saveto
Construction Materials

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804 for :

Pre Mix Plasters

Programme :	The International EPD® System, www.environdec.com
Programme Operator :	EPD International AB
EPD registration number :	S-P-04335
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

ECO PLATFORM EPD EN 15804 VERIFIED

EPD®
THE INTERNATIONAL EPD® SYSTEM

Synaxis Saveto LLC. P.O. Box 111902, Abu Dhabi, United Arab Emirates

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1.0 DOCUMENT INFORMATION

Program	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com
Product Category Rules (PCR)	PCR 2012:01 Construction Products and Construction Services, Version 2.33, 2020-09-18
Product Group Classification	UN CPC 37410
PCR Review Conducted by	Martin Erlandsson, IVL Swedish Environmental Research Institute, martin.erlandsson@ivl.se
Independent third-party verification of the declaration and data, according to ISO 14025:2006	☐ EPD Process Certification ☒ EPD Verification
Third party verifier	Professor Vladimír Kocí Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier	☐ Yes ☒ No
Geographical Scope	The information collected comes from the Abu Dhabi, UAE factory producing Plasters.

2.0 INTRODUCTION

This report contains the environmental performance of the manufacturing process of Pre Mix Plasters manufactured by Al Synaxis Saveto LLC. This Environmental Product Declaration (EPD) has been developed using the Life Cycle Assessment (LCA) methodology. The environmental impact values calculated are expressed to 1 Kg of Pre Mix Plasters.

The assessed life cycle includes all phases in the manufacturing process of Pre Mix Plasters in a "Cradle to Gate with options" scope. This LCA covers from the extraction and production of all raw materials like White Limestone, Grey Limestone, Dune Sand, White Cement etc. and all others manufacturing processes up to the distribution of final product to the customer.

This EPD has been conducted according to the program operator regulations and it has been certified and registered in The International EPD System. The EPD regulation is a system for the international use of Type III Environmental Declarations, according to ISO 14025:2010. Not only the system, but also its applications, is described in the Programmer's Product Category Rules (PCR). This report has been made following the specifications given in the European standard EN 15804:2012+A2:2019.

The direct and indirect emissions and the corresponding environmental impacts calculated in the life cycle assessments and reported in this EPD include, amongst other, the calculation of the environmental impacts to air, land and water, according to the selected Product Category Rules.

3.0 GENERAL INFORMATION

In 1981, Saudi VETONIT Co. Ltd. (SAVETO) was established as a Saudi European JV, in partnership with the leading manufacturers of building finishing materials and specialty chemicals in northern Europe. In 1991, Rashed Al Rashed Group assumed full ownership of SAVETO, becoming the first Saudi Company to offer a full range of advanced construction chemicals and building materials to the Middle East and North Africa markets (MENA region) under SAVETO & VETONIT brands.

Synaxis Saveto's focus on the MENA region enabled the company to be the leading manufacturer in the region offering premium quality products that are best in class when it comes to compatibility with the regional environmental conditions, integrating an extensive distribution network, world class technical support and customer service; Saveto Group provides the ultimate formula of success through servicing the construction market in three core business Segments.

Saveto is the first supplier to provide bulk supply of plaster products to projects with a complete end-to-end support of products, equipment and machinery as well as logistical support. The advanced plaster systems provided by Saveto Plasters increase efficiency, decrease waste all while being green low VOC products.

Saveto works on continuous evolution of R&D work as well as literature creation in accordance to international standards and cooperation with international organizations. Saveto is a proud member of:

- **ACI** : American Concrete Institute as an Organizational Member.
- **ASTM** : American Society for Testing Material as an Organizational Member.
- **ICRI** : International Concrete Repair Institute as a Supporting Member.

SAVETO prides itself in manufacturing environmentally friendly products by extracting and manufacturing building materials as close as possible to the building site. By using locally sourced products and conveniently located manufacturing site, SAVETO is able to minimize the energy embedded in the transportation of building material and supply ready to use premixed construction components manufactured off site.

SAVETO produces plaster and mortar materials in a special factory with dedicated facilities on batching and blending of all the necessary ingredients in highly controlled process.

Advantages of SAVETO Plaster System

- Premixed materials to exact ACTM Standards.
- Material contributes to LEED accreditation points.
- Greater productivity and efficiency of labor force.
- Inherently safe delivery method – lessens contractor liability.
- All materials are weighed prior to blending assuring consistency.
- Material in Silo and bags is protected against weathering (rain, dust storms…) spillage and theft.
- Environmentally friendly, re-useable silos, no dust or disposal of bafs, no waste of product.

3.1 Analyzed Product

The assessed system in this Environmental Product Declaration (EPD) comprises the full life cycle of **Pre Mix Plasters** by Synaxis Saveto LLC in its factory in Abu Dhabi. The assessment has been done using the production data from January 2020 – December 2020.

Sl No	Product Name
1	Spatter Dash-SB SDB210
2	Spatter Dash-MC SDM212
3	Plaster Mix-S PLS221
4	Plaster Mix-S PLS222
5	Premix Plaster LW
6	Premix Plaster S
7	Acoustic Plaster
8	Gypsum Plaster
9	Vetonit Render RND310
10	Vetonit Base WR EG
11	Vetonit Finish WR EG
12	Vetonit Putty WR
13	Vetotherm Flex
14	Vetotherm Plaster
15	Vetotouch Tyrolean
16	Vetotouch Europa
17	Vetotouch Graviatto
18	Vetotouch Marmo
19	Vetotouch Serene
20	Vetotouch Textura
21	Vetoset CA540
22	Vetonit Tile Grout
23	Vetotop CS536
24	Vetonit Masonry Mortar MMR510
25	Gypsum Veneer Plaster
26	Vetonit AAC Masonry Mortat AAC520
27	Saveto Premium Fix
28	Vetoproof CM740
29	Vetotile Bond

3.2 Applications

1 INDOOR PARKING ZONE
2 LIVINGROOM ZONE
3 KITCHEN ZONE
4 STONE FACADE ZONE

5 PLASTER APPLICATION ZONE
6 FACADE ZONE

3.3 Declared Unit

The Declared Unit of the Life Cycle Assessments is 1 Kg of Pre Mix Plaster product at the gate of the customer.

All direct and indirect environmental impacts, as well as the use of resources, are reported referred to this unit. This EPD presents separately the environmental impacts associated to the LCA of all the Pre Mix Plasters analyzed in this EPD.

3.4 System Boundaries

This EPD covers all product stages from "Cradle to Gate with options", this means that process in the life cycle from raw materials extraction, production and transport to final customers are included. Use and final disposal is not included in this LCA.

Synaxis Saveto LLC buys the raw materials White Limestone, Grey Limestone, Dune Sand, White Cement etc. from external suppliers. From this point Saveto controls all the manufacturing process: filling into hopper, sieve screening, drying, mixing etc. Saveto buy raw materials from GCC countries.

The procedures that are not controlled by the company, but are included in this environmental study, are:

- The manufacturing process of Pre Mix Plasters, Chemicals and other raw materials (these procedures can be considered "upstream" in this LCA).
- The extraction and production of fuels.
- The production of electricity.
- The production of the machinery, buildings, and vehicles.

All related direct and indirect environmental impacts related to these elements have been calculated and were included in the LCAs in this EPD.

The scope of this EPD is "cradle to gate with options".

Possible scopes of the LCA defined in the European standard EN 15804:2012+A2:2019 are:

Production Stage			Construction Process Stage		Use Stage						End of Life Stage					Resource Recovery Stage
Raw Materials	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
A1	**A2**	**A3**	**A4**	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	**X**	**X**	**X**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

X = Included, ND=Module not declared, NR= Module not relevant

Modules from A5 to D are not included (X refers to considered stage; NR refers to not relevant stage and ND to not declared stage).

Upstream Processes (A1: Raw Material Supply): Production for each product starts with mainly transported from GCC Countries and some locally sourced. 'Raw material supply' includes raw material extraction and pre-treatment processes before production.

Core Processes (A2: Transportation, A3: Manufacturing and A4: Transport): Transport is relevant for delivery of raw materials to the plant (White Limestone, Grey Limestone, Dune Sand, Gypsum Powder & chemicals, etc.) and the transport of materials within the plant. Pre Mix Plasters production starts with filling into hopper, sieve screening, drying, mixing etc. and packaging. Electricity and Diesel are consumed at Pre Mix Plasters production process.

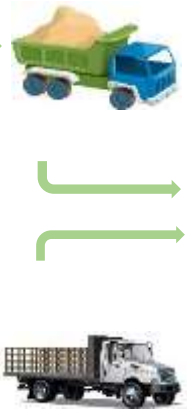
All part of the production is distributed to customer's sites.

