

## Environmental Product Declaration

### Declared Units:

The production of dry mortar. The products included are:

Scan Mørtel / Promix M&P M5

Scan Mørtel M&P M10

Scan Mørtel KC 35/65 / Scan Mørtel KC50/50

Scan Mørtel B-20

Scan Mørtel M&P M15

Scan Mørtel / Promix B-30

Scan Ekspanderende K1.50 / Scan Ekspanderende K4.50

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## Company Information

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**MRPI code:**  
20.1.00043.005

**Date of issue:**  
10-2-2016

**End of validity:**  
10-2-2021

## Scope of the declaration

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This EPD (MRPI – certificate) is verified by IVAM UvA BV (Harry van Ewijk). The LCA is executed by SGS INTRON. The data on this MRPI – certificate are based on the European Standard EN 15804:2012 and on NL nationale guidelines from the SBK protocol version 2.0 of November 2014 and the SBK – review protocol 2014, and the MRPI review protocol 2011. The verification meets the standard of the ECO platform verification. A detailed description of the results and the methodology of the LCA is included in SGS INTRON report A884260/R20150391 of 12 november 2015.

## Accountability

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CEN standard EN 15804 serves as the core PCR  
Independent verification of the declaration, according to EN ISO 14025:2010, External.  
Third party verifier: Harry van Ewijk (IVAM UvA BV).

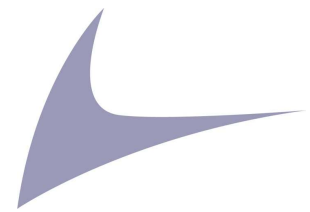
The data on this EPD (MRPI®-certificate) are based on the guidelines from the SBK protocol of November 2011 and the MRPI®-review protocol for the NEN8006:2004, version 2.0.

As a general rule, a comparison or evaluation of EPD data is only possible when all of the data records to be compared have been drawn up in accordance with EN 15804 and the building context and/or product-specific performance features are taken into consideration.

## Visual representation



## Product description



Material composition (>1%wt).	%
Binder	15 – 40 %
Aggregates	50 – 85 %
Filler	0 – 10 %
Packaging*	-3 %

\* per ton mortar: 3 kg (wood) pallet and 3,4 kg PE (foil, packaging straps)

## Sourcing raw materials

Material composition (>1%wt raw materials)	Source
Binder	MRPI EPD Cement & Betoncentrum CEM I, 2011 (MRPI code 20.2.000.22.004)
Binder	MRPI EPD Cement & Betoncentrum CEM III, 2011 (MRPI code 20.2.00023.004)
Aggregates (sand)	MRPI EPD Cascade "Industrial sand", 2015 (MRPI code 20.2.00023.004)
Aggregates (gravel)	MRPI EPD Cascade "Gravel", 2015 (MRPI code 30.1.00018.005)
Filler (milled limestone)	Ecoinvent v2.2
Remainder	Ecoinvent v2.2
Packaging (PE packaging foil, pallets)	Ecoinvent v2.2

## Environmental profile and ratings representative

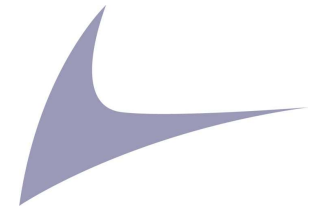
Representative for production in the Netherlands by:  
Manufacturer: Remix Droge Mortel BV, site Borger (NL). The production stage (A1-A3) includes the transport of the mortar to the port of Eemshaven.



