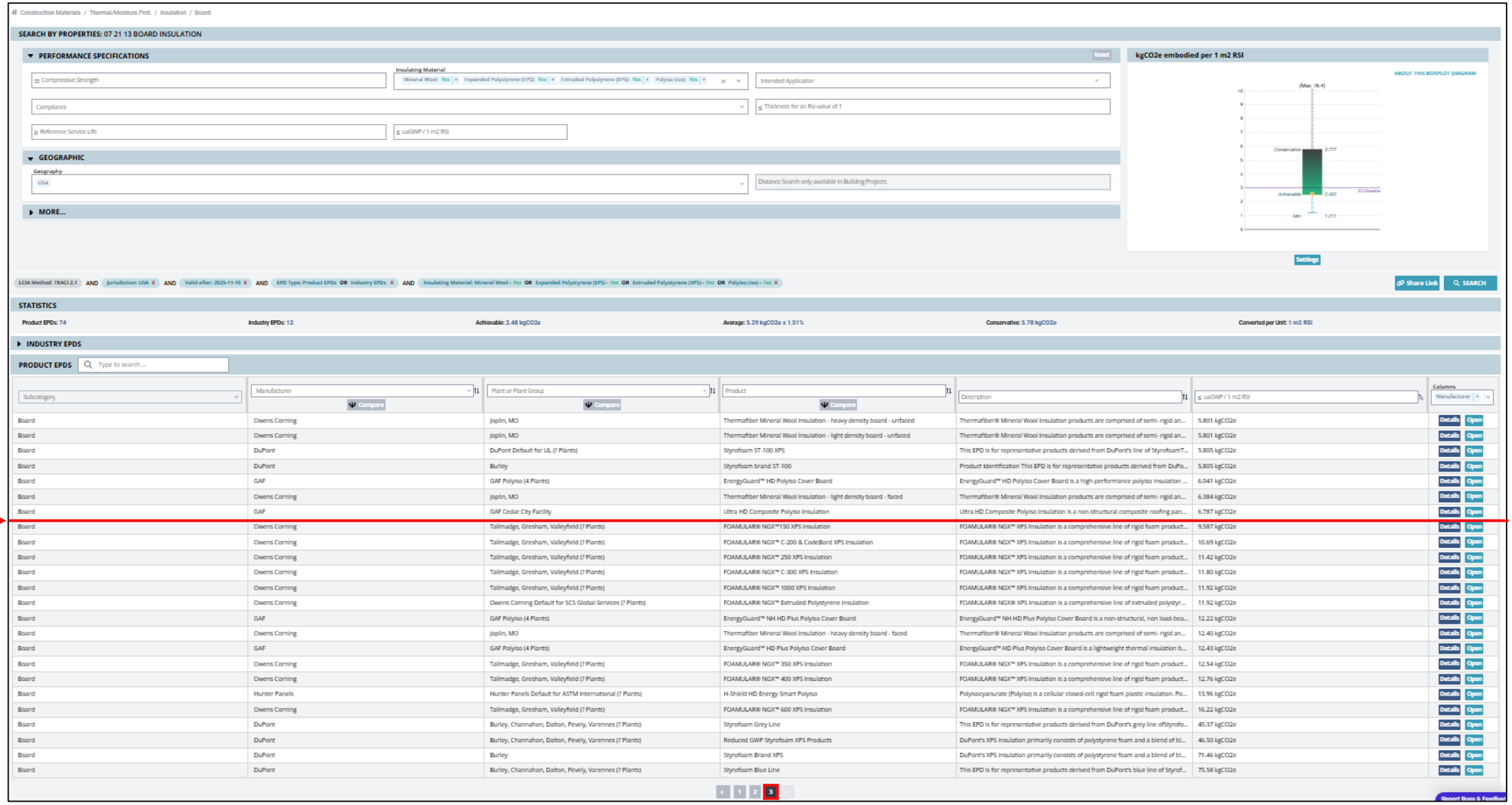




Roof Insulation: Blanket

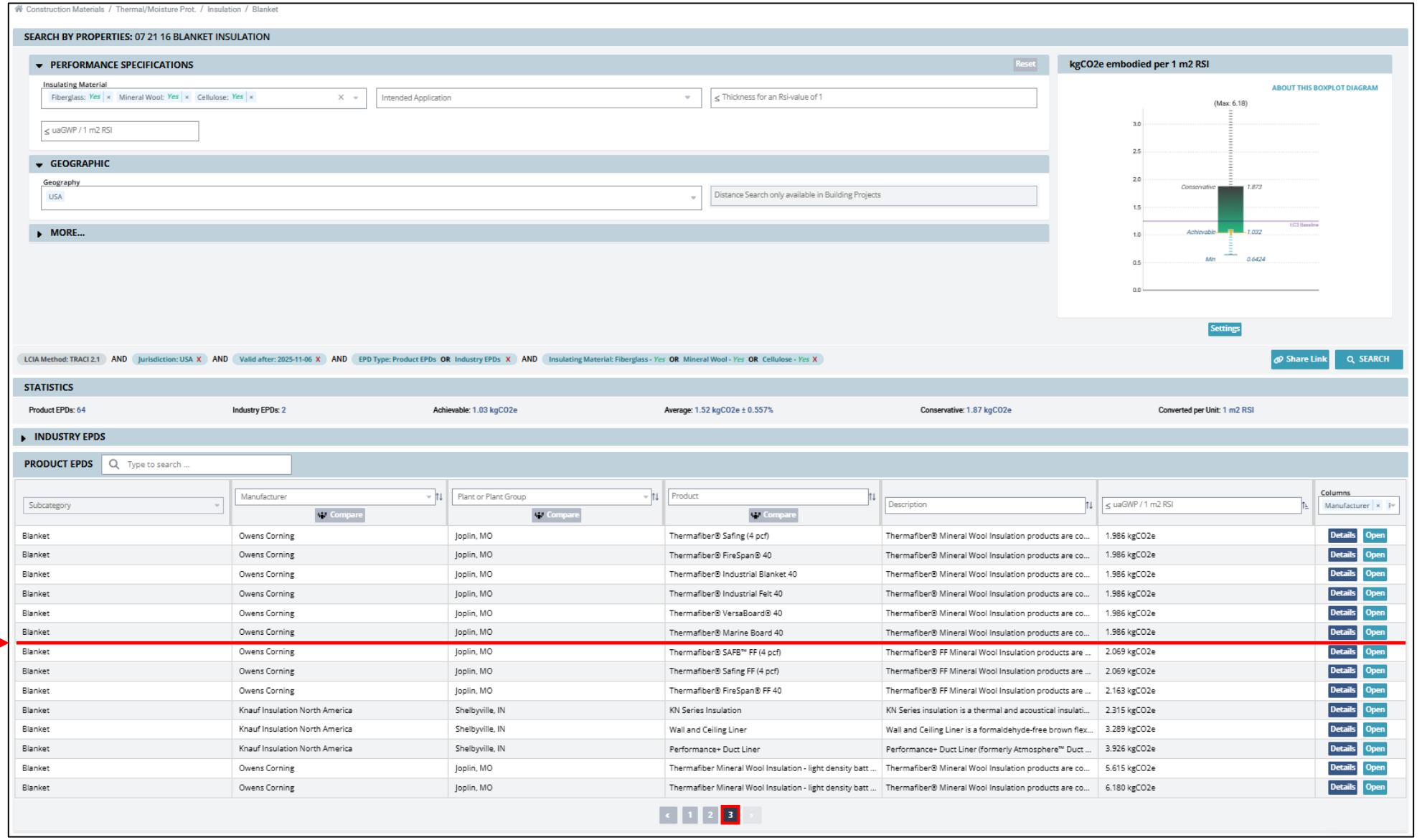


Roof Insulation: Board



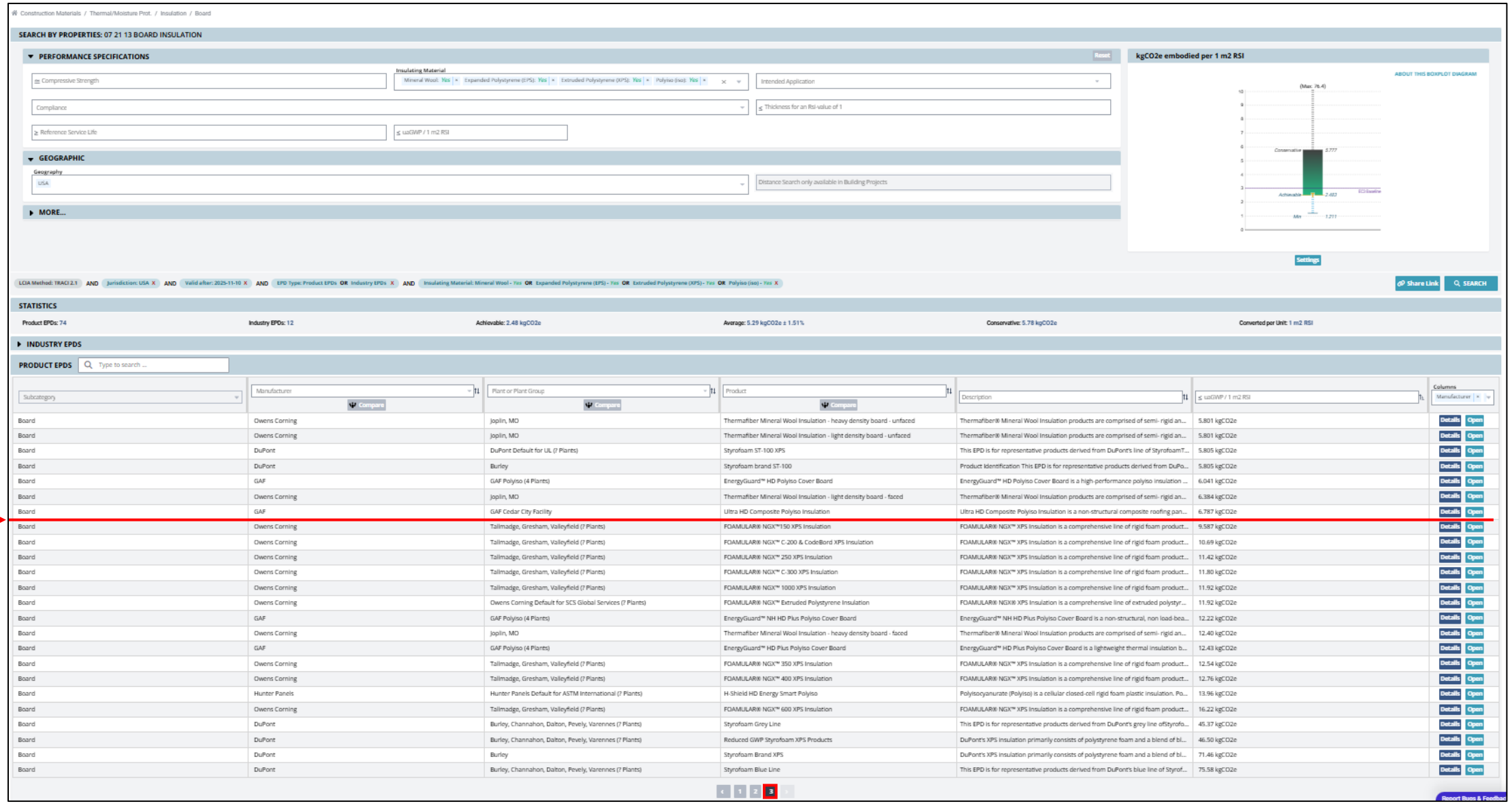
GWP Limit

Insulation: Exterior Stud Wall Cavity



GWP Limit

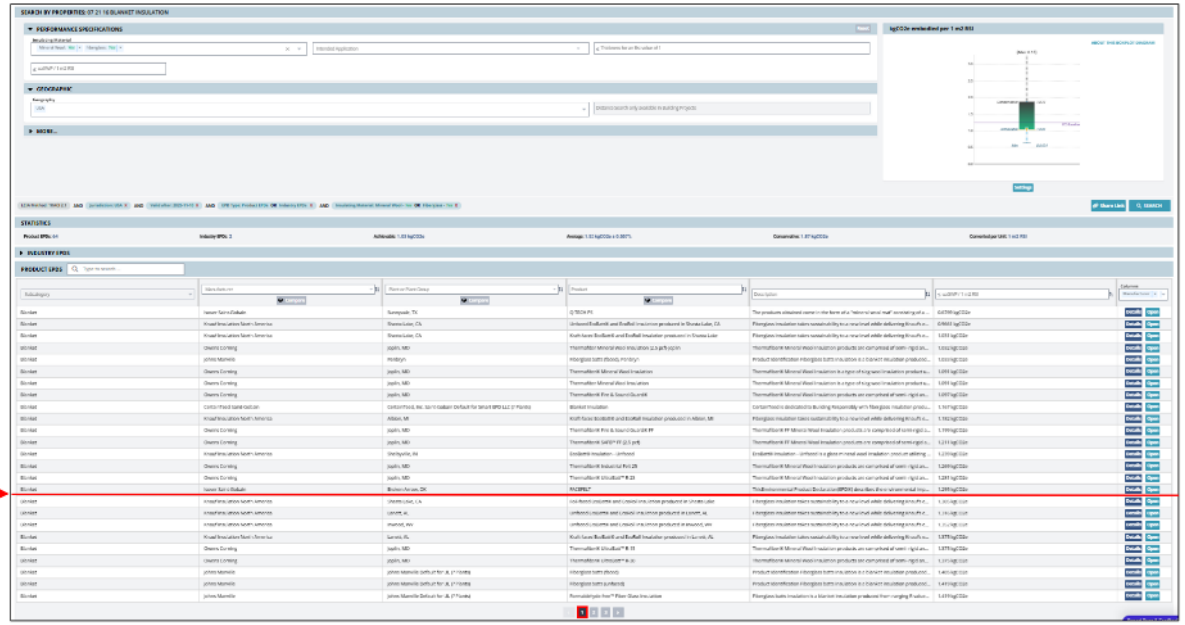
Insulation: Exterior Continuous



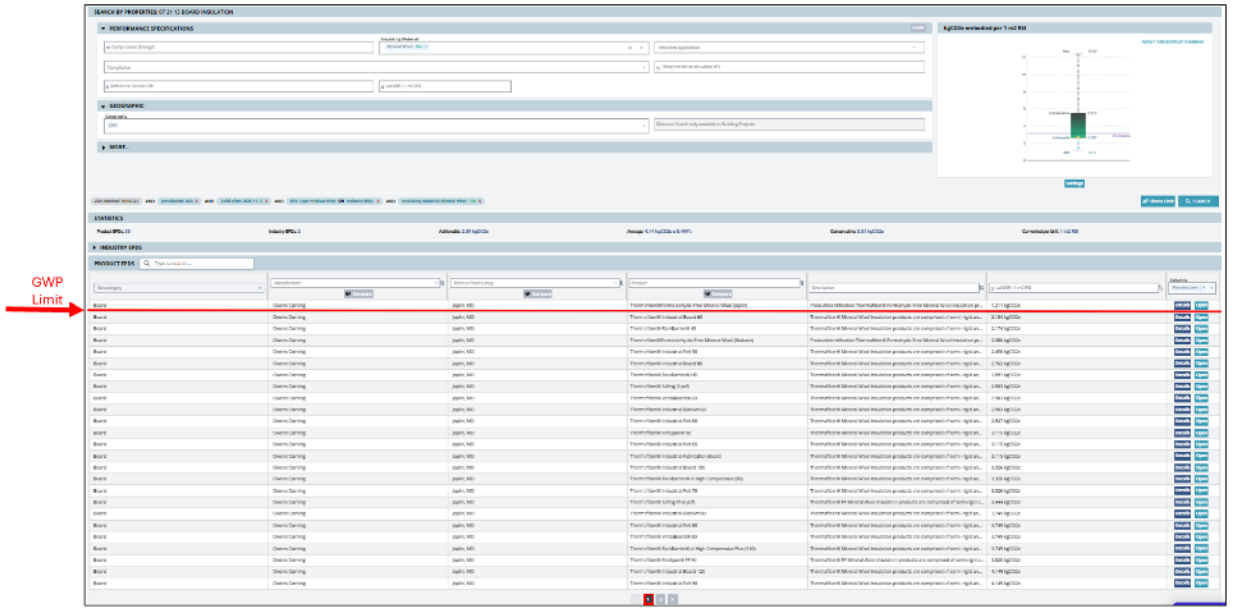
Subcategory	Manufacturer	Plant or Plant Group	Product	Description	≤ saGWP / 1 m2 RSI
Board	Owens Corning	Joplin, MO	Thermafiber Mineral Wool Insulation - heavy density board - unfaced	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	5.801 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber Mineral Wool Insulation - light density board - unfaced	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	5.801 kgCO2e
Board	DuPont	DuPont Default for UL (7 Plants)	Styrofoam ST-100 XPS	This EPD is for representative products derived from DuPont's line of StyrofoamT...	5.805 kgCO2e
Board	DuPont	Burley	Styrofoam brand ST-100	Product Identification This EPD is for representative products derived from DuPo...	5.805 kgCO2e
Board	GAF	GAF Polyiso (4 Plants)	EnergyGuard™ HD Polyiso Cover Board	EnergyGuard™ HD Polyiso Cover Board is a high-performance polyiso insulation ...	6.041 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber Mineral Wool Insulation - light density board - faced	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	6.384 kgCO2e
