

# Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

## Vnext Panels

From

**Visaka Industries Limited**



**Vpanel**

Programme:

Programme operator:

EPD registration number:

Publication date:

Valid until:

The International EPD System, Indian Regional Hub, [www.environdec.com](http://www.environdec.com)  
[www.environdecindia.com](http://www.environdecindia.com)

EPD International

S-P-06084

2022-07-28

2027-07-27

## General information

### Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
<b>E-mail:</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

<b>Accountabilities for PCR, LCA and independent, third-party verification</b>
<b>Product Category Rules (PCR)</b>
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): <b>PCR 2019:14 Construction Products Version 1.11</b>
PCR review was conducted by: <b>The Technical Committee of the International EPD system.</b> <b>Chair of the PCR Review : Claudia A.Pena, The Review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a></b>
<b>Life Cycle Assessment (LCA)</b>
LCA accountability: Mr.Shyam Chandra V Sr. Manager- Sustainable Development Susnomics Engineering Systems Pvt Ltd 202, Matrix Synergy West Maredpally Secunderabad, 500026, India
<b>Third-party verification</b>
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:  <input checked="" type="checkbox"/> EPD verification by individual verifier  Third-party verifier: Mr.Sunil Kumar CS, Chakra4 Sustainability Consulting Services <u>signature of the third-party verifier</u>  Approved by: The International EPD® System

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

**Owner of the EPD:** Visaka Industries Limited, Vnext Division

**Contact:** Mr KVE Prasad, Sr. Vice President-Technical, Vnext Division

### **Description of the organisation:**

The company was established by Dr G Vivekanand in 1981 and is presently stewarded by Mr G Vamsi Krishna son of Dr. G. Vivekanand and Mrs. Saroja Vivekanand. Over the last four decades, the Company has established itself as one of the leading building construction material providers and a dependable synthetic yarns manufacturer in India. The company is engaged in the manufacture of cement fibre roofing sheets, Fiber Cement Boards and panels, value added textile yarns, Solar roofing products. Head-quartered in Hyderabad, Visaka has a total of 14 manufacturing locations across India.

Visaka has 8 manufacturing locations across India for the production of Cement fibre roofing sheet. Our production facility possess an annual production capacity of 8, 02,000 tonnes of cement roofing sheets.

Visaka has 4 manufacturing plants across India for the production of Vboards (Fiber cement boards) and 3 manufacturing plants for the production of Vpanels in total. Our Boards / Panels / Planks are marketed under the V Next brand. Our production facility possess an annual production capacity of 2, 40,000 tonnes of fiber cement board products.

Visaka has 1 manufacturing plant for its flagship product called ATUM solar (patented) which helps in sustainable energy generation using solar PV as well as a roofing solution for buildings. This products holds a major advantage due to its area efficiency factor compared to the installation of conventional solar PV. Our integrated solar panel roofing is offered under the ATUM brand.

Yarn production by use of recycled PET bottles is spinning plant possesses an annual production capacity of 2,752 twin air-jet spinning positions equivalent to 82,560 ring spindles. Our synthetic blended yarn is marketed under the Wonder Yarn brand.

**Product-related or management system-related certifications:** ISO 9001- Quality Management Systems

**Name and location of production site(s):** Vnext- Panel is manufactured in two factories in India-

1. Miryalaguda, Telangana
2. Jhajjar, Haryana

## Product information

**Product name:** Vnext Panels

**Product identification:** Vnext Panels by Visaka Industries Limited

### Product description:

Vnext Panels is generally made using factory made fiber cement boards of 4mm thickness. The fiber cement boards are erected on both sides of the pre-molded extrusion panel and then it is filled with light weight aerated concrete/ light weight concrete with EPS made by mix of cement and additives. The Vnext Panels are produced in two different thickness of 50mm and 75mm.

The Vnext Panels has a wide range of applications in construction of pre-fabricated structures, internal partitions, external walls and compound walls.

The present declaration is conducted for 1 m<sup>2</sup> of Vnext Panel product manufactured at Miryalaguda & Jhajjar locations of Visaka Industries Limited.

UN CPC code: UN CPC 3752

Geographical scope: The Geographic scope of the product is India.

Vnext- Panels		
Thickness (mm)	Locations & Properties	
	MLG *	JJR*
	Standard weight (kg/m <sup>2</sup> )	Density (Kg/m <sup>3</sup> )
50	34	34
75	46	46

**MLG \*** - Miryalaguda, Telangana

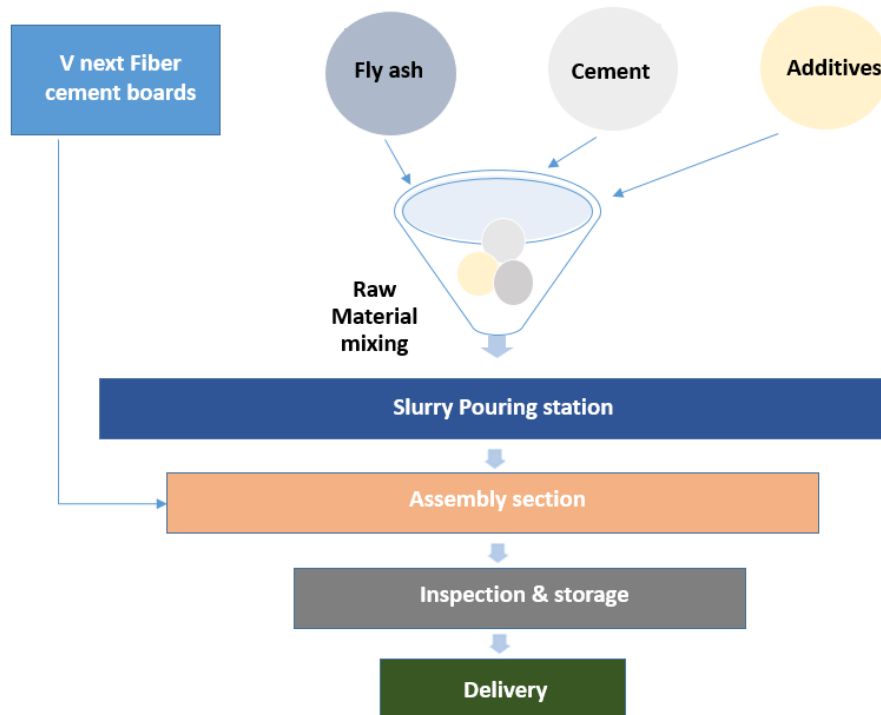
**JJR\*** - Jhajjar, Haryana

## Content Declaration

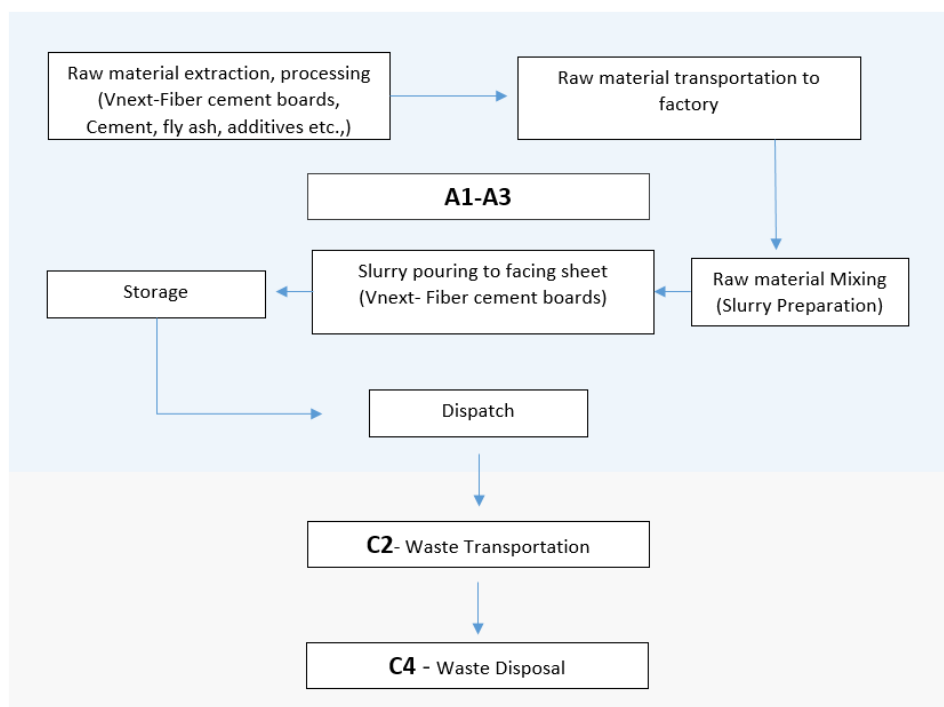
Material	% of mass per declared functional unit
V next Fiber cement board	40-42%
Cement	40-43%
Fly ash	10-12%
EPS Admixture	1.30%
Additives	0.12%

No substance, listed in the Candidate List of Substances of Very High Concern for Authorisation under the REACH Regulations are used in this product , either above the threshold limit or above 0.1% (wt/wt).

### Process diagram:



### System diagram:



## LCA information:

Declared unit: The declared unit for the EPD is 1m<sup>2</sup> of Vnext Panel board of various thickness (50mm and 75mm)

Time representativeness: The reference period of EPD data is used for the year of Jan 2021 to Dec 2021.

Database(s) and LCA software used: The primary data for this particular product is collected from both the manufacturing plants in India (Miryalaguda and Jhajjar ).The relevant secondary datasets are taken from ecoinvent 3.8 database and OpenLCA software is used to carry out the assessment. The impact models used are those indicated in EN 15804:2012+A2:2019.

### Impact assessment method and Impact categories

CML IA Impact assessment method is used primarily for all core impact indicators. The impact categories involved are as follows,

1. Global warming potential (GWP)- kg CO<sub>2</sub>-eq
2. Depletion potential of the stratospheric ozone layer- kg CFC 11-eq
3. Acidification potential of land and water- kg SO<sub>2</sub>-eq
4. Eutrophication potential- kg PO<sub>4</sub> 3—eq
5. Photochemical oxidation- kg C<sub>2</sub>H<sub>4</sub> eq
6. Abiotic depletion potential for nonfossil resources- kg Sb-eq
7. Abiotic depletion potential for fossil resources- MJ
8. Particulate matter emission - Disease incidence
9. Ionizing radiation human health - kBq U235 eq.
10. Freshwater ecotoxicity - FETP100- CTUe
11. Human toxicity – cancer- CTUh
12. Human toxicity - non cancer effects- CTUh
13. Land Use related impact – dimensionless
14. Water use- m<sup>3</sup>
15. Non-renewable, fossil- MJ
16. Non-renewable, biomass - MJ
17. Non-renewable, nuclear - MJ
18. Renewable, biomass - MJ
19. Renewable, water - MJ
20. Renewable, wind, solar, geothermal - MJ
21. Non-hazardous waste kg
22. Hazardous waste kg
23. Radioactive waste kg

## System boundaries:

The LCA model of Vnext- Panel represents a cradle-to-gate with modules C and D, starting from raw materials extraction, transportation of raw material, manufacturing of Vnext Panel (A1 to A3), transport of waste (C2) and end of life- disposal of waste (C4).

Module	Life cycle stages	Descriptions
A1	Raw material extraction and processing	Extraction, production of the raw materials such as Vnext-Fiber cement boards, EPS admixtures, cement, fly ash, additives etc.
A2	Transport raw materials	Road and ship transport of raw materials
A3	Product Manufacturing	Manufacturing of V next Panel in factory- includes energy consumed, water consumed and other fuels required for manufacturing and processing.
C1	Deconstruction/Demolition	The product is dismantled and landfilled along with other construction materials. So it is not considered.
C2	Transport of waste	It is considered the waste is transported 50kms in road for Disposal.
C3	Waste processing	the product is 0% recycled
C4	Disposal of waste	The waste is 100% landfill, the impact is calculated for 1m2 declared unit.
D	Reuse, Recovery, recycling potential	Despite the fact that module D has been considered, there are no recycling benefits since all the product is disposed of in a landfill as a mixture of demolition construction wastes. 100% of the weight is sent to landfill.

All the module stage inputs and outputs are based on weighted average of percentage of production and total weightage of respective product in the time period of Jan 2021 to Dec 2021.

### Data sources and quality requirements:

Data characterising the core processes (Jan 2021 to Dec 2021), were checked to ensure that, sufficient materials and water are included as inputs to account for all products, wastes and emissions.

All primary data were collected from Visaka factories. Secondary data were collected from the Ecoinvent 3.8 database. All related factors such as time, geography and technology were checked and confirmed.

Electricity used in the manufacturing plant is supplied from both state electricity grid and from the onsite solar PV system. The basic data from the Ecoinvent 3.8 database were used for fuel, energy, transportation and auxiliary materials.

Data from stages (A1-A3) in the life cycle were gathered from Visaka factories through structured data collection formats. The data included in the study are measurable and recordable and were supplied by the factories.

The scenarios included are currently in use, and are representative to the most likely scenario alternatives.

### Allocation procedure

The allocation is avoided as far as possible, it is done by dividing the unit process to be allocated into two or more sub-processes and collecting the input and output data related to these sub-processes.

### Cut-off criteria:

The collected data covered all raw materials, consumables; associated transport to the manufacturing site; process energy, water use and environmental significance. The complete total mass flow, energy flow and environmental significance in inputs and output are considered. All waste output is < 1% by mass, so it is the part of cut off criteria.

### Description of System boundaries (X-Included in LCA, NA- Not Assessed)

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA	X	NA

All primary data have been obtained from Visaka factories. Secondary data have been obtained from the Ecoinvent 3.8 database.

The below processes have not been included since its impact is not significant:

- Manufacture of equipment used in production, buildings or any other capital good;
- Transportation of personnel to the plant;
- Transportation of personnel within the plant;
- Research and development activities.



## Environmental Information

Core Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at MLG plant

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Global warming potential (GWP)	kg CO2-eq	14.81975207	0.292168244	0.085264339
2	Depletion potential of the stratospheric ozone layer	kg CFC 11-eq	3.99246E-07	5.20173E-08	4.26375E-08
3	Acidification potential of land and water	kg SO2-eq	0.044016957	0.001478758	0.000613479
4	Eutrophication potential	kg PO4 3--eq	0.016299442	0.000350187	0.000119269
5	Photochemical oxidation	kg C2H4 eq	0.001515953	4.45763E-05	2.6638E-05
6	Abiotic depletion potential for nonfossil resources	kg Sb-eq	2.05256E-05	1.00651E-06	3.59481E-07
7	Abiotic depletion potential for fossil resources	MJ	128.3061123	4.333216876	3.725316868

Additional Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at MLG plant

S.no	Impact category	Reference unit	Total Module (A1-A3)	Module C2	Module C4
1	Particulate matter emission	Disease incidence	3.24459E-07	2.95054E-08	9.21355E-09
2	Ionizing radiation human health	kBq U235 eq.	0.221045055	0.01999896	0.016781832
3	freshwater ecotoxicity - FETP100	CTUe	308.0079262	3.678295949	2.165773901
4	human toxicity - cancer	CTUh	2.83688E-09	1.79161E-10	5.0675E-11
5	human toxicity - non cancer effects	CTUh	1.27572E-07	4.45392E-09	1.15019E-09
6	Land use related impact	dimensionless	71.66864614	2.658582838	9.238117213
7	Water use	m3	3.323240705	0.019798977	0.22493684

**Parameter describing resource use- LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at MLG plant**

S.no	Impact category	Reference unit	Module (A1-A3)	Module C2	Module C4
1	Non renewable, fossil	MJ	136.3548817	4.605349106	3.96080989
2	Non-renewable, biomass	MJ	0.003618977	0.000185253	0.000851914
3	Non-renewable, nuclear	MJ	3.04197103	0.05238612	0.041561789
4	Renewable, biomass	MJ	2.20112697	0.014661	0.009443743
5	Renewable, water	MJ	1.164414725	0.028258889	0.018096582
6	Renewable, wind, solar, geothe	MJ	1.792851596	0.007298438	0.004956596

**Waste categories & output flows LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at MLG plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Non-hazardous waste	kg	0.76777769	0.220844905	0.023527124
2	Hazardous waste	kg	5.1257E-05	1.14245E-05	4.33556E-06
3	Radioactive waste	kg	0.00022041	2.8479E-05	2.45504E-05
4	Components for re-use	kg	0	0	0
5	Materials for recycling	kg	0	0	0
6	Materials for energy recovery	kg	0	0	0
7	Exported energy	MJ	0	0	0

**Core Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at MLG plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Global warming potential (GWP)	kg CO2-eq	20.05461033	0.395286447	0.116130029
2	Depletion potential of the stratospheric ozone layer	kg CFC 11-eq	5.40357E-07	7.03763E-08	5.80723E-08
3	Acidification potential of land and water	kg SO2-eq	0.059565388	0.002000672	0.000835558
4	Eutrophication potential	kg PO4 3--eq	0.022052016	0.000473782	0.000162445
5	Photochemical oxidation	kg C2H4 eq	0.002051433	6.03092E-05	3.6281E-05
6	Abiotic depletion potential for nonfossil resources	kg Sb-eq	2.78029E-05	1.36174E-06	4.89614E-07
7	Abiotic depletion potential for fossil resources	MJ	173.6024378	5.862587538	5.073881574

**Additional Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at MLG plant**

S.no	Impact category	Reference unit	Total Module (A1-A3)	Module C2	Module C4
1	Particulate matter emission	Disease incidence	4.39107E-07	3.99191E-08	1.25489E-08
2	Ionizing radiation human health	kBq U235 eq.	0.299065203	0.027057417	0.022856855
3	freshwater ecotoxicity - FETP100	CTUe	416.7725504	4.976518048	2.949784053
4	human toxicity - cancer	CTUh	3.83912E-09	2.42394E-10	6.90193E-11
5	human toxicity - non cancer effects	CTUh	1.72641E-07	6.02589E-09	1.56656E-09
6	Land use related impact	dimensionless	96.99620393	3.596906192	12.58231564
7	Water use	m3	4.496037605	0.026786851	0.306363976

**Parameter describing resource use- LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at MLG plant**

S.no	Impact category	Reference unit	Module (A1-A3)	Module C2	Module C4
1	Non renewable, fossil	MJ	184.4928238	6.230766438	5.39462307
2	Non-renewable, biomass	MJ	0.004899153	0.000250636	0.001160307
3	Non-renewable, nuclear	MJ	4.114887194	0.070875339	0.056607156
4	Renewable, biomass	MJ	2.977210926	0.01983547	0.012862377
5	Renewable, water	MJ	1.575606363	0.038232615	0.024647544
6	Renewable, wind, solar, geothe	MJ	2.433813554	0.009874357	0.006750884

**Waste categories & output flows LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at MLG plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Non-hazardous waste	kg	1.03923085	0.298790165	0.032043943
2	Hazardous waste	kg	6.9472E-05	1.54566E-05	5.90503E-06
3	Radioactive waste	kg	0.00029827	3.85304E-05	3.34376E-05
4	Components for re-use	kg	0	0	0
5	Materials for recycling	kg	0	0	0
6	Materials for energy recovery	kg	0	0	0
7	Exported energy	MJ	0	0	0

**Core Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Global warming potential (GWP)	kg CO2-eq	18.5197911	0.292168244	0.085775925
2	Depletion potential of the stratospheric ozone layer	kg CFC 11-eq	7.33744E-07	5.20173E-08	4.28934E-08
3	Acidification potential of land and water	kg SO2-eq	0.08614274	0.001478758	0.00061716
4	Eutrophication potential	kg PO4 3--eq	0.027032407	0.000350187	0.000119985
5	Photochemical oxidation	kg C2H4 eq	0.003144251	4.45763E-05	2.67979E-05
6	Abiotic depletion potential for nonfossil resources	kg Sb-eq	0.000293653	1.00651E-06	3.61638E-07
7	Abiotic depletion potential for fossil resources	MJ	152.4139265	4.333216876	3.747668769

**Additional Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Total Module (A1-A3)	Module C2	Module C4
1	Particulate matter emission	Disease incidence	7.56561E-07	2.95054E-08	9.26883E-09
2	Ionizing radiation human health	kBq U235 eq.	0.561093051	0.01999896	0.016882523
3	freshwater ecotoxicity - FETP100	CTUe	508.94438	3.678295949	2.178768544
4	human toxicity - cancer	CTUh	7.97577E-09	1.79161E-10	5.0979E-11
5	human toxicity - non cancer effects	CTUh	3.25174E-07	4.45392E-09	1.15709E-09
6	Land use related impact	dimensionless	121.0067058	2.658582838	9.293545917
7	Water use	m3	5.149290541	0.019798977	0.226286461

**Parameter describing resource use- LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Module (A1-A3)	Module C2	Module C4
1	Non renewable, fossil	MJ	162.0807074	4.605349106	3.984574749
2	Non-renewable, biomass	MJ	0.020530682	0.000185253	0.000857026
3	Non-renewable, nuclear	MJ	6.110659673	0.05238612	0.04181116
4	Renewable, biomass	MJ	5.179849945	0.014661	0.009500405
5	Renewable, water	MJ	3.375118036	0.028258889	0.018205161
6	Renewable, wind, solar, geothe	MJ	1.499531545	0.007298438	0.004986336

**Waste categories & output flows LCIA for 1 m2 of Vnext Panel of thickness 50 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Non-hazardous waste	kg	2.34116158	0.220844905	0.023668287
2	Hazardous waste	kg	0.00025247	1.14245E-05	4.36157E-06
3	Radioactive waste	kg	0.00039791	2.8479E-05	2.46977E-05
4	Components for re-use	kg	0	0	0
5	Materials for recycling	kg	0	0	0
6	Materials for energy recovery	kg	0	0	0
7	Exported energy	MJ	0	0	0

**Core Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Global warming potential (GWP)	kg CO2-eq	25.0491761	0.395286447	0.116130029
2	Depletion potential of the stratospheric ozone layer	kg CFC 11-eq	9.84742E-07	7.03763E-08	5.80723E-08
3	Acidification potential of land and water	kg SO2-eq	0.116480816	0.002000672	0.000835558
4	Eutrophication potential	kg PO4 3--eq	0.036553813	0.000473782	0.000162445
5	Photochemical oxidation	kg C2H4 eq	0.004251039	6.03092E-05	3.6281E-05
6	Abiotic depletion potential for nonfossil resources	kg Sb-eq	0.000396907	1.36174E-06	4.89614E-07
7	Abiotic depletion potential for fossil resources	MJ	206.0728786	5.862587538	5.073881574

**Additional Environmental impact indicators- LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Total Module (A1-A3)	Module C2	Module C4
1	Particulate matter emission	Disease incidence	1.02285E-06	3.99191E-08	1.25489E-08
2	Ionizing radiation human health	kBq U235 eq.	0.758468499	0.027057417	0.022856855
3	freshwater ecotoxicity - FETP100	CTUe	688.2691975	4.976518048	2.949784053
4	human toxicity - cancer	CTUh	1.0782E-08	2.42394E-10	6.90193E-11
5	human toxicity - non cancer effects	CTUh	4.3966E-07	6.02589E-09	1.56656E-09
6	Land use related impact	dimensionless	163.6795661	3.596906192	12.58231564
7	Water use	m3	6.960796418	0.026786851	0.306363976

**Parameter describing resource use- LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Module (A1-A3)	Module C2	Module C4
1	Non renewable, fossil	MJ	219.1413028	6.230766438	5.39462307
2	Non-renewable, biomass	MJ	0.027747377	0.000250636	0.001160307
3	Non-renewable, nuclear	MJ	8.257150559	0.070875339	0.056607156
4	Renewable, biomass	MJ	7.001545674	0.01983547	0.012862377
5	Renewable, water	MJ	4.561824495	0.038232615	0.024647544
6	Renewable, wind, solar, geothe	MJ	2.027224323	0.009874357	0.006750884

**Waste categories & output flows LCIA for 1 m2 of Vnext Panel of thickness 75 mm manufactured at JJR plant**

S.no	Impact category	Reference unit	Total (A1-A3)	Module C2	Module C4
1	Non-hazardous waste	kg	1.03042678	0.298790165	0.032043943
2	Hazardous waste	kg	5.014E-05	1.54566E-05	5.90503E-06
3	Radioactive waste	kg	0.00028666	3.85304E-05	3.34376E-05
4	Components for re-use	kg	0	0	0
5	Materials for recycling	kg	0	0	0
6	Materials for energy recovery	kg	0	0	0
7	Exported energy	MJ	0	0	0

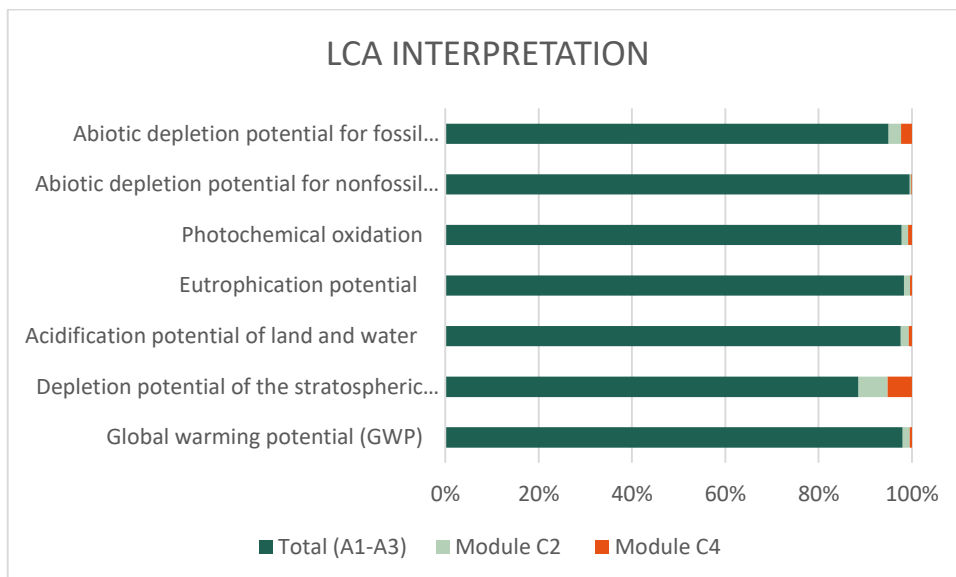


## LCA Interpretation

50mm Vnext Panel manufactured at JJR is considered for the below study.

As we can see in from the graph given below, the product Life cycle stage (A1-A3) has the largest impact for all the impact categories analysed, representing 98% of the total impact of the product life cycle.

C2 represents an intermediate impact for all the impact categories analysed. C2 and C4 indicates considerable impact in depletion potential of the stratospheric ozone layer.



## Glossary:

1. Life Cycle Assessment (LCA):  
Life cycle assessment is a methodology for assessing environmental impacts associated with all the stages of the life cycle of a commercial product, process, or service.
2. Cut-off criteria:  
Specification of the amount of material or energy flow or the level of environmental significance associated with unit processes or product system to be excluded from a study.
3. Life cycle inventory analysis result (LCI result):  
Outcome of a life cycle inventory analysis that catalogues the flows crossing the system boundary and provides the starting point for life cycle impact assessment.
4. Allocation:  
Partitioning the input or output flows of a process or a product system between the product system under study and one or more other product systems
5. The International EPD® System  
A programme for Type III environmental declarations, maintaining a system to verify and register EPDs as well as keeping a library of EPDs and PCRs in accordance with ISO 14025. ([www.environdec.com](http://www.environdec.com)).
6. REACH Regulation:  
European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals.

## References

1. General Programme Instructions of the International EPD® System. Version 3.01.
2. PCR 2019:14 Construction Products Version 1.11
3. EN15804:2012+A2:2019
4. ISO 14025: 2006 (Environmental labels and declarations — Type III environmental declarations — Principles and procedures)
5. ISO 14040: 2006 (Environmental management — Life cycle assessment — Principles and framework),
6. ISO 14044: 2006 (Environmental management — Life cycle assessment — Requirements and guidelines)

## Information related to Sector EPD

Individual EPD®.

## Differences versus previous versions

First version of EPD®.