Environmental product declaration  
 Product stage (A1-3)

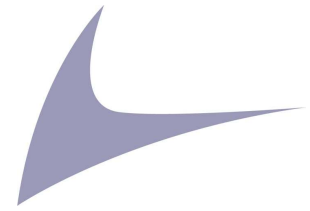
Impact category	Unit	Scan Mørtel	Scan Mørtel	Scan Mørtel	Scan Mørtel	Scan Mørtel	Scan Mørtel	Scan
		Promix M&P M5 A1-3	M&P M10 A1-3	KC 35/65 KC50/50 A1-3	B-20 A1-3	M&P M15 A1-3	Promix B-30 A1-3	Ekspanderende de K1.50 Scan Ekspanderende de K4.50 A1-3
Abiotic depletion, non fuel	kg Sb	1,57E-04	1,50E-04	1,54E-04	1,77E-04	1,57E-04	1,77E-04	3,07E-04
Abiotic depletion, fuel	kg Sb	5,00E-01	4,92E-01	4,97E-01	5,30E-01	4,84E-01	5,42E-01	6,38E-01
Abiotic depletion, fuel	MJ	1,04E+03	1,02E+03	1,03E+03	1,10E+03	1,01E+03	1,13E+03	1,33E+03
Global warming	kg CO2	1,80E+02	1,71E+02	1,75E+02	1,53E+02	1,81E+02	2,00E+02	3,55E+02
Ozone layer depletion	kg CFK-11	4,67E-06	4,57E-06	4,63E-06	4,64E-06	4,41E-06	5,10E-06	6,22E-06
Photochemical ozon creation	kg ethene	5,91E-02	5,68E-02	5,80E-02	5,29E-02	5,90E-02	6,59E-02	1,06E-01
Acidification (soil and water)	kg SO2	5,64E-01	5,36E-01	5,50E-01	4,78E-01	5,69E-01	6,47E-01	1,15E+00
Eutrophication	kg PO4-3	8,18E-02	7,79E-02	8,00E-02	6,59E-02	8,13E-02	9,36E-02	1,62E-01
Human toxicity	kg 1,4 DB	1,89E+01	1,83E+01	1,86E+01	1,76E+01	1,84E+01	2,22E+01	2,99E+01
Ecotoxicity, fresh water	kg 1,4 DB	4,86E-01	4,76E-01	4,82E-01	4,41E-01	4,51E-01	5,33E-01	6,50E-01
Ecotoxicity, marine water (MAETP)	kg 1,4 DB	3,25E+03	3,18E+03	3,22E+03	3,63E+03	3,17E+03	3,62E+03	4,45E+03
Ecotoxicity, terrestrial	kg 1,4 DB	2,91E-01	2,83E-01	2,87E-01	2,65E-01	2,76E-01	3,51E-01	4,33E-01
Parameter	Unit	A1-3	A1-3	A1-3	A1-3	A1-3	A1-3	A1-3
Renewable primary energy ex. raw material	MJ	1,17E+02	1,10E+02	1,13E+02	9,43E+01	1,19E+02	1,34E+02	2,53E+02
Renewable primary energy used as raw material	MJ	7,30E+01	7,30E+01	7,30E+01	7,21E+01	7,21E+01	7,34E+01	7,26E+01
Renewable primary energy total	MJ	1,90E+02	1,83E+02	1,86E+02	1,66E+02	1,91E+02	2,07E+02	3,26E+02
Non-renewable primary energy ex. raw material	MJ	1,95E+03	1,88E+03	1,92E+03	1,79E+03	1,94E+03	2,16E+03	3,32E+03
Non-renewable primary energy used as raw material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable primary energy total	MJ	1,95E+03	1,88E+03	1,92E+03	1,79E+03	1,94E+03	2,16E+03	3,32E+03
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m3	5,83E+01	5,65E+01	5,76E+01	4,86E+01	5,34E+01	9,13E+01	8,62E+01
Hazardous waste disposed	kg	4,91E+01	4,75E+01	4,86E+01	4,17E+01	4,15E+01	6,17E+01	6,90E+01
Non hazardous waste disposed	kg	4,40E+00	4,30E+00	4,36E+00	4,22E+00	4,14E+00	6,09E+00	6,13E+00
Radioactive waste disposed	kg	7,81E-02	7,66E-02	7,80E-02	6,37E-02	6,30E-02	1,26E-01	8,37E-02
Components for re-use	kg	1,76E-01	1,72E-01	1,76E-01	1,33E-01	1,31E-01	2,95E-01	1,84E-01
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

## Environmental product declaration end of life stage (C1-4)

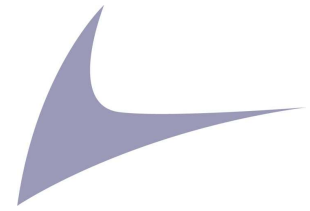


Impact category	Unit	C1	C2	C3-4
Abiotic depletion, non fuel	kg Sb	MND	MND	MND
Abiotic depletion, fuel	kg Sb	MND	MND	MND
Abiotic depletion, fuel	MJ	MND	MND	MND
Global warming	kg CO2	MND	MND	MND
Ozone layer depletion	kg CFK-11	MND	MND	MND
Photochemical ozon creation	kg ethene	MND	MND	MND
Acidification (soil and water)	kg SO2	MND	MND	MND
Eutrophication	kg PO4-3	MND	MND	MND
Human toxicity	kg 1,4 DB	MND	MND	MND
Ecotoxicity, fresh water	kg 1,4 DB	MND	MND	MND
Ecotoxicity, marine water (MAETP)	kg 1,4 DB	MND	MND	MND
Ecotoxicity, terrestrial	kg 1,4 DB	MND	MND	MND
Parameter	Unit	C1	C2	C3-4
Renewable primary energy ex. raw materials	MJ	MND	MND	MND
Renewable primary energy used as raw materials	MJ	MND	MND	MND
Renewable primary energy total	MJ	MND	MND	MND
Non-renewable primary energy ex. raw materials	MJ	MND	MND	MND
Non-renewable primary energy used as raw materials	MJ	MND	MND	MND
Non-renewable primary energy total	MJ	MND	MND	MND
Use of secondary material	kg	MND	MND	MND
Use of renewable secondary fuels	MJ	MND	MND	MND
Use of non-renewable secondary fuels	MJ	MND	MND	MND
Use of net fresh water	m3	MND	MND	MND
Hazardous waste disposed	kg	MND	MND	MND
Non hazardous waste disposed	kg	MND	MND	MND
Radioactive waste disposed	kg	MND	MND	MND
Components for re-use	kg	MND	MND	MND
Materials for recycling	kg	MND	MND	MND
Materials for energy recovery	kg	MND	MND	MND
Exported energy	MJ	MND	MND	MND

## Environmental product declaration benefits and loads beyond the system boundary (D)



Impact category	Unit	D
Abiotic depletion, non fuel	kg Sb	MND
Abiotic depletion, fuel	kg Sb	MND
Abiotic depletion, fuel	MJ	MND
Global warming	kg CO2	MND
Ozone layer depletion	kg CFK-11	MND
Photochemical ozon creation	kg ethene	MND
Acidification (soil and water)	kg SO2	MND
Eutrophication	kg PO4-3	MND
Human toxicity	kg 1,4 DB	MND
Ecotoxicity, fresh water	kg 1,4 DB	MND
Ecotoxicity, marine water (MAETP)	kg 1,4 DB	MND
Ecotoxicity, terrestrial	kg 1,4 DB	MND
Parameter	Unit	D
Renewable primary energy ex. raw materials	MJ	MND
Renewable primary energy used as raw materials	MJ	MND
Renewable primary energy total	MJ	MND
Non-renewable primary energy ex. raw materials	MJ	MND
Non-renewable primary energy used as raw materials	MJ	MND
Non-renewable primary energy total	MJ	MND
Use of secondary material	kg	MND
Use of renewable secondary fuels	MJ	MND
Use of non-renewable secondary fuels	MJ	MND
Use of net fresh water	m3	MND
Hazardous waste disposed	kg	MND
Non hazardous waste disposed	kg	MND
Radioactive waste disposed	kg	MND
Components for re-use	kg	MND
Materials for recycling	kg	MND
Materials for energy recovery	kg	MND
Exported energy	MJ	MND



## Qualitative information + Related certificates

- EN 998-1

- EN 998-2

### Data quality:

Primary data collection at production plant, Borger, by Remix Droge Mortel BV. Data collected in 2013 over production 2012. In 2015 Remix reassessed the representativeness of the data. None of the raw materials have been excluded from the composition of the mortars.

Data collection by Remix based on averages complete year (2012)

## Life cycle stages