Board	GAF	GAF Cedar City Facility	Ultra HD Composite Polyiso Insulation	Ultra HD Composite Polyiso Insulation is a non-structural composite roofing pan...	6.787 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™150 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	9.587 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ C-200 & CodeBord XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	10.69 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ 250 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	11.42 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ C-300 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	11.80 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ 1000 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	11.92 kgCO2e
Board	Owens Corning	Owens Corning Default for SCS Global Services (7 Plants)	FOAMULAR® NGX™ Extruded Polystyrene Insulation	FOAMULAR® NGX® XPS Insulation is a comprehensive line of extruded polystyr...	11.92 kgCO2e
Board	GAF	GAF Polyiso (4 Plants)	EnergyGuard™ NH HD Plus Polyiso Cover Board	EnergyGuard™ NH HD Plus Polyiso Cover Board is a non-structural, non load-bea...	12.22 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber Mineral Wool Insulation - heavy density board - faced	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	12.40 kgCO2e
Board	GAF	GAF Polyiso (4 Plants)	EnergyGuard™ HD Plus Polyiso Cover Board	EnergyGuard™ HD Plus Polyiso Cover Board is a lightweight thermal insulation b...	12.43 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ 350 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	12.54 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ 400 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	12.76 kgCO2e
Board	Hunter Panels	Hunter Panels Default for ASTM International (7 Plants)	H-Shield HD Energy Smart Polyiso	Polyisocyanurate (Polyiso) is a cellular closed-cell rigid foam plastic insulation. Po...	13.96 kgCO2e
Board	Owens Corning	Tallmadge, Gresham, Valleyfield (7 Plants)	FOAMULAR® NGX™ 600 XPS Insulation	FOAMULAR® NGX™ XPS Insulation is a comprehensive line of rigid foam product...	16.22 kgCO2e
Board	DuPont	Burley, Channahon, Dalton, Pevely, Varennes (7 Plants)	Styrofoam Grey Line	This EPD is for representative products derived from DuPont's grey line ofStyrofo...	45.37 kgCO2e
Board	DuPont	Burley, Channahon, Dalton, Pevely, Varennes (7 Plants)	Reduced GWP Styrofoam XPS Products	DuPont's XPS insulation primarily consists of polystyrene foam and a blend of bl...	46.50 kgCO2e
Board	DuPont	Burley	Styrofoam Brand XPS	DuPont's XPS insulation primarily consists of polystyrene foam and a blend of bl...	71.46 kgCO2e
Board	DuPont	Burley, Channahon, Dalton, Pevely, Varennes (7 Plants)	Styrofoam Blue Line	This EPD is for representative products derived from DuPont's blue line of Styrof...	75.58 kgCO2e