3.5 Product Stages

A simplified model of the manufacturing and distribution process is described in the following diagrams, enumerating the main activities included in the system boundaries. The process and facilities are also linked to the phases of the product life cycle (A1-A4) The first phase in the LCA is the production of Pre Mix Plasters. Saveto buys the White Limestone, Grey Limestone, Dune Sand, Gypsum Powder & chemicals, etc. and other raw

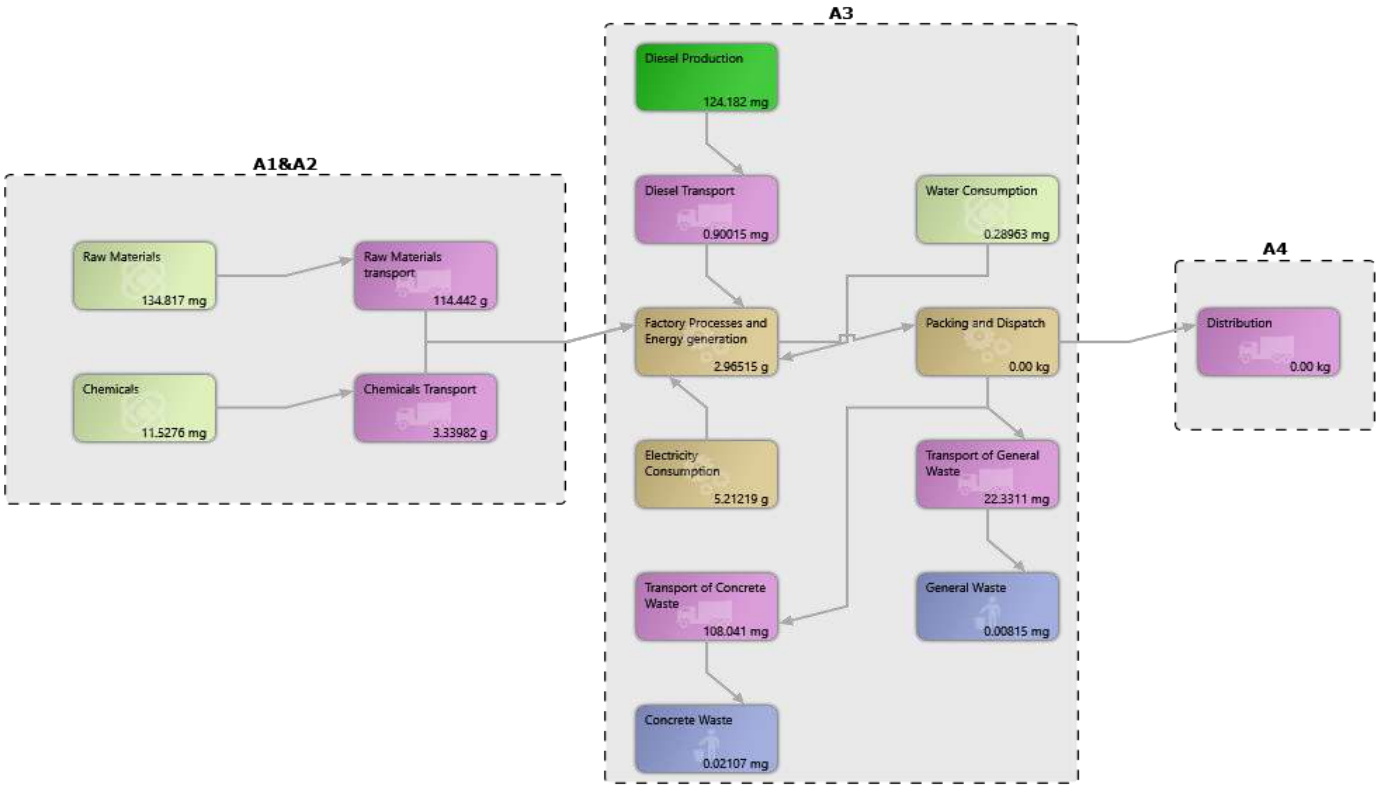
materials from different suppliers in GCC Countries (A1-A2). After the filling into hopper, sieve screening, drying, mixing etc., Pre Mix Plasters are packaged (A3).

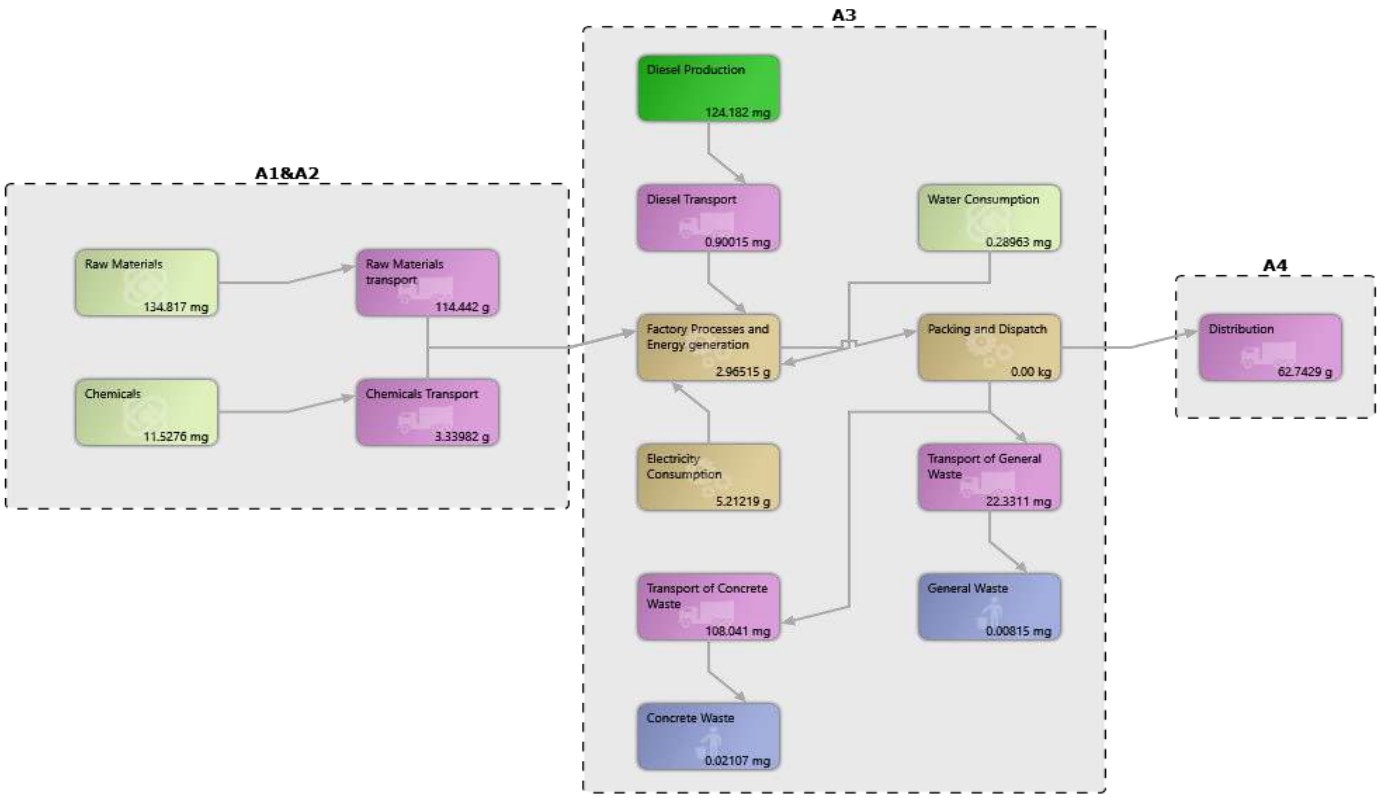
The Pre Mix Plasters are distributed to customers around the world (A4). In this EPD environmental impacts are reported by Pre Mix Plaster type of product.

Scope of this Life Cycle Assessment 'Cradle to Gate with Options'					
A1 Raw Materials Production	**A2 Transport raw materials**	**A3 Manufacture**	**A4 Distribution**	**USE**	**Recovering and Recycling**
					
Raw Materials and Chemicals	Transport from supplier by Road	filling into hopper, sieve screening, drying, mixing etc	Transport to customers by trucks	NOT DECLARED	NOT DECLARED

The following diagram designed using Air.e LCA software shows and example of the materials, fuels consumption, energy consumption, transports and other elements and procedures included in the assessments.

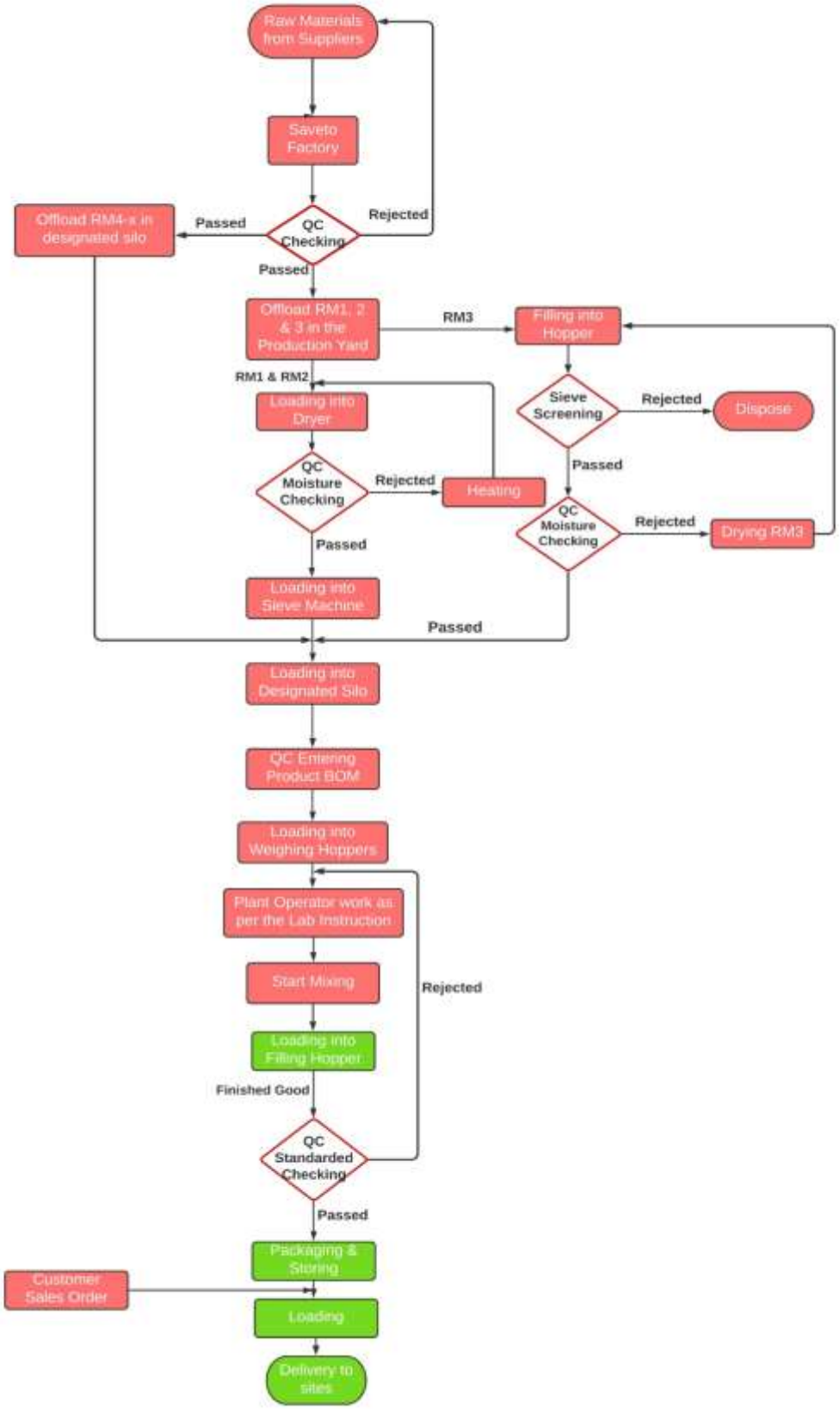
Example of Life Cycle Assessments





The following diagram is a more detailed description of the A3 phase.

Manufacturing Process



3.6 Content Declaration*

Materials	Percentage
White Lime stone	15.68%
Grey Lime Stone	58.94%
White Cement	<1%
Cement OPC Grey	15.09%
Hydrated Lime Powder	<1%
Gypsum Powder	<1%
Fibron Polypropylene Fiber	31.73%
Silica Sand	3.04%
Dune Sand	18.15%
Other Chemicals	<1%

*Each end product may not contain all the above listed materials.

3.7 Substances listed in the “Candidate List of SVHC”

The Pre-Mix Plasters do not contain substances which exceed the limits for registration with the European Chemicals Agency regarding the “Candidate List of Substances of Very High Concern for authorization”.

4.0 TECHNICAL INFORMATION

4.1 Calculation Methodology

This EPD represents a Type III Environmental Declarations according to ISO 14025:2010. The Life Cycle Assessment (LCA) has been developed following the ISO 14040 International Standard. The environmental impacts calculation method reported in this EPD follow the CML-IA, Baseline Version 4.8, 2016. The report has been done following the specifications given in the European standard EN 15804:2012+A2:2019, as Product Category Rules.

4.2 Emission Factors

Emission factors and environmental impacts of elements in life cycles that are not directly controlled by Saveto (White Limestone, Grey Limestone, Dune Sand, Gypsum Powder & chemicals etc. , Electricity, Fuels Production, etc.) have been analyzed using external studies and external emissions factors databases like Ecoinvent due to the lack of direct data. The next paragraphs describe the calculation rules and criterial applied in the calculation of the environmental performance of this type of elements in the LCA.

Raw Materials and Chemicals

Datasets from Ecoinvent 3.6 with emission factors raw materials for Pre Mix Plasters has been characterized to adjust them to the characteristics of manufacturing of Saveto suppliers or counties where suppliers are located.

Datasets from Ecoinvent 3.6 with emission factors for generic chemicals have been characterized to adjust them to the characteristics of the products manufactured by Saveto's suppliers

Electricity

A specific dataset with the Life Cycle Inventory (LCI) corresponding to the electricity mix in Abu Dhabi, UAE in 2019-2020 has been developed by GCAS for this LCA.

Fuels Production and Consumption

Specific datasets with the emissions factors corresponding to the fuel combustion in Saveto plant and machinery have been developed for these LCAs. Indirect emissions due to diesel production and transportation are also included in the environmental impact values calculation reported in this report. In the calculation was estimated a diesel calorific value of 43 kg/l and a density of 0.85 kg/l for diesel.

Transport to the construction site stage – A4

The Pre-Mix Plasters are provided to customers all over the world. To create a scenario of the A4 phase, all the plasters sold from January 2020 to December 2020 has been analyzed as representative of the international transport. The transport means are international cargo ships and 3.5-7.5t & >32t trucks, as described in the following table.

Scenario	Parameter	Units	Value Per functional unit
A4 – Cargo Ship	Vehicle type used for transport	Transoceanic cargo ship	n/a
	Vehicle load capacity	Kg (dw)	50,000
	Fuel type and consumption	Litres of heavy fuel oil per km	0.24
	Distance to construction site	Km	See detailed table
	Capacity utilization	%	See detailed table
	Bulk density of transported products	Kg/m3	n/a
	Volume capacity utilization factor	n/a	1
A4 - Truck	Vehicle type used for transport	>32t truck, 3.5-7.5t truck	n/a
	Vehicle load capacity	Kg	25,000
	Fuel type and consumption	Litres of diesel per km	0.38
	Distance to construction site	Km	See detailed table
	Capacity utilization	%	See detailed table
	Bulk density of transported products	Kg/m^3	n/a
	Volume capacity utilization factor	n/a	1

For every destination, the total amount of products delivered to customers has been taken to account according to the following detailed table:

Means of Transport	Destination	Distance	% FU
Cargo Ship	Nigeria	8030 nmi	14.18
Truck	Abu Dhabi	27.7 km	43.49
	Dubai	147 km	42.17
	Oman	544 km	0.17

4.3 Calculation Rules

Version 3.10.0.6 of software Air.e LCA™ with Ecoinvent™ 3.6 database have been used for LCA modeling and impacts calculations.

Annual Statistics 2020 reports from Abu Dhabi Electricity Company have been used to create the model of electricity mix in the country.

Minor components are not directly related to the product, with less than 1% impact, such as office supplies, has been excluded from the assessment.

All transports of components have been included in the LCA considering real distances travelled by materials used from January 2020 to December 2020. Transport of raw materials needed to produce Pre-Mix Plasters is estimated in a global scale according to Ecoinvent™ criteria. Main means of transport have been included for materials purchases and feed ingredients. As exact port locations are not known in detail, transport distances have been calculated from a one of the ports in the country of origin to the factory. Operation in port has also been excluded.

Road distances calculated using Google Maps. Maritime distances calculated using MarineTraffic Voyage Planner.

Cut-off rules: more than 99% of the materials and energy consumption have been included. The Polluter Pays Principle and the Modularity Principle have been followed.

4.4 By Products Assignment

There are no By Products in this Environmental Product Declaration.

5.0 ENVIRONMENTAL PERFORMANCE

5.1 Potential Environment Impacts

In the following tables, the environmental performance of the declared units "1 kg of Pre Mix Plaster" are presented for the Synaxis Saveto LLC product totalized and for every sub-phase of the life cycles.

During the assessment it was not evident to distinguish the differences in the consumption of electricity, water, diesel, raw material and chemicals during the manufacturing process of the different types of Pre Mix Plasters. Hence, the calculation is based on total production vs total consumption against production of each product.

Environmental impacts are calculated using the CML-IA, Baseline Version 4.8, 2016.

Global Warming Potential
(GWP100) (g of CO_2 equivalent/kg of Pre Mix Plaster)

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	117.62	8.31	45.27	171.20
Spatter Dash-MC SDM212	21.81	8.31	26.79	56.91
PlasterMix-S PLS221	20.97	8.22	10.98	40.17
PlasterMix-S PLS222	20.97	8.21	29.83	59.01
Premix Plaster LW	117.44	8.31	17.74	143.49
Pre Mix Plaster S	117.55	8.31	12.60	138.46
Acoustic Plaster	117.36	8.31	12.50	138.17
Gypsum Plaster	117.44	8.31	29.45	155.20
Vetonit Render RND310	117.44	8.21	7.98	133.63

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Vetonit Base WR EG	117.63	8.31	2.33	128.27
Vetonit Finish WR EG	117.63	8.31	4.87	130.81
Vetonit Putty WR	117.63	8.70	0.00	126.33
Vetotherm Flex	117.63	8.70	62.57	188.90
Vetotherm Plaster	117.63	8.31	0.00	125.94
Vetotouch Tyrolean	117.63	8.31	2.08	128.02
Vetotouch Europa	117.63	8.31	0.00	125.94
Vetotouch Graviatto	117.63	8.31	0.00	125.94
Vetotouch Marmo	117.63	8.31	0.00	125.94
Vetotouch Serene	117.63	8.31	11.65	137.59
Vetotouch Textura	35.43	8.31	17.21	60.95
Vetoset CA540	117.63	8.31	35.28	161.22
Vetonit Tile Grout	117.63	8.31	10.62	136.56
Vetotop CS536	52.64	8.31	8.07	69.02
Vetonit Masonry Mortar MMR510	21.85	8.31	16.79	46.95
Gypsum Veneer Plaster	117.42	8.31	0.00	125.73
Vetonit AAC Masonry Mortar AAC520	52.57	8.31	19.53	80.41
Saveto Premium Fix	52.64	8.31	56.11	117.06
Vetoproof CM740	117.63	8.31	0.00	125.94
Vetotile Bond	117.63	8.31	0.00	125.94

Ozone Depletion
(mg CFC-11 equivalent/ kg of Pre Mix Plaster)

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	4.41e-6	0.00043	0.00707	0.0075
Spatter Dash-MC SDM212	4.44e-6	0.00043	0.00302	0.0035
PlasterMix-S PLS221	4.44e-6	0.00043	0.00052	0.00096
PlasterMix-S PLS222	4.44e-6	0.00043	0.0036	0.00404
Premix Plaster LW	4.44e-6	0.00043	0.00	0.00044
Pre Mix Plaster S	4.44e-6	0.00043	0.00	0.00044
Acoustic Plaster	4.44e-6	0.00043	0.00	0.00044
Gypsum Plaster	4.44e-6	0.00043	0.00395	0.00438
Vetonit Render RND310	4.44e-6	0.00043	0.00034	0.00078
Vetonit Base WR EG	4.44e-6	0.00043	0.00	0.00044
Vetonit Finish WR EG	4.44e-6	0.00043	0.00	0.00044
Vetonit Putty WR	4.44e-6	0.00043	0.00	0.00044
Vetotherm Flex	4.44e-6	0.00043	0.00	0.00044
Vetotherm Plaster	4.44e-6	0.00043	0.00	0.00044
Vetotouch Tyrolean	4.44e-6	0.00043	0.00	0.00044
Vetotouch Europa	4.44e-6	0.00043	0.00	0.00044
Vetotouch Graviatto	4.44e-6	0.00043	0.00	0.00044
Vetotouch Marmo	4.44e-6	0.00043	0.00	0.00044
Vetotouch Serene	4.44e-6	0.00043	0.00	0.00044

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Vetotouch Textura	4.44e-6	0.00043	0.00234	0.00278
Vetoset CA540	4.44e-6	0.00043	0.00	0.00044
Vetonit Tile Grout	4.44e-6	0.00043	0.00	0.00044
Vetotop CS536	4.44e-6	0.00043	0.00	0.00044
Vetonit Masonry Mortar MMR510	4.44e-6	0.00043	0.00134	0.00178
Gypsum Veneer Plaster	4.44e-6	0.00043	0.00	0.00044
Vetonit AAC Masonry Mortar AAC520	4.44e-6	0.00043	0.00018	0.00061
Saveto Premium Fix	4.44e-6	0.00043	0.00807	0.00851
Vetoproof CM740	4.44e-6	0.00043	0.00	0.00044
Vetotile Bond	4.44e-6	0.00043	0.00	0.00044

Acidification

mg SO2 equivalent/ kg of Pre Mix Plaster

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	419.43	34.99	1,156.65	1,611.07
Spatter Dash-MC SDM212	87.93	34.99	521.40	644.32
PlasterMix-S PLS221	84.97	34.66	116.28	235.91
PlasterMix-S PLS222	84.94	34.62	618.49	738.05
Premix Plaster LW	418.79	34.99	72.11	525.89
Pre Mix Plaster S	419.18	34.99	51.21	505.38
Acoustic Plaster	418.50	34.99	50.72	504.21
Gypsum Plaster	418.80	34.99	660.83	1,114.62

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Vetonit Render RND310	418.80	34.99	75.07	528.86
Vetonit Base WR EG	419.46	34.99	9.45	463.90
Vetonit Finish WR EG	419.46	34.99	19.81	474.26
Vetonit Putty WR	419.44	36.37	0.00	455.81
Vetotherm Flex	419.44	34.99	254.37	708.80
Vetotherm Plaster	419.44	34.99	0.00	454.43
Vetotouch Tyrolean	419.44	34.99	8.47	462.90
Vetotouch Europa	419.44	34.99	0.00	454.43
Vetotouch Graviatto	419.44	34.99	0.00	454.43
Vetotouch Marmo	419.44	34.99	0.00	454.43
Vetotouch Serene	419.44	34.99	47.35	501.78
Vetotouch Textura	136.45	34.99	392.55	563.99
Vetoset CA540	419.46	34.99	143.43	597.88
Vetonit Tile Grout	419.46	34.99	43.17	497.62
Vetotop CS536	196.35	34.99	32.79	264.13
Vetonit Masonry Mortar MMR510	88.06	34.99	253.24	376.29
Gypsum Veneer Plaster	418.71	34.99	0.00	453.70
Vetonit AAC Masonry Mortar AAC520	196.11	34.99	103.11	334.21
Saveto Premium Fix	196.35	34.99	1,341.36	1,572.70
Vetoproof CM740	419.46	34.99	0.00	454.45
Vetotile Bond	419.46	34.99	0.00	454.45

Eutrophication

mg of $(PO_4)^{3-}$ equivalent/ kg of Pre Mix Plaster

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	109.01	7.78	124.49	241.28
Spatter Dash-MC SDM212	22.88	7.78	60.43	91.09
PlasterMix-S PLS221	22.11	7.69	17.30	47.10
PlasterMix-S PLS222	22.24	7.68	71.04	100.96
Premix Plaster LW	108.85	7.78	18.75	135.38
Pre Mix Plaster S	108.95	7.78	13.32	130.05
Acoustic Plaster	108.77	7.78	13.19	129.74
Gypsum Plaster	108.85	7.78	73.40	190.03
Vetonit Render RND310	108.85	7.78	11.00	127.63
Vetonit Base WR EG	109.02	7.78	2.46	119.26
Vetonit Finish WR EG	109.02	7.78	5.15	121.95
Vetonit Putty WR	109.02	8.13	0.00	117.15
Vetotherm Flex	109.02	7.76	66.14	182.93
Vetotherm Plaster	109.02	7.76	0.00	116.78
Vetotouch Tyrolean	109.02	7.76	2.20	118.98
Vetotouch Europa	109.02	7.78	0.00	116.80
Vetotouch Graviatto	109.02	7.78	0.00	116.80
Vetotouch Marmo	109.02	7.78	0.00	116.80
Vetotouch Serene	109.02	7.78	12.31	129.11

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Vetotouch Textura	35.49	7.78	43.68	86.95
Vetoset CA540	109.02	7.78	37.3	154.10
Vetonit Tile Grout	109.02	7.78	11.23	128.03
Vetotop CS536	51.07	7.78	8.53	67.38
Vetonit Masonry Mortar MMR510	22.91	7.78	32.37	63.06
Gypsum Veneer Plaster	108.83	7.78	0.00	116.61
Vetonit AAC Masonry Mortar AAC520	51.00	7.78	22.42	81.20
Saveto Premium Fix	51.06	7.78	147.81	206.65
Vetoproof CM740	109.02	7.78	0.00	116.80
Vetotile Bond	109.02	7.78	0.00	116.80

Photochemical Ozone Creation
(mg ethane equivalent/ kg of Pre Mix Plaster)

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	7.42	1.34	30.03	38.79
Spatter Dash-MC SDM212	1.51	1.34	13.30	16.15
PlasterMix-S PLS221	1.45	1.34	2.73	5.52
PlasterMix-S PLS222	1.45	1.34	15.78	18.57
Premix Plaster LW	7.41	1.34	1.22	9.97
Pre Mix Plaster S	7.41	1.34	0.87	9.62
Acoustic Plaster	7.41	1.34	0.86	9.61
Gypsum Plaster	7.41	1.34	17.04	25.79

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Vetonit Render RND310	7.41	1.34	1.80	10.55
Vetonit Base WR EG	7.42	1.34	0.16	8.92
Vetonit Finish WR EG	7.42	1.34	0.33	9.09
Vetonit Putty WR	7.42	1.37	0.00	8.79
Vetotherm Flex	7.42	1.34	4.32	13.08
Vetotherm Plaster	7.42	1.34	0.00	8.76
Vetotouch Tyrolean	7.42	1.34	0.14	8.90
Vetotouch Europa	7.42	1.34	0.00	8.76
Vetotouch Graviatto	7.42	1.34	0.00	8.76
Vetotouch Marmo	7.42	1.34	0.00	8.76
Vetotouch Serene	7.42	1.34	0.80	9.56
Vetotouch Textura	2.52	1.34	10.15	14.01
Vetoset CA540	7.42	1.34	2.43	11.19
Vetonit Tile Grout	7.42	1.34	0.73	9.49
Vetotop CS536	3.56	1.34	0.55	5.45
Vetonit Masonry Mortar MMR510	1.51	1.34	6.27	9.12
Gypsum Veneer Plaster	7.41	1.34	0.00	8.75
Vetonit AAC Masonry Mortar AAC520	3.56	1.34	2.06	6.96
Saveto Premium Fix	3.56	1.34	34.61	39.51
Vetoproof CM740	7.42	1.34	0.00	8.76
Vetotile Bond	7.42	1.34	0.00	8.76

Depletion of Abiotic – Element
(mg of Sb equivalent/ kg of Pre Mix Plaster)

	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	0.57	0.53	5.60	6.70
Spatter Dash-MC SDM212	0.57	0.53	2.39	3.49
PlasterMix-S PLS221	0.57	0.53	0.41	1.51
PlasterMix-S PLS222	0.57	0.53	2.85	3.95
Premix Plaster LW	0.57	0.53	0.00	1.10
Pre Mix Plaster S	0.57	0.53	0.00	1.10
Acoustic Plaster	0.57	0.53	0.00	1.10
Gypsum Plaster	0.57	0.53	3.13	4.23
Vetonit Render RND310	0.57	0.53	0.27	1.37
Vetonit Base WR EG	0.57	0.53	0.00	1.10
Vetonit Finish WR EG	0.57	0.53	0.00	1.10
Vetonit Putty WR	0.57	0.53	0.00	1.10
Vetotherm Flex	0.57	0.53	0.00	1.10
Vetotherm Plaster	0.57	0.53	0.00	1.10
Vetotouch Tyrolean	0.57	0.53	0.00	1.10
Vetotouch Europa	0.57	0.53	0.00	1.10
Vetotouch Graviatto	0.57	0.53	0.00	1.10
Vetotouch Marmo	0.57	0.53	0.00	1.10
Vetotouch Serene	0.57	0.53	0.00	1.10

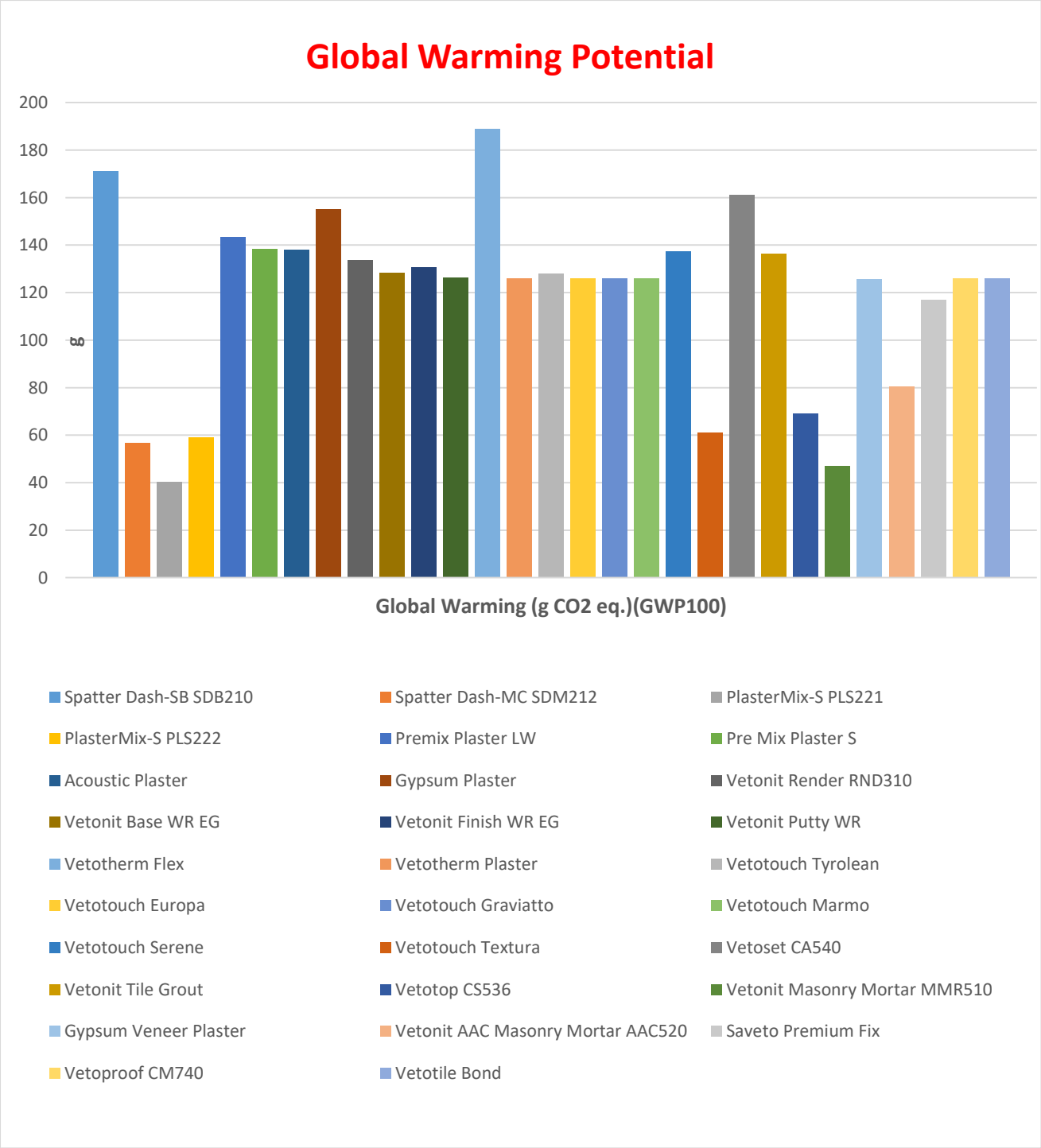
	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Vetotouch Textura	0.57	0.53	1.86	2.96
Vetoset CA540	0.57	0.53	0.00	1.10
Vetonit Tile Grout	0.57	0.53	0.00	1.10
Vetotop CS536	0.57	0.53	0.00	1.10
Vetonit Masonry Mortar MMR510	0.57	0.53	1.06	2.16
Gypsum Veneer Plaster	0.57	0.53	0.00	1.10
Vetonit AAC Masonry Mortar AAC520	0.57	0.53	0.14	1.24
Saveto Premium Fix	0.57	0.53	6.39	7.49
Vetoproof CM740	0.57	0.53	0.00	1.10
Vetotile Bond	0.57	0.53	0.00	1.10

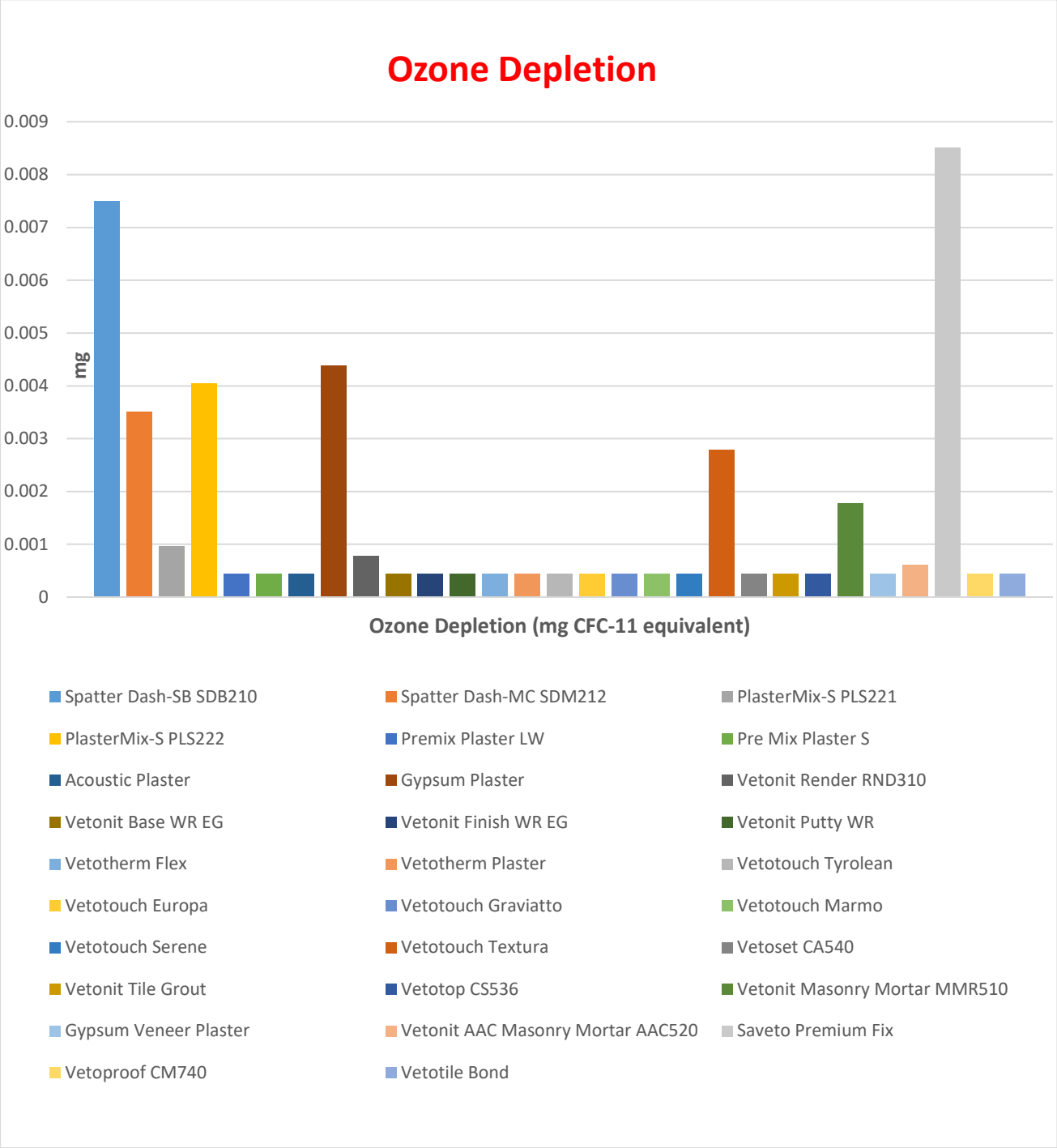
Depletion of Abiotic – (fuel and fossil) MJ net calorific value / kg of Pre Mix Plaster

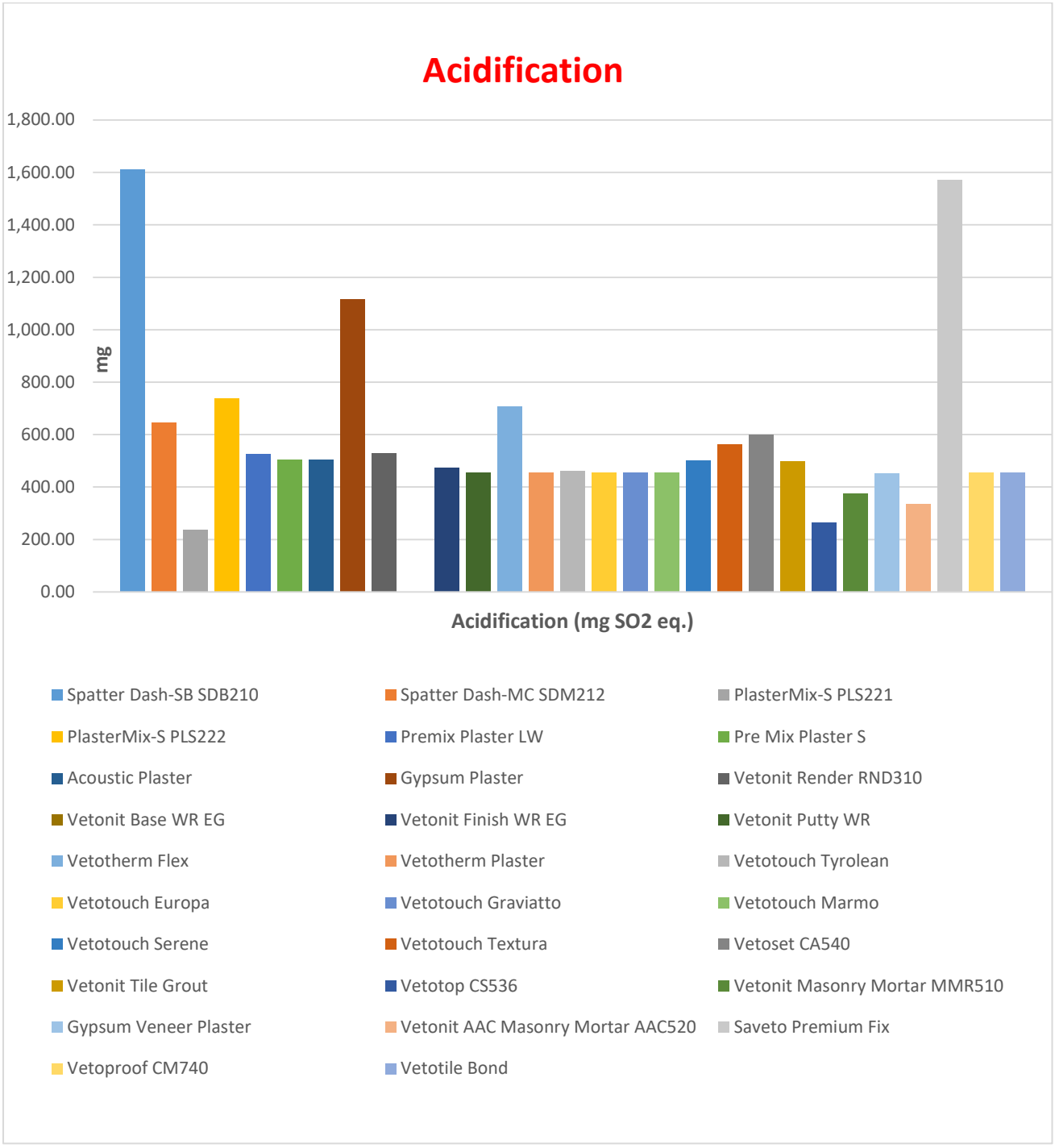
	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Spatter Dash-SB SDB210	0.000774	0.11	0.56	0.67
Spatter Dash-MC SDM212	0.000793	0.11	0.24	0.34
PlasterMix-S PLS221	0.000793	0.11	0.04	0.15
PlasterMix-S PLS222	0.000793	0.11	0.28	0.39
Premix Plaster LW	0.000793	0.11	0.00	0.11
Pre Mix Plaster S	0.000793	0.11	0.00	0.11
Acoustic Plaster	0.000793	0.11	0.00	0.11

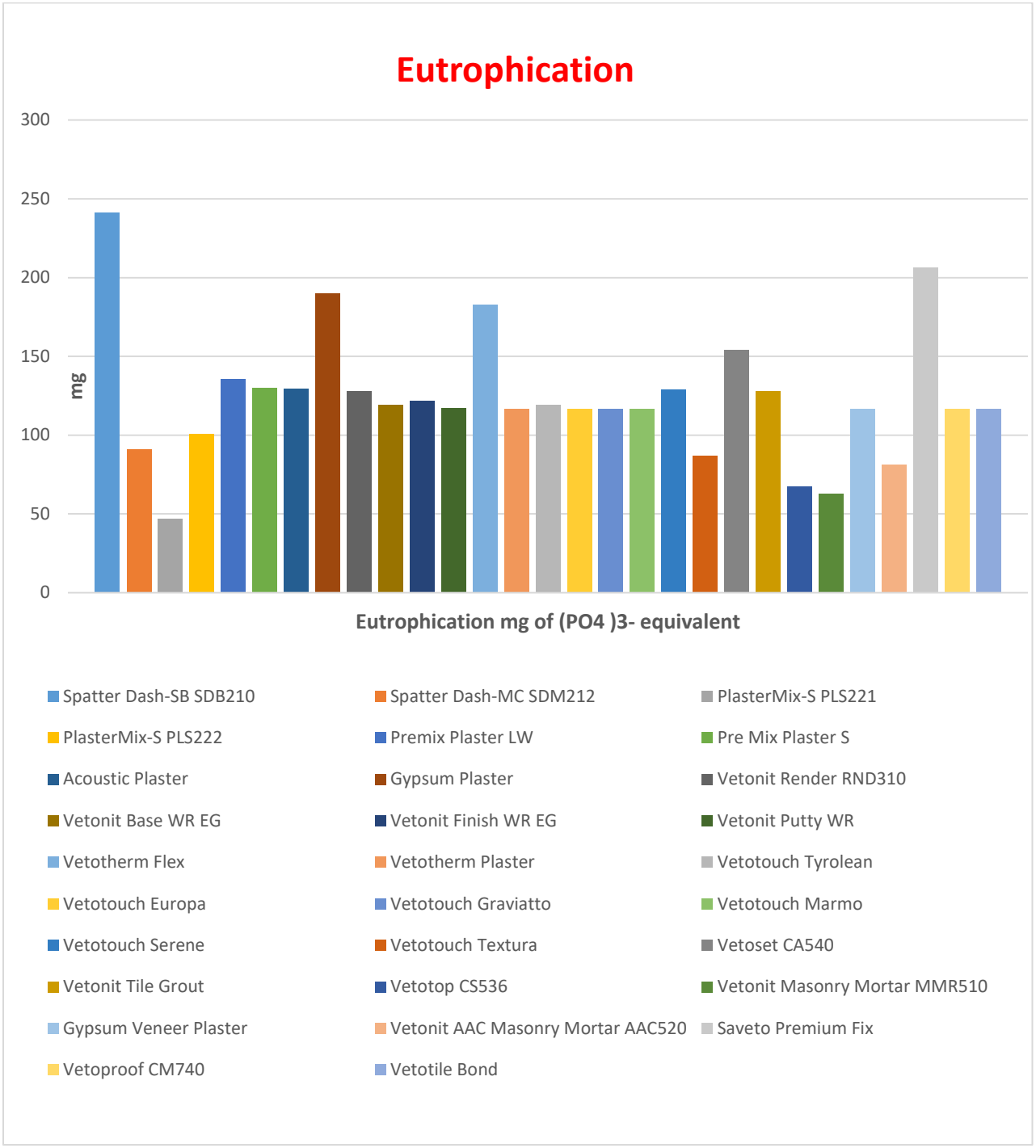
	A1 & A2 Raw Manufacture, Chemicals and Transport	A3 Manufacturing Process	A4 Delivery	Total
Gypsum Plaster	0.000793	0.11	0.31	0.42
Vetonit Render RND310	0.000793	0.11	0.03	0.13
Vetonit Base WR EG	0.000793	0.11	0.00	0.11
Vetonit Finish WR EG	0.000793	0.11	0.00	0.11
Vetonit Putty WR	0.000793	0.11	0.00	0.11
Vetotherm Flex	0.000793	0.11	0.00	0.11
Vetotherm Plaster	0.000793	0.11	0.00	0.11
Vetotouch Tyrolean	0.000793	0.11	0.00	0.11
Vetotouch Europa	0.000793	0.11	0.00	0.11
Vetotouch Graviatto	0.000793	0.11	0.00	0.11
Vetotouch Marmo	0.000793	0.11	0.00	0.11
Vetotouch Serene	0.000793	0.11	0.00	0.11
Vetotouch Textura	0.000793	0.11	0.19	0.29
Vetoset CA540	0.000793	0.11	0.00	0.11
Vetonit Tile Grout	0.000793	0.11	0.00	0.11
Vetotop CS536	0.000793	0.11	0.00	0.11
Vetonit Masonry Mortar MMR510	0.000793	0.11	0.11	0.21
Gypsum Veneer Plaster	0.000793	0.11	0.00	0.11
Vetonit AAC Masonry Mortar AAC520	0.000793	0.11	0.01	0.12
Saveto Premium Fix	0.000793	0.11	0.64	0.74
Vetoproof CM740	0.000793	0.11	0.00	0.11

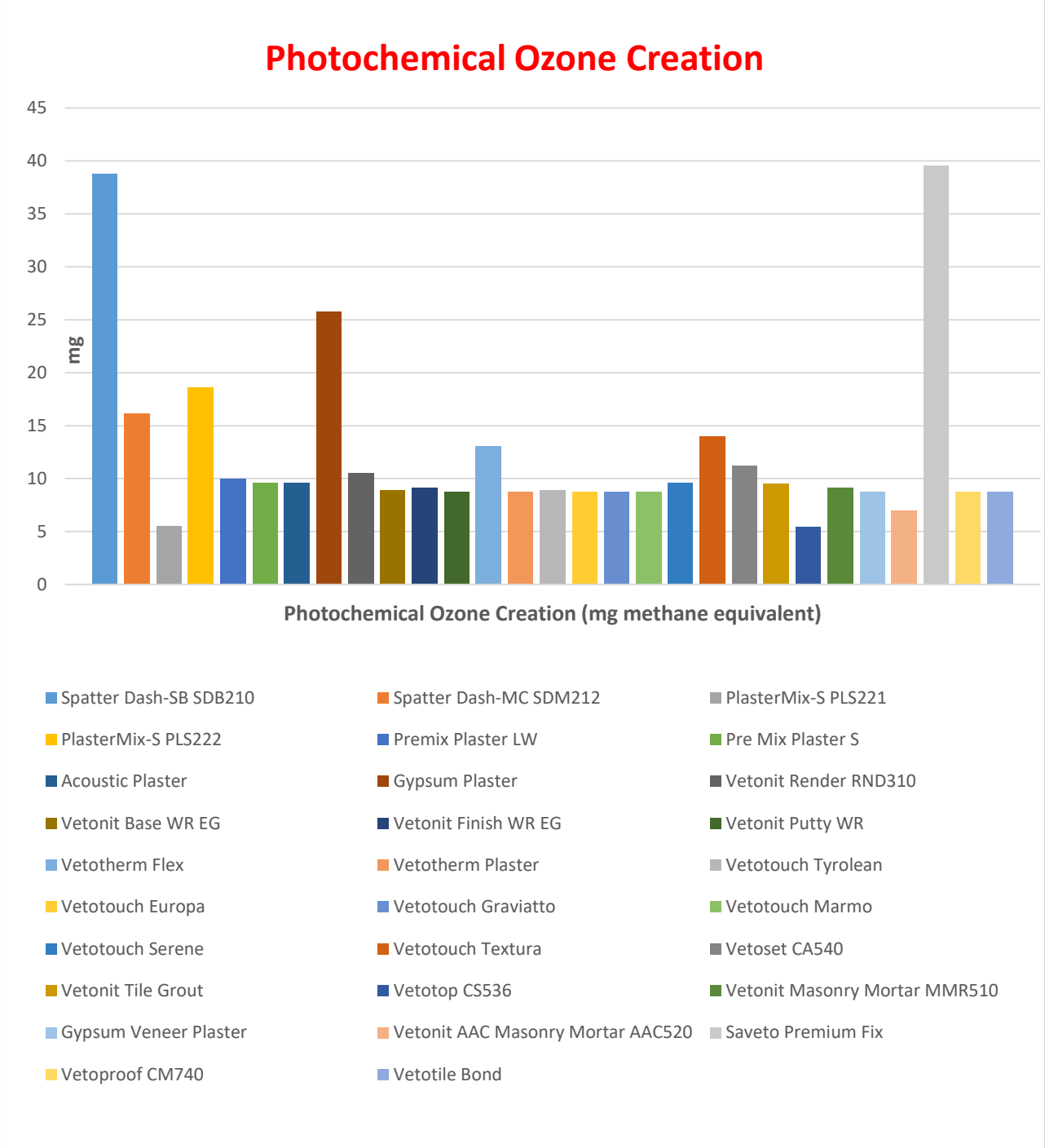
Vetotile Bond	0.000793	0.11	0.00	0.11

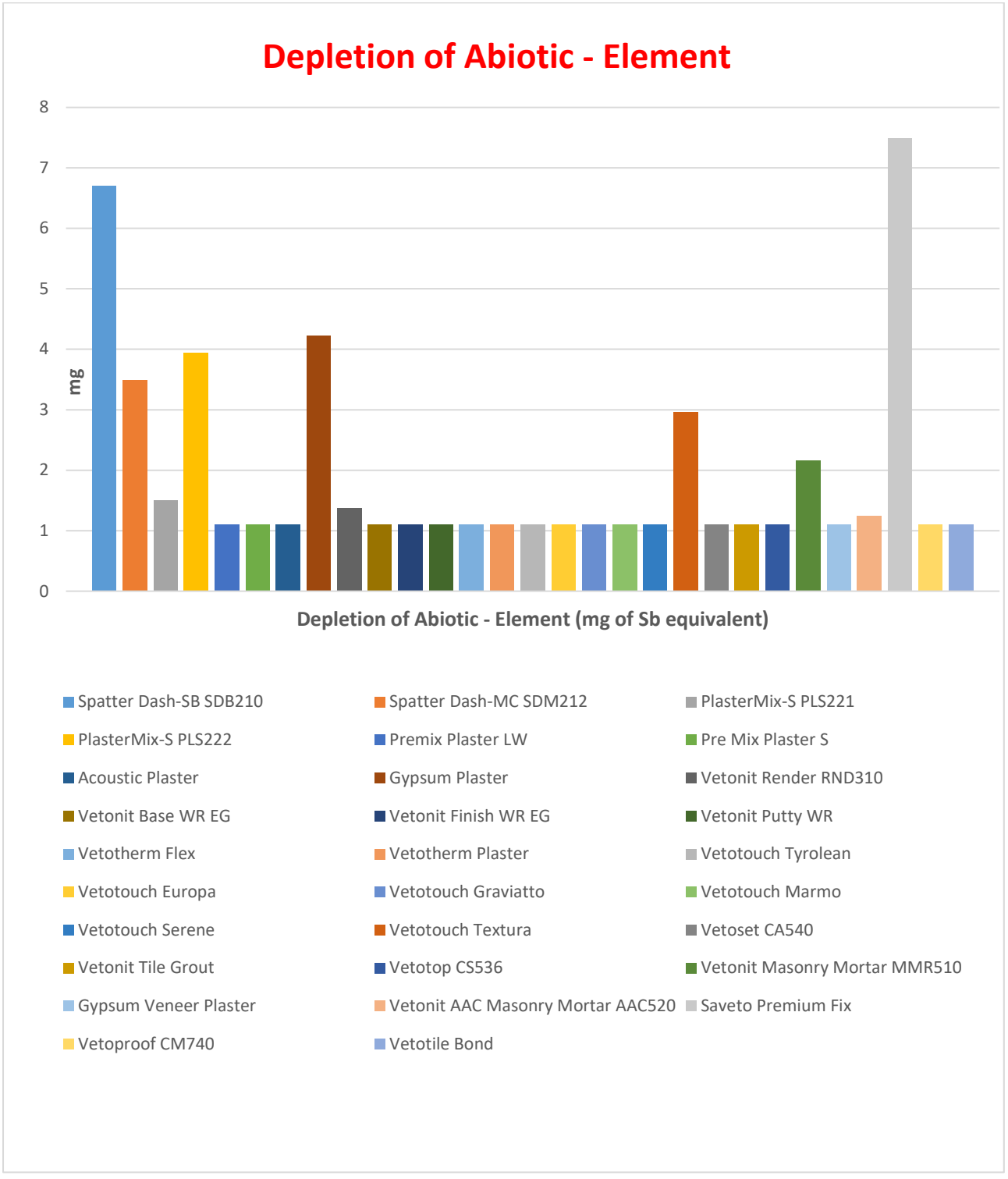


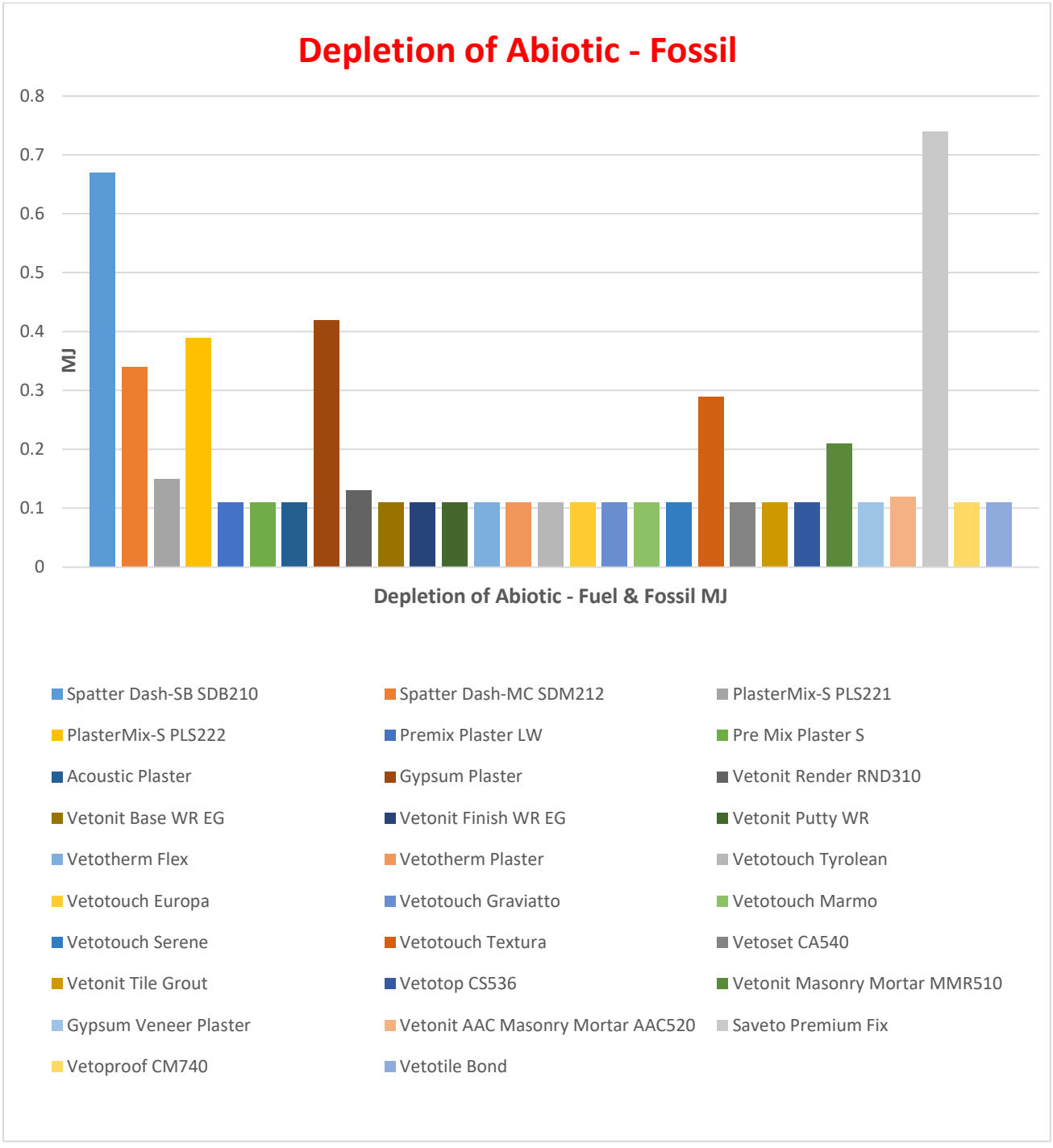

Ozone Depletion
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
mg
Ozone Depletion (mg CFC-11 equivalent)
Spatter Dash-SB SDB210
Spatter Dash-MC SDM212
PlasterMix-S PLS221
PlasterMix-S PLS222
Premix Plaster LW
Pre Mix Plaster S
Acoustic Plaster
Gypsum Plaster
Vetonit Render RND310
Vetonit Base WR EG
Vetonit Finish WR EG
Vetonit Putty WR
Vetotherm Flex
Vetotherm Plaster
Vetotouch Tyrolean
Vetotouch Europa
Vetotouch Graviatto
Vetotouch Marmo
Vetotouch Serene
Vetotouch Textura
Vetoset CA540
Vetonit Tile Grout
Vetotop CS536
Vetonit Masonry Mortar MMR510
Gypsum Veneer Plaster
Vetonit AAC Masonry Mortar AAC520
Saveto Premium Fix
Vetoproof CM740
Vetotile Bond


Acidification
1,800.00
1,600.00
1,400.00
1,200.00
1,000.00
800.00
600.00
400.00
200.00
0.00
mg
Acidification (mg SO2 eq.)
Spatter Dash-SB SDB210
Spatter Dash-MC SDM212
PlasterMix-S PLS221
PlasterMix-S PLS222
Premix Plaster LW
Pre Mix Plaster S
Acoustic Plaster
Gypsum Plaster
Vetonit Render RND310
Vetonit Base WR EG
Vetonit Finish WR EG
Vetonit Putty WR
Vetotherm Flex
Vetotherm Plaster
Vetotouch Tyrolean
Vetotouch Europa
Vetotouch Graviatto
Vetotouch Marmo
Vetotouch Serene
Vetotouch Textura
Vetoset CA540
Vetonit Tile Grout
Vetotop CS536
Vetonit Masonry Mortar MMR510
Gypsum Veneer Plaster
Vetonit AAC Masonry Mortar AAC520
Saveto Premium Fix
Vetoproof CM740
Vetotile Bond


Eutrophication
300
250
200
150
100
50
0
mg
Eutrophication mg of (PO4)3- equivalent
Spatter Dash-SB SDB210
Spatter Dash-MC SDM212
PlasterMix-S PLS221
PlasterMix-S PLS222
Premix Plaster LW
Pre Mix Plaster S
Acoustic Plaster
Gypsum Plaster
Vetonit Render RND310
Vetonit Base WR EG
Vetonit Finish WR EG
Vetonit Putty WR
Vetotherm Flex
Vetotherm Plaster
Vetotouch Tyrolean
Vetotouch Europa
Vetotouch Graviatto
Vetotouch Marmo
Vetotouch Serene
Vetotouch Textura
Vetoset CA540
Vetonit Tile Grout
Vetotop CS536
Vetonit Masonry Mortar MMR510
Gypsum Veneer Plaster
Vetonit AAC Masonry Mortar AAC520
Saveto Premium Fix
Vetoproof CM740
Vetotile Bond


Photochemical Ozone Creation
45
40
35
30
25
20
15
10
5
0
mg
Photochemical Ozone Creation (mg methane equivalent)
Spatter Dash-SB SDB210
Spatter Dash-MC SDM212
PlasterMix-S PLS221
PlasterMix-S PLS222
Premix Plaster LW
Pre Mix Plaster S
Acoustic Plaster
Gypsum Plaster
Vetonit Render RND310
Vetonit Base WR EG
Vetonit Finish WR EG
Vetonit Putty WR
Vetotherm Flex
Vetotherm Plaster
Vetotouch Tyrolean
Vetotouch Europa
Vetotouch Graviatto
Vetotouch Marmo
Vetotouch Serene
Vetotouch Textura
Vetoset CA540
Vetonit Tile Grout
Vetotop CS536
Vetonit Masonry Mortar MMR510
Gypsum Veneer Plaster
Vetonit AAC Masonry Mortar AAC520
Saveto Premium Fix
Vetoproof CM740
Vetotile Bond

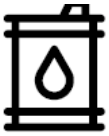

Depletion of Abiotic - Element
8
7
6
5
4
3
2
1
0
mg
Depletion of Abiotic - Element (mg of Sb equivalent)
Spatter Dash-SB SDB210
Spatter Dash-MC SDM212
PlasterMix-S PLS221
PlasterMix-S PLS222
Premix Plaster LW
Pre Mix Plaster S
Acoustic Plaster
Gypsum Plaster
Vetonit Render RND310
Vetonit Base WR EG
Vetonit Finish WR EG
Vetonit Putty WR
Vetotherm Flex
Vetotherm Plaster
Vetotouch Tyrolean
Vetotouch Europa
Vetotouch Graviatto
Vetotouch Marmo
Vetotouch Serene
Vetotouch Textura
Vetoset CA540
Vetonit Tile Grout
Vetotop CS536
Vetonit Masonry Mortar MMR510
Gypsum Veneer Plaster
Vetonit AAC Masonry Mortar AAC520
Saveto Premium Fix
Vetoproof CM740
Vetotile Bond


Depletion of Abiotic - Fossil
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
MJ
Depletion of Abiotic - Fuel & Fossil MJ
Spatter Dash-SB SDB210
Spatter Dash-MC SDM212
PlasterMix-S PLS221
PlasterMix-S PLS222
Premix Plaster LW
Pre Mix Plaster S
Acoustic Plaster
Gypsum Plaster
Vetonit Render RND310
Vetonit Base WR EG
Vetonit Finish WR EG
Vetonit Putty WR
Vetotherm Flex
Vetotherm Plaster
Vetotouch Tyrolean
Vetotouch Europa
Vetotouch Graviatto
Vetotouch Marmo
Vetotouch Serene
Vetotouch Textura
Vetoset CA540
Vetonit Tile Grout
Vetotop CS536
Vetonit Masonry Mortar MMