



EcoReview
Part of the solution.

Environmental Product Declaration

Declaration according to

EN 15804+A2 &

NMD Assessment Method 1.2



Environmental Product Declaration

According to EN 15804+A2

(conform NMD AM 1.2 & NL-PCR Cement)



**Heidelberg
Materials**

**Product Declaration
Unit (DU or FU)**
Declared by
Owner of Declaration
Verifier

CEM III/A 52,5 N (Conform-PCR) - Grouped
1 ton
Heidelberg Materials Nederland Cement B.V.
Heidelberg Materials Nederland Cement B.V.
SGS Intron B.V.

LCA study by
Calculation number
Issue Date
Expiry Date

EcoReview B.V.
2025.057.
20-06-2025
20-06-2030

General Information



Owner of Declaration

Name	Heidelberg Materials Nederland Cement B.V.
Street	Pettelaarpark 30
Postal Code	5216PD
City	's Hertogenbosch
Contact	Technische Voorlichting
Phone	073 - 640 1220
E-mail	tv-cement-nl@heidelbergmaterials.com

Declaration for

Calculation Number	2025.057.
Issue Date	20-06-2025
Expiry Date	20-06-2030
Product	CEM III/A 52,5 N (Conform-PCR) - Grouped
Declared / Functional Unit	1 ton
Reference Service Life	Not applicable
Scalable product	Not applicable
Geographical Representation	Produced (A1-A3) at Heidelberg, Gent 1 & Rotterdam and sold on the Dutch market.
Product Description	Cement with specific properties is produced by intergrinding or blending cement clinker, gypsum and other materials.

Declaration Information

This Environmental Product Declaration is in accordance with EN 15804+A2. This certificate is based on an LCA-dossier developed according to ISO14040 and EN15804+A2 and the NMD Assessment Method 1.2. EPD of construction products may not be comparable if they do not comply to comparable norms and standards. Substances of Very High Concern (SVHC) that are listed on the 'Candidate List of Substances of Very High Concern for authorization' are declared when contents exceed the limits for registration with ECHA.

This LCA study was conducted by: Roel van Oosterhout, EcoReview B.V.

Demonstration of Verification

Statement	CEN standard EN15804 serves as the core PCR. Verification of the claim and data was carried out independently.
-----------	--

Verifier Name	External
Signature	Bob Roijen, SGS Intron B.V.



LCA Information

LCA Standard

Product Category Rules (PCR)

Additional PCR

Standard Database

System Model

LCA Software

Year of Data Collection

ISO 14040:2006

EN 15804+A2 + NMD Assessment Method 1.2

NL PCR Cement (04-2023)

Ecoinvent 3.6 + NMD 3.9

Allocation, cut-off by classification

SimaPro 9.6.0.1

2023

Scope of Declaration

Lifecycle Stage	Module	Declared	Description
Production stage	A1	X	Raw Material supply
	A2	X	Transport
	A3	X	Manufacturing
Construction stage	A4	MND	Transport
	A4	MND	Installation
Use stage	B1	MND	Use
	B2	MND	Maintenance
	B3	MND	Repair
	B4	MND	Replacement
	B5	MND	Refurbishment
	B6	MND	Operational Energy Use
	B7	MND	Operational Water Use
End-of-Life stage	C1	MND	Deconstruction
	C2	MND	Transport
	C3	MND	Waste Processing
	C4	MND	Disposal
Benefits and loads beyond the system boundaries	D	MND	Reuse, Recycle, Recycling potential

X = Module Declared

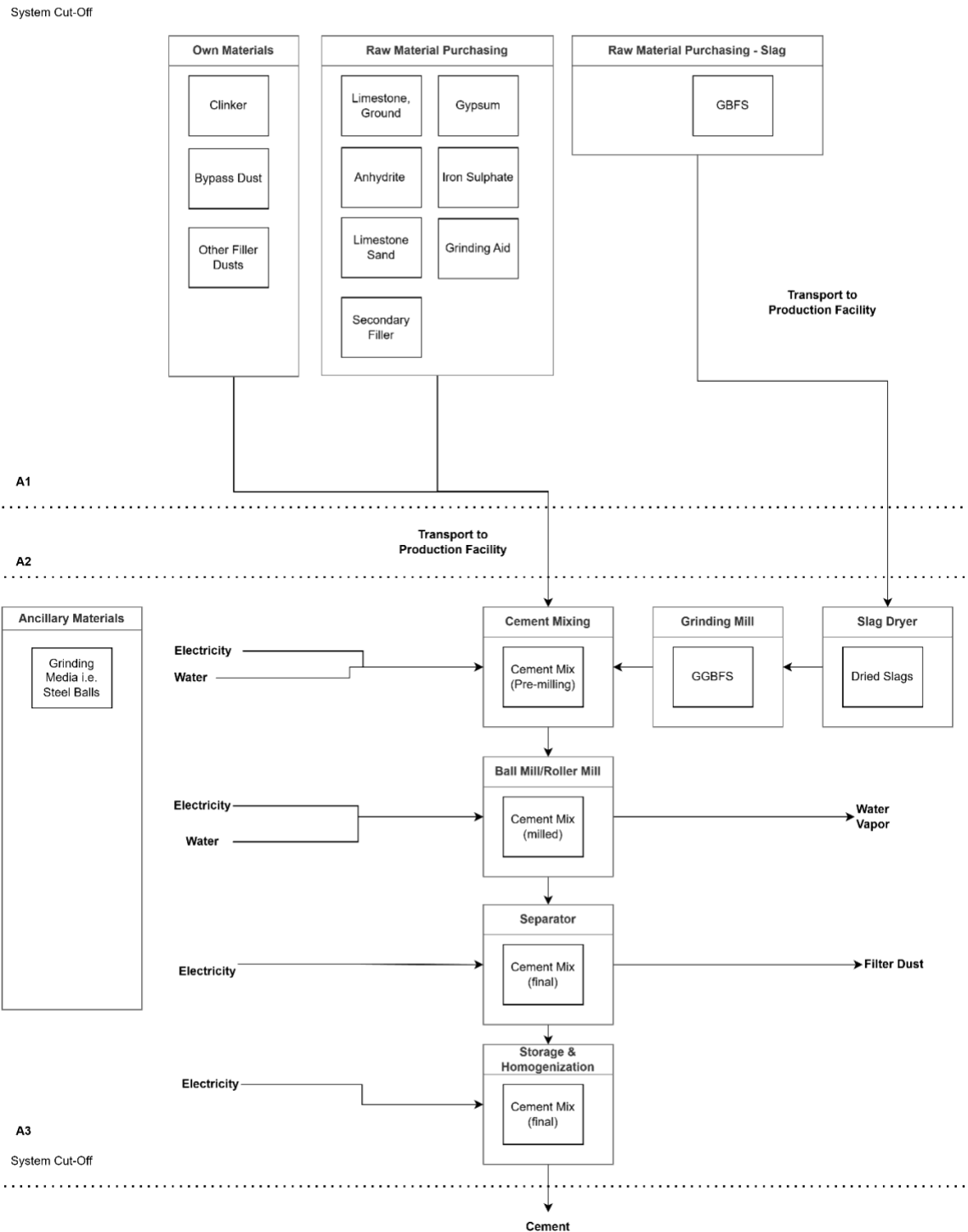
MND = Module Not Declared



Process Diagram

Cement Production Process Diagram

Organisation: Heidelberg Materials - Lixhe, Gent 1 & 2, Ijmuiden, Rotterdam



Environmental Product Declaration

Environmental declaration according to EN 15804+A2 & NMD Assessment Method 1.2



Detailed Product Description

General Product Information

Cement is a hydraulic binder, mainly used for concrete, mortar and cement screed. Cement with specific properties is produced by intergrinding or blending cement clinker, gypsum and other purchased materials like limestone. The origin of the cement clinker used for the cement production is the plant Lixhe & Antoing in Belgium.

Calculation Rules

The additional PCR of NL PCR Cement has been followed, which dictates specific NMD datasets for granulated blast furnace slag (ground or non-ground) and fly ash. These datasets allocate impact on these materials through economic allocation.

Declaration of Average Environmental Performance

This EPD is an averaged EPD generated based on a weighted average of product sold in 2023 by Heidelberg. Production locations are the production locations of Gent 1 & Rotterdam.

In order for the averaging to be valid, grouping requirements set by both NMD Assessment Method 1.2 and NL PCR Cement were attained through verification. For further elaboration:

1. In case the deviation on a singular impact category between the average and a location specific product exceeded 20%, the effect on the single score (ECI) never exceeded 20% (NMD Assessment Method 1.2)
2. The deviation between the average and location specific product never exceeded 20% on climate change, fossil and the ECI scores (NL PCR Cement).

Components (> 1%)

The division of components described below is indented to enable users of this EPD to understand the composition of the product for safe and effective installation, use and disposal of the product.

Component	Mass %
Cement Mix	100%
Other	0%

Example Image



Figure: Representation of product.

Environmental Product Declaration

Environmental declaration according to EN 15804+A2 & NMD Assessment Method 1.2



Results EN15804+A1

Set 1	Unit	A1	A2	A3	A1-A3
ECI	euro	31,51	1,18	5,10	37,79
ECI	euro	3,15E+01	1,18E+00	5,10E+00	3,78E+01
Core Impact Indicators					
ADPE	kg Sb eq	2,59E-04	8,70E-05	1,20E-04	4,66E-04
ADPF	kg Sb eq	7,25E-01	6,12E-02	5,21E-01	1,31E+00
GWP	kg CO2 eq	3,66E+02	9,85E+00	6,82E+01	4,44E+02
ODP	kg CFC-11 eq	6,06E-06	1,43E-06	5,77E-06	1,33E-05
POCP	kg C2H4	1,58E-01	5,83E-03	1,00E-02	1,74E-01
AP	kg SO2 eq	1,11E+00	6,99E-02	1,06E-01	1,29E+00
EP	kg PO4--- eq	1,25E-01	1,55E-02	2,20E-02	1,63E-01
Toxicity Indicators for Dutch Market					
HTP	kg 1,4-DB eq	7,44E+01	2,50E+00	9,89E+00	8,68E+01
FAETP	kg 1,4-DB eq	5,90E-01	6,32E-02	1,56E-01	8,09E-01
MAETP	kg 1,4-DB eq	4,39E+03	2,04E+02	6,63E+02	5,25E+03
TETP	kg 1,4-DB eq	5,62E-01	1,19E-02	1,07E-01	6,81E-01

ECI = Environmental Cost Indicator (Milieukosten Indicator (MKI) in Dutch); ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; POCP = Formation potential of tropospheric ozone photochemical oxidants; AP = Acidification potential of land and water; EP = Eutrophication potential; HTP = Human toxicity potential; FAETP = Freshwater aquatic ecotoxicity potential; MAETP = Marine aquatic ecotoxicity potential; TETP = Terrestrial ecotoxicity potential; ECI = Environmental Costs Indicator; ADPF = Abiotic depletion potential for fossil resources



Results EN15804+A2

Set 2	Unit	A1	A2	A3	A1-A3
ECI	euro	53,87	1,89	9,54	65,30
ECI	euro	5,39E+01	1,89E+00	9,54E+00	6,53E+01
GWP-Total	kg CO2 eq	3,71E+02	9,96E+00	6,97E+01	4,50E+02
GWP-f	kg CO2 eq	3,71E+02	9,93E+00	6,90E+01	4,50E+02
GWP-b	kg CO2 eq	-1,58E-01	1,54E-02	6,57E-01	5,15E-01
GWP-luluc	kg CO2 eq	4,14E-02	1,77E-02	2,96E-02	8,86E-02
ODP	kg CFC11 eq	5,13E-06	1,78E-06	5,38E-06	1,23E-05
AP	mol H+ eq	1,40E+00	9,73E-02	1,35E-01	1,64E+00
EP-fw	kg P eq	5,26E-03	1,18E-04	3,03E-03	8,40E-03
EP-m	kg N eq	2,69E-01	4,12E-02	3,12E-02	3,42E-01
EP-t	mol N eq	3,48E+00	4,53E-01	3,78E-01	4,31E+00
POCP	kg NMVOC eq	9,09E-01	1,17E-01	9,63E-02	1,12E+00
ADP-mm	kg Sb eq	2,59E-04	8,70E-05	1,20E-04	4,66E-04
ADP-f	MJ	1,39E+03	1,27E+02	1,10E+03	2,62E+03
WDP	m3 depriv.	1,46E+01	5,88E-01	7,46E+00	2,27E+01
PM	disease inc.	9,40E-06	2,61E-07	4,65E-07	1,01E-05
IR	kBq U-235 eq	5,71E+00	5,50E-01	4,22E+00	1,05E+01
ETP-fw	CTUe	2,38E+03	1,12E+02	7,00E+02	3,19E+03
HTP-c	CTUh	2,33E-07	4,70E-09	1,47E-08	2,52E-07
HTP-nc	CTUh	3,44E-06	7,98E-08	3,42E-07	3,86E-06
SQP	Pt	3,33E+02	9,76E+01	1,99E+02	6,29E+02

ECI = Environmental Cost Indicator (Milieukosten Indicator (MKI) in Dutch); GWP-total = Climate change; GWP-f = Climate change – Fossil; GWP-b = Climate change – Biogenic; GWP-luluc = Climate change – Land use and LU change; ODP = Ozone depletion; AP = Acidification; EP-fw = Eutrophication, freshwater; EP-m = Eutrophication, marine; EP-T = Eutrophication, terrestrial; POCP = Photochemical ozone formation; ADP-mm = Resource use, minerals and metals; ADP-f = Resource use, fossils; WDP = Water use; PM = Particulate matter; IR = Ionising radiation; ETP-fw = Ecotoxicity, freshwater; HTP-c = Human toxicity, cancer; HTP-nc = Human toxicity, non-cancer; SQP = Land use;



Results Parameters

Parameter	Unit	A1	A2	A3	A1-A3
Resource Use					
PERE	MJ	5,37E+01	2,89E+00	8,65E+01	1,43E+02
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,37E+01	2,89E+00	8,65E+01	1,43E+02
PENRE	MJ	1,46E+03	1,35E+02	1,18E+03	2,77E+03
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,46E+03	1,35E+02	1,18E+03	2,77E+03
PET	MJ	1,51E+03	1,38E+02	1,26E+03	2,91E+03
SM	kg	2,03E+01	0,00E+00	0,00E+00	2,03E+01
RSF	MJ	3,91E+02	0,00E+00	0,00E+00	3,91E+02
NRSF	MJ	7,28E+02	0,00E+00	0,00E+00	7,28E+02
FW	m3	4,22E-01	2,37E-02	4,85E-01	9,31E-01
Waste Categories					
HWD	kg	3,67E-03	3,29E-04	7,19E-04	4,72E-03
NHWD	kg	6,51E+00	1,08E+00	2,64E+00	1,02E+01
RWD	kg	5,22E-03	8,24E-04	3,85E-03	9,89E-03
Output Flows					
CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE-E	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE-T	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; PERM = Use of renewable primary energy resources used as raw materials [MJ]; PERT = Total use of renewable primary energy resources [MJ]; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; PENRM = Use of non-renewable primary energy resources used as raw materials [MJ]; PENRT = Total use of non-renewable primary energy resources [MJ]; PET = Total Energy [MJ]; SM = Use of secondary material [kg]; RSF = Use of renewable secondary fuels [MJ]; NRSF = Use of non-renewable secondary fuels [MJ]; FW = Use of net fresh water [m3]; HWD = Hazardous waste disposed [kg]; NHWD = Non-hazardous waste disposed [kg]; RWD = Radioactive waste disposed [kg]; CRU = Components for re-use [kg]; MFR = Materials for recycling [kg]; EIA = Materials for energy recovery [kg]; EE = Exported energy [MJ]



Biogenic Carbon Content

In the table below, information describing the biogenic carbon content at factory gate (A1-A3) is described.

Biogenic Carbon Content	Amount (in kg C)
Biogenic Carbon in Product	0,00
Biogenic Carbon in Packaging	0,00
Note: 1 kg biogenic carbon (C) is equivalent to 44/12 kg CO ₂	

If the mass of biogenic carbon containing materials in the product is less than 5% of the mass of the product, the declaration of biogenic carbon may be omitted (= 0 kg).

If the mass of biogenic carbon containing materials in the packaging is less than 5% of the mass of the product, the declaration of biogenic carbon may be omitted (= 0 kg).

GWP with Secondary Fuels

In this section, the GWP values including CO₂ emissions from waste secondary fuels are declared. These values serve an indicative purpose and are not supposed to be used in successive life cycle analyses.

GWP Value	Amount (in kg CO ₂)
EN15804+A1 -> GWP	4,55E+02
EN15804+A2 -> GWP-Total	4,60E+02



References

CML - Department of Industrial Ecology, CML-IA Characterisation Factors, Dated August 2016, Leiden University, Leiden, Netherlands Available at: <https://www.universiteitleiden.nl/en/research/research-output/science/cml-ia-characterisation-factors>.

PRé Sustainability - Simapro 9.6.0.1

EN 15804: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products', I.S. EN 15804:2012+A1:2013 and EN 15804:2019+A2.

ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006.

ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006.

ISO 14025: Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures', International Organization for Standardization, ISO14025:2006.

NMD Environmental Performance Assessment Method for Buildings version 1.2 (December 2024)

SGS Intron B.V. (2023, 04 05). Product Category Rules voor cement en grondstoffen voor cementproductie ("NL-PCR")