Insulation: Curtain Wall Spandrel

Blanket

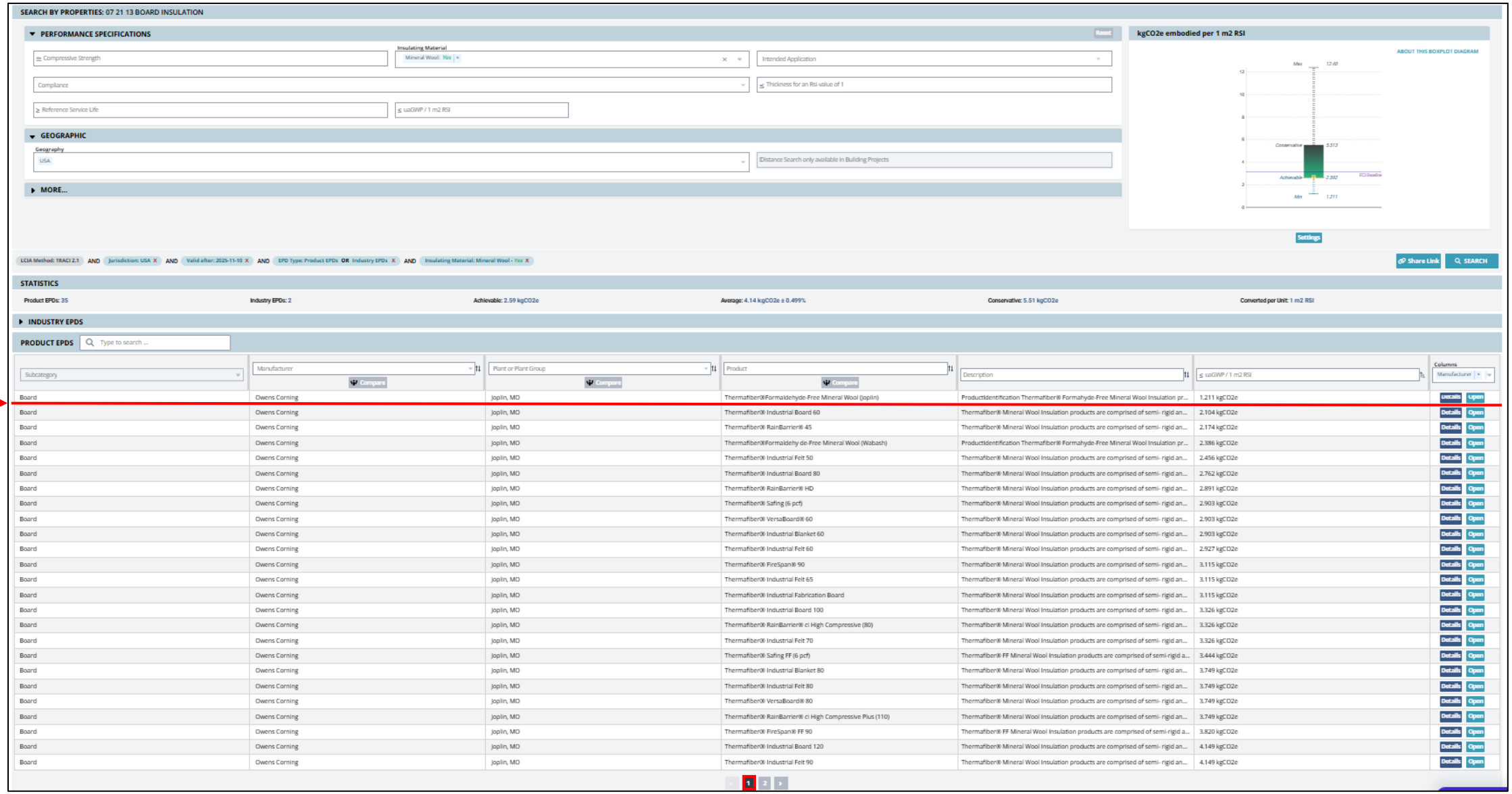


Board



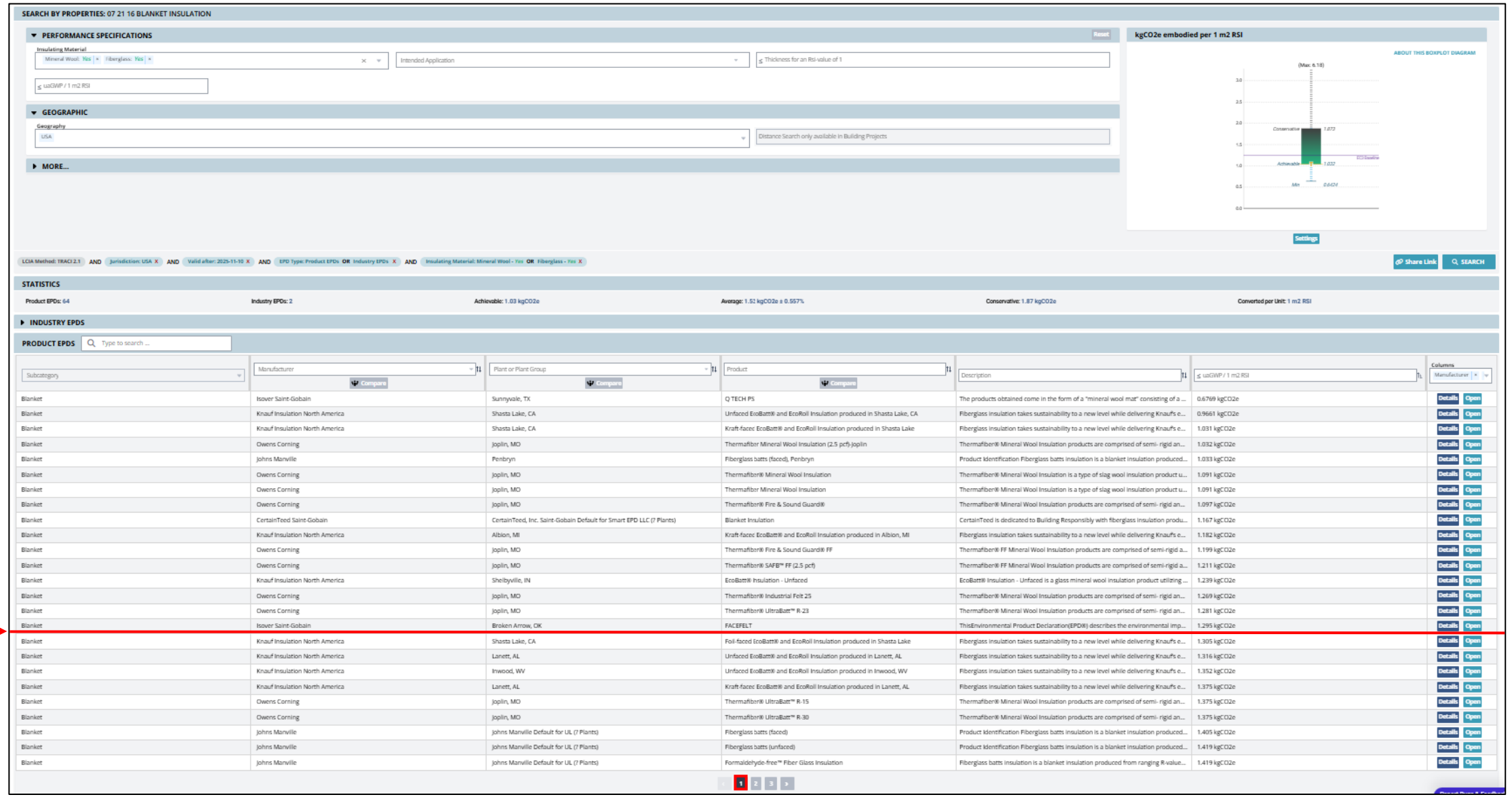
Insulation: Curtain Wall Spandrel - Board

GWP Limit



Subcategory	Manufacturer	Plant or Plant Group	Product	Description	≤ uaGWP / 1 m2 RSI
Board	Owens Corning	Joplin, MO	Thermafiber® Formaldehyde-Free Mineral Wool (Joplin)	ProductIdentification Thermafiber® Formahyde-Free Mineral Wool Insulation pr...	1.211 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Board 60	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.104 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® RainBarrier® 45	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.174 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Formaldehy de-Free Mineral Wool (Wabash)	ProductIdentification Thermafiber® Formahyde-Free Mineral Wool Insulation pr...	2.386 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 50	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.456 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Board 80	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.762 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® RainBarrier® HD	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.891 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Safing (6 pcf)	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.903 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® VersaBoard® 60	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.903 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Blanket 60	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.903 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 60	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	2.927 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® FireSpan® 90	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.115 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 65	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.115 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Fabrication Board	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.115 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Board 100	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.326 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® RainBarrier® ci High Compressive (80)	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.326 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 70	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.326 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Safing FF (6 pcf)	Thermafiber® FF Mineral Wool Insulation products are comprised of semi-rigid a...	3.444 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Blanket 80	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.749 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 80	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.749 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® VersaBoard® 80	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.749 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® RainBarrier® ci High Compressive Plus (110)	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	3.749 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® FireSpan® FF 90	Thermafiber® FF Mineral Wool Insulation products are comprised of semi-rigid a...	3.820 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Board 120	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	4.149 kgCO2e
Board	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 90	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	4.149 kgCO2e

Insulation: Curtain Wall Spandrel - Blanket



SEARCH BY PROPERTIES: 07 21 16 BLANKET INSULATION

PERFORMANCE SPECIFICATIONS

GEOGRAPHIC

MORE...

kgCO2e embodied per 1 m2 RSI

STATISTICS

Product EPDs: 64 | Industry EPDs: 2 | Achievable: 1.03 kgCO2e | Average: 1.52 kgCO2e ± 0.557% | Conservative: 1.87 kgCO2e | Converted per Unit: 1 m2 RSI

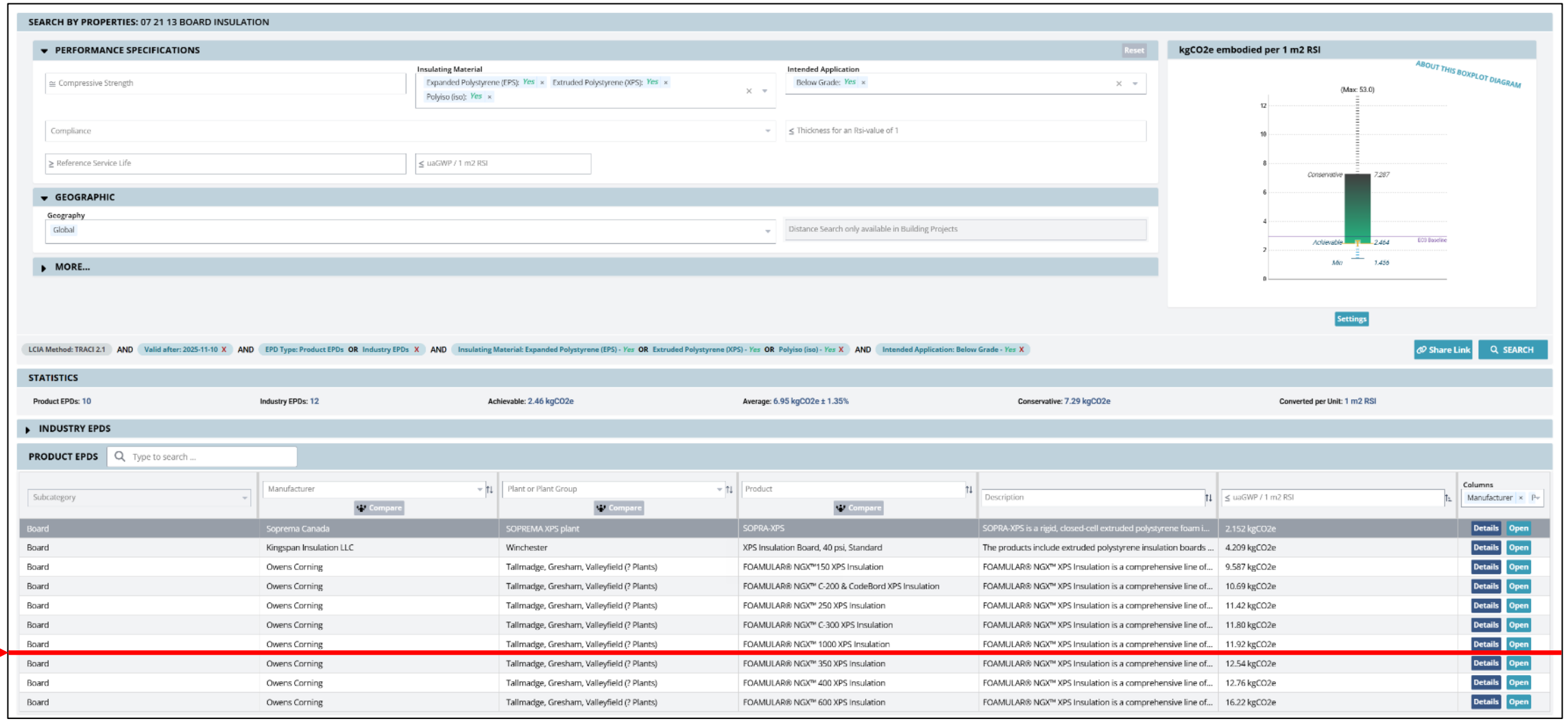
INDUSTRY EPDS

PRODUCT EPDS

Subcategory	Manufacturer	Plant or Plant Group	Product	Description	≤ uaGWP / 1 m2 RSI	Columns
Blanket	Isover Saint-Gobain	Sunnyvale, TX	Q TECH PS	The products obtained come in the form of a "mineral wool mat" consisting of a ...	0.6769 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Shasta Lake, CA	Unfaced EcoBatt® and EcoRoll Insulation produced in Shasta Lake, CA	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	0.9661 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Shasta Lake, CA	Kraft-facec EcoBatt® and EcoRoll Insulation produced in Shasta Lake	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	1.031 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber Mineral Wool Insulation (2.5 pcf)-Joplin	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	1.032 kgCO2e	Details Open
Blanket	Johns Manville	Penbryn	Fiberglass batts (faced), Penbryn	Product Identification Fiberglass batts insulation is a blanket insulation produced...	1.033 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® Mineral Wool Insulation	Thermafiber® Mineral Wool Insulation is a type of slag wool insulation product u...	1.091 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber Mineral Wool Insulation	Thermafiber® Mineral Wool Insulation is a type of slag wool insulation product u...	1.091 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® Fire & Sound Guard®	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	1.097 kgCO2e	Details Open
Blanket	CertainTeed Saint-Gobain	CertainTeed, Inc. Saint-Gobain Default for Smart EPD LLC (7 Plants)	Blanket Insulation	CertainTeed is dedicated to Building Responsibly with fiberglass insulation produ...	1.167 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Albion, MI	Kraft-facec EcoBatt® and EcoRoll Insulation produced in Albion, MI	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	1.182 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® Fire & Sound Guard® FF	Thermafiber® FF Mineral Wool Insulation products are comprised of semi-rigid a...	1.199 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® SAFB™ FF (2.5 pcf)	Thermafiber® FF Mineral Wool Insulation products are comprised of semi-rigid a...	1.211 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Shelbyville, IN	EcoBatt® Insulation - Unfaced	EcoBatt® Insulation - Unfaced is a glass mineral wool insulation product utilizing ...	1.239 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® Industrial Felt 25	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	1.269 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® UltraBatt™ R-23	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	1.281 kgCO2e	Details Open
Blanket	Isover Saint-Gobain	Broken Arrow, OK	FACEFELT	ThisEnvironmental Product Declaration(EPD®) describes the environmental imp...	1.295 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Shasta Lake, CA	Foil-faced EcoBatt® and EcoRoll Insulation produced in Shasta Lake	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	1.305 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Lanett, AL	Unfaced EcoBatt® and EcoRoll Insulation produced in Lanett, AL	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	1.316 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Inwood, WV	Unfaced EcoBatt® and EcoRoll Insulation produced in Inwood, WV	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	1.352 kgCO2e	Details Open
Blanket	Knauf Insulation North America	Lanett, AL	Kraft-facec EcoBatt® and EcoRoll Insulation produced in Lanett, AL	Fiberglass insulation takes sustainability to a new level while delivering Knauf's e...	1.375 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® UltraBatt™ R-15	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	1.375 kgCO2e	Details Open
Blanket	Owens Corning	Joplin, MO	Thermafiber® UltraBatt™ R-30	Thermafiber® Mineral Wool Insulation products are comprised of semi- rigid an...	1.375 kgCO2e	Details Open
Blanket	Johns Manville	Johns Manville Default for UL (7 Plants)	Fiberglass batts (faced)	Product Identification Fiberglass batts insulation is a blanket insulation produced...	1.405 kgCO2e	Details Open
Blanket	Johns Manville	Johns Manville Default for UL (7 Plants)	Fiberglass batts (unfaced)	Product Identification Fiberglass batts insulation is a blanket insulation produced...	1.419 kgCO2e	Details Open
Blanket	Johns Manville	Johns Manville Default for UL (7 Plants)	Formaldehyde-free™ Fiber Glass Insulation	Fiberglass batts insulation is a blanket insulation produced from ranging R-value...	1.419 kgCO2e	Details Open

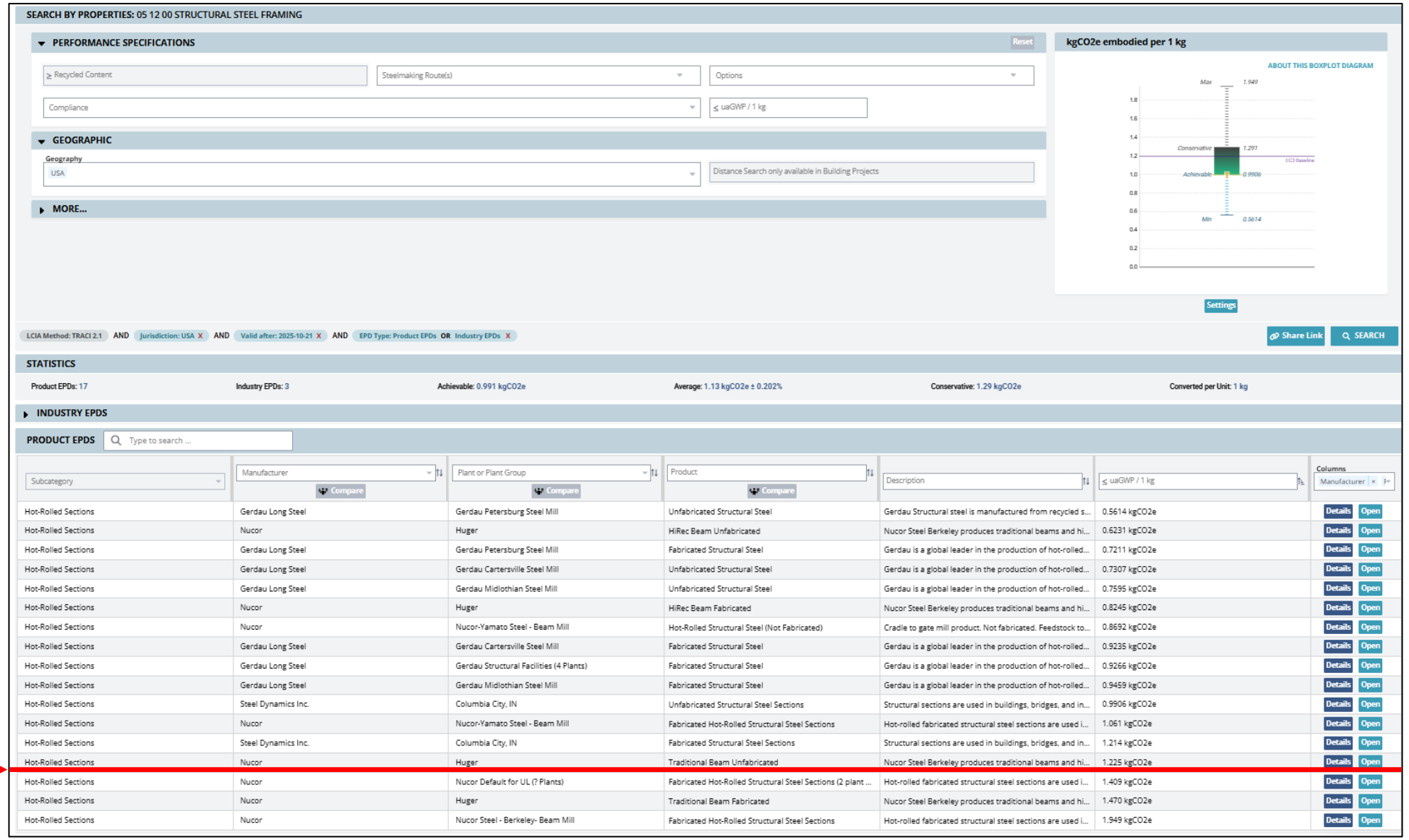
GWP Limit

Insulation: Below Grade



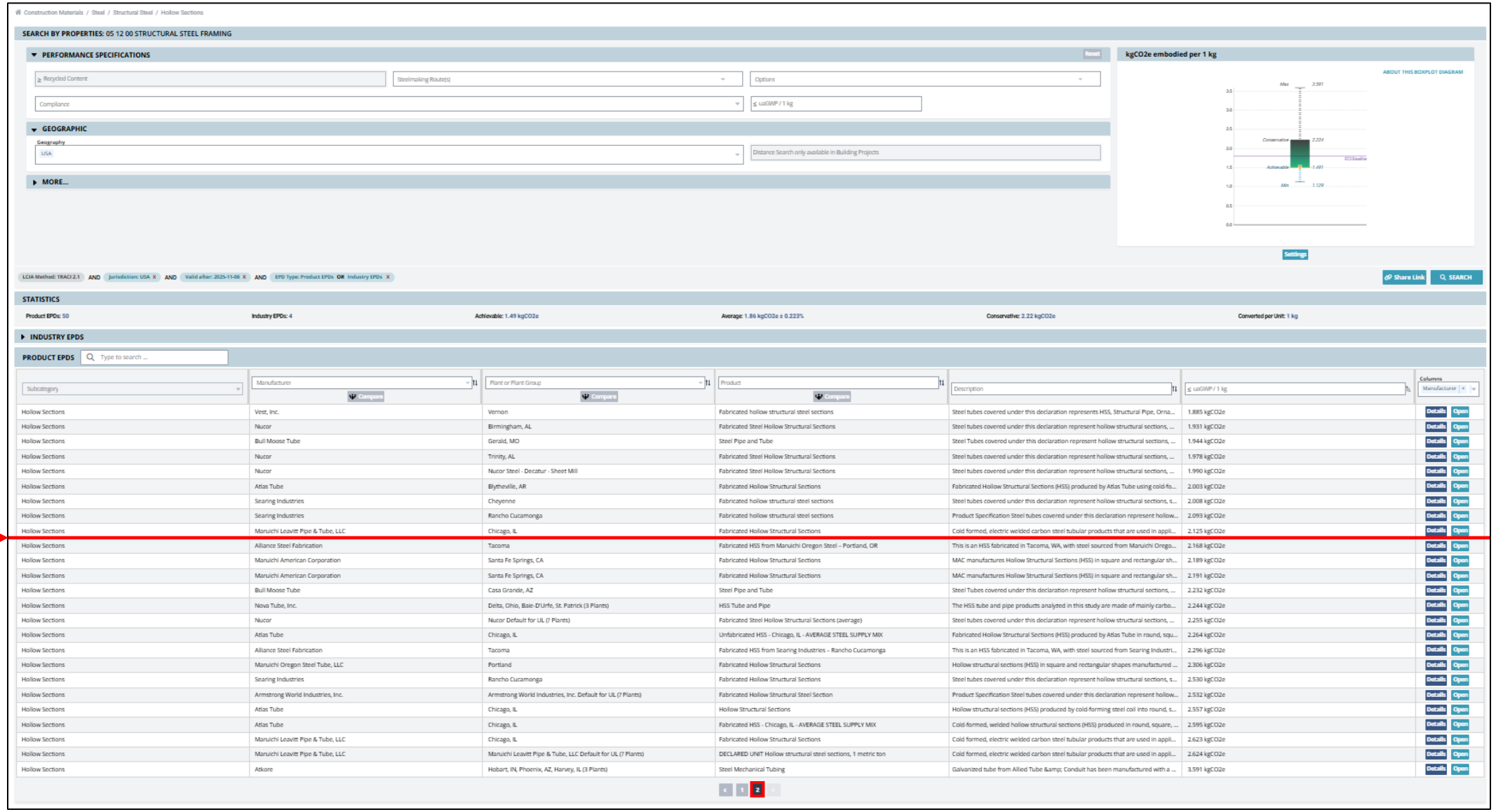
GWP Limit

Structural Steel: Hot-Rolled



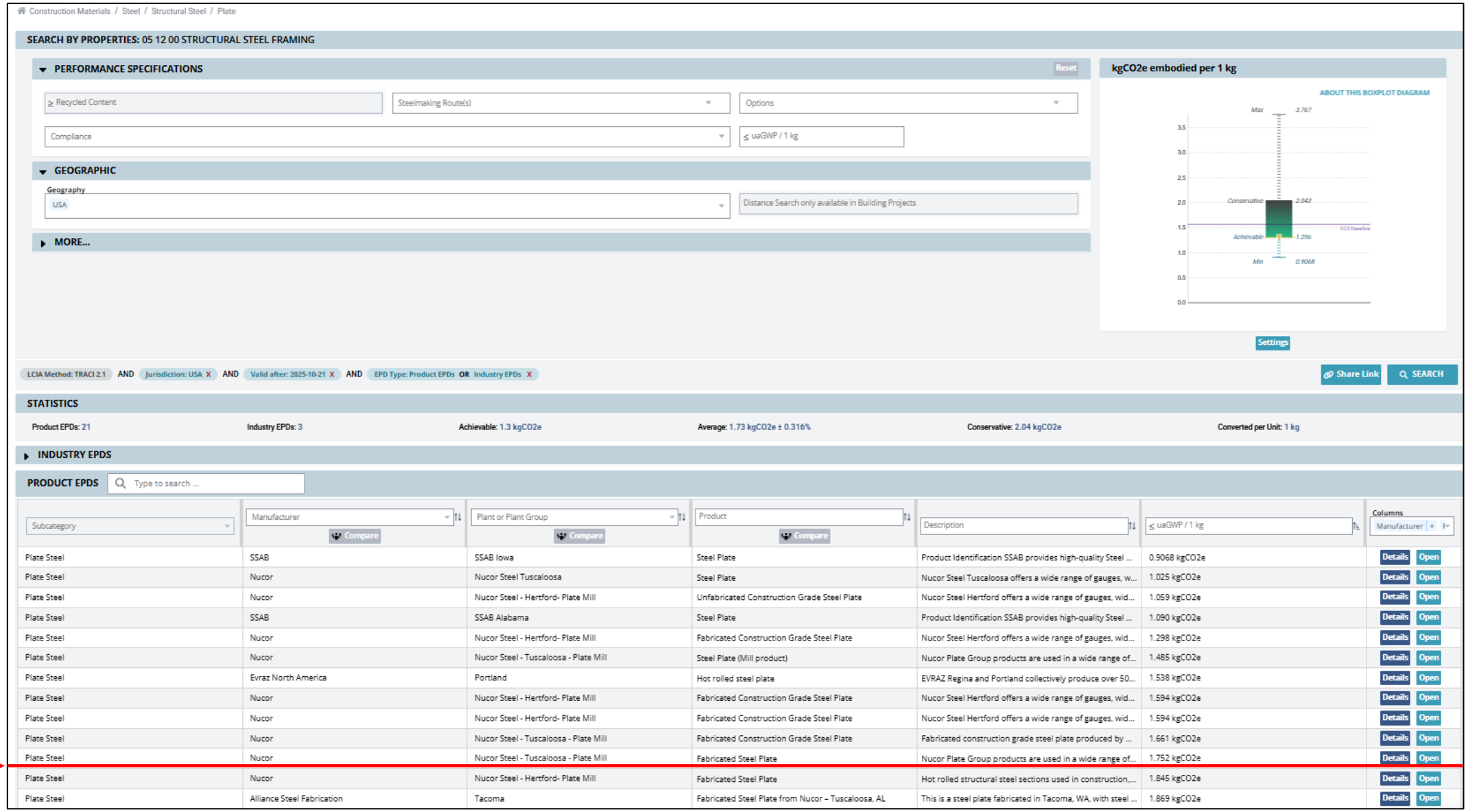
GWP Limit

Structural Steel: Hollow Section



GWP Limit

Structural Steel: Plate



Construction Materials / Steel / Structural Steel / Plate

SEARCH BY PROPERTIES: 05 12 00 STRUCTURAL STEEL FRAMING

PERFORMANCE SPECIFICATIONS Reset

≥ Recycled Content | Steelmaking Route(s) | Options

Compliance | ≤ uaGWP / 1 kg

GEOGRAPHIC

Geography: USA

Distance Search only available in Building Projects

MORE...

kgCO2e embodied per 1 kg

ABOUT THIS BOXPLOT DIAGRAM

Max 3.767 | Conservative 2.043 | Achievable 1.296 | Min 0.9068 | EC3 baseline

Settings

LCIA Method: TRACI 2.1 AND Jurisdiction: USA X AND Valid after: 2025-10-21 X AND EPD Type: Product EPDs OR Industry EPDs X

Share Link | SEARCH

STATISTICS

Product EPDs: 21 | Industry EPDs: 3 | Achievable: 1.3 kgCO2e | Average: 1.73 kgCO2e ± 0.316% | Conservative: 2.04 kgCO2e | Converted per Unit: 1 kg

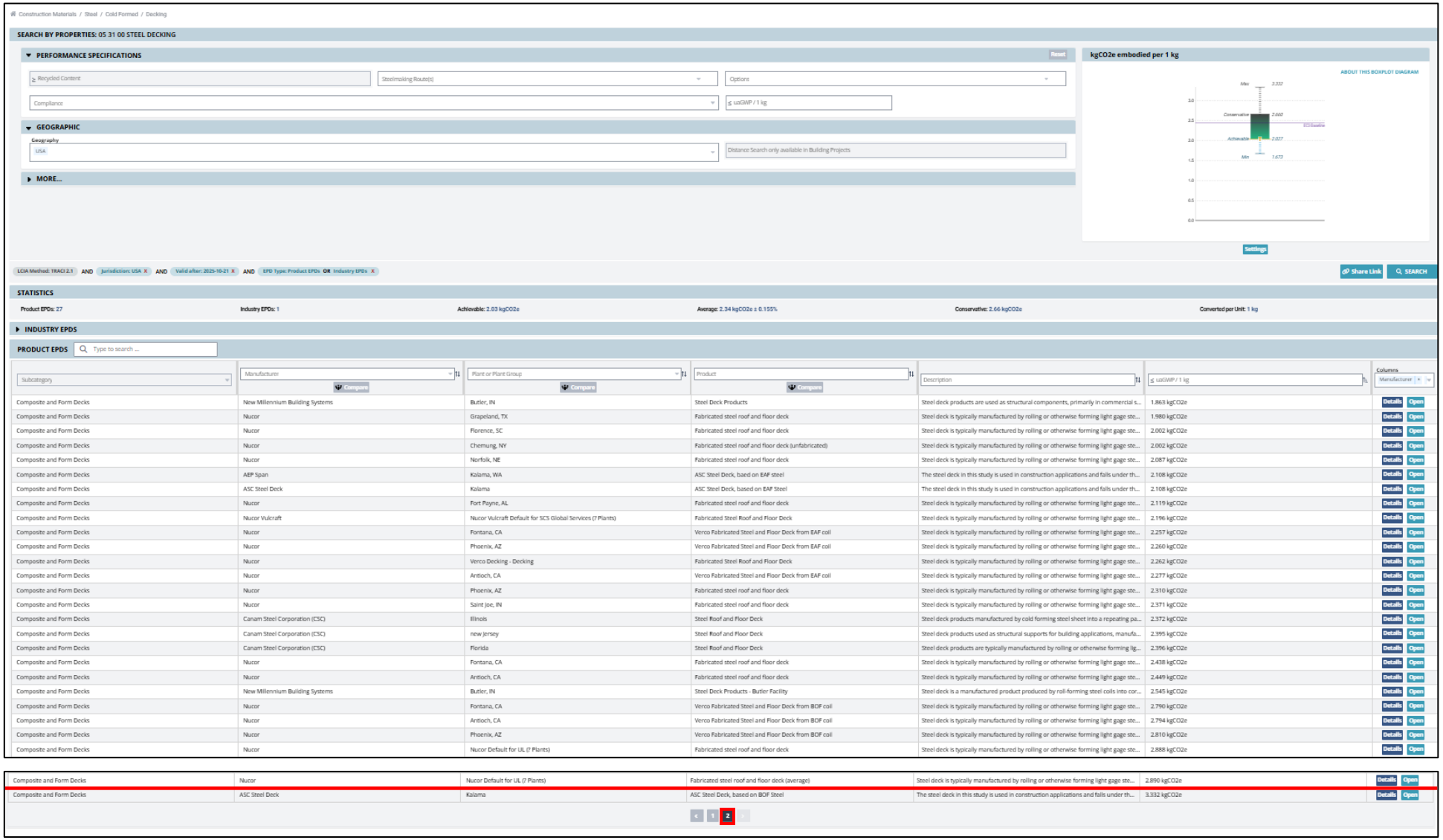
INDUSTRY EPDS

PRODUCT EPDS Type to search ...

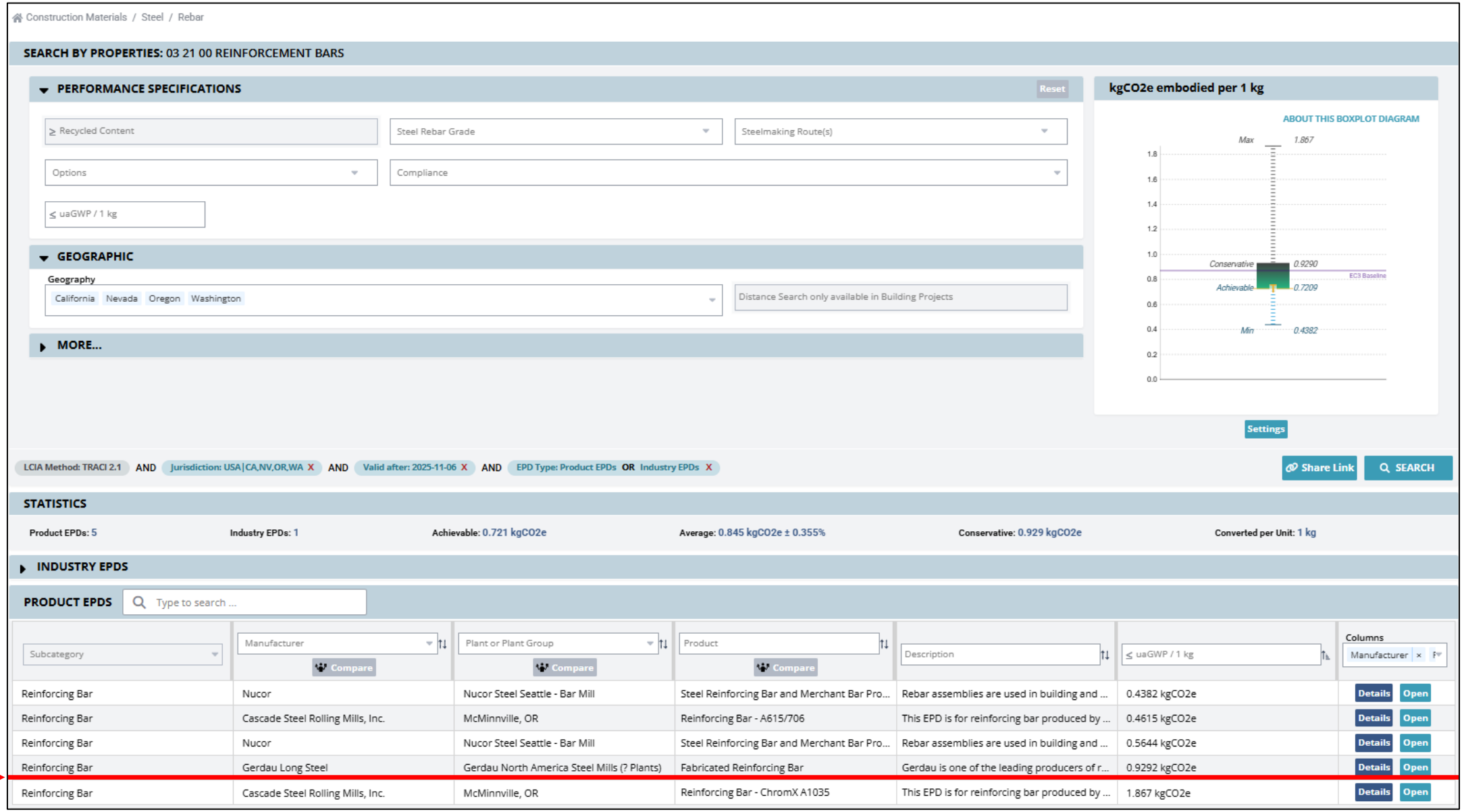
Subcategory	Manufacturer (Compare)	Plant or Plant Group (Compare)	Product (Compare)	Description	≤ uaGWP / 1 kg	Columns: Manufacturer	
Plate Steel	SSAB	SSAB Iowa	Steel Plate	Product Identification SSAB provides high-quality Steel ...	0.9068 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel Tuscaloosa	Steel Plate	Nucor Steel Tuscaloosa offers a wide range of gauges, w...	1.025 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Hertford- Plate Mill	Unfabricated Construction Grade Steel Plate	Nucor Steel Hertford offers a wide range of gauges, wid...	1.059 kgCO2e	Details	Open
Plate Steel	SSAB	SSAB Alabama	Steel Plate	Product Identification SSAB provides high-quality Steel ...	1.090 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Hertford- Plate Mill	Fabricated Construction Grade Steel Plate	Nucor Steel Hertford offers a wide range of gauges, wid...	1.298 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Tuscaloosa - Plate Mill	Steel Plate (Mill product)	Nucor Plate Group products are used in a wide range of...	1.485 kgCO2e	Details	Open
Plate Steel	Evraz North America	Portland	Hot rolled steel plate	EVRAZ Regina and Portland collectively produce over 50...	1.538 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Hertford- Plate Mill	Fabricated Construction Grade Steel Plate	Nucor Steel Hertford offers a wide range of gauges, wid...	1.594 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Hertford- Plate Mill	Fabricated Construction Grade Steel Plate	Nucor Steel Hertford offers a wide range of gauges, wid...	1.594 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Tuscaloosa - Plate Mill	Fabricated Construction Grade Steel Plate	Fabricated construction grade steel plate produced by ...	1.661 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Tuscaloosa - Plate Mill	Fabricated Steel Plate	Nucor Plate Group products are used in a wide range of...	1.752 kgCO2e	Details	Open
Plate Steel	Nucor	Nucor Steel - Hertford- Plate Mill	Fabricated Steel Plate	Hot rolled structural steel sections used in construction,...	1.845 kgCO2e	Details	Open
Plate Steel	Alliance Steel Fabrication	Tacoma	Fabricated Steel Plate from Nucor – Tuscaloosa, AL	This is a steel plate fabricated in Tacoma, WA, with steel ...	1.869 kgCO2e	Details	Open

GWP Limit

Structural Steel: Decking



Rebar


Construction Materials / Steel / Rebar
SEARCH BY PROPERTIES: 03 21 00 REINFORCEMENT BARS
PERFORMANCE SPECIFICATIONS
Reset
≥ Recycled Content
Steel Rebar Grade
Steelmaking Route(s)
Options
Compliance
≤ uaGWP / 1 kg
GEOGRAPHIC
Geography
California Nevada Oregon Washington
Distance Search only available in Building Projects
MORE...
kgCO2e embodied per 1 kg
ABOUT THIS BOXPLOT DIAGRAM
Max 1.867
Conservative 0.9290
EC3 Baseline
Achievable 0.7209
Min 0.4382
Settings
LCIA Method: TRACI 2.1 AND Jurisdiction: USA|CA,NV,OR,WA X AND Valid after: 2025-11-06 X AND EPD Type: Product EPDs OR Industry EPDs X
Share Link
SEARCH
STATISTICS
Product EPDs: 5
Industry EPDs: 1
Achievable: 0.721 kgCO2e
Average: 0.845 kgCO2e ± 0.355%
Conservative: 0.929 kgCO2e
Converted per Unit: 1 kg
INDUSTRY EPDS
PRODUCT EPDS
Type to search ...
Subcategory
Manufacturer
Compare
Plant or Plant Group
Compare
Product
Compare
Description
≤ uaGWP / 1 kg
Columns
Manufacturer
Reinforcing Bar | Nucor | Nucor Steel Seattle - Bar Mill | Steel Reinforcing Bar and Merchant Bar Pro... | Rebar assemblies are used in building and ... | 0.4382 kgCO2e | Details Open
Reinforcing Bar | Cascade Steel Rolling Mills, Inc. | McMinnville, OR | Reinforcing Bar - A615/706 | This EPD is for reinforcing bar produced by ... | 0.4615 kgCO2e | Details Open
Reinforcing Bar | Nucor | Nucor Steel Seattle - Bar Mill | Steel Reinforcing Bar and Merchant Bar Pro... | Rebar assemblies are used in building and ... | 0.5644 kgCO2e | Details Open
Reinforcing Bar | Gerdau Long Steel | Gerdau North America Steel Mills (? Plants) | Fabricated Reinforcing Bar | Gerdau is one of the leading producers of r... | 0.9292 kgCO2e | Details Open
Reinforcing Bar | Cascade Steel Rolling Mills, Inc. | McMinnville, OR | Reinforcing Bar - ChromX A1035 | This EPD is for reinforcing bar produced by ... | 1.867 kgCO2e | Details Open
GWP Limit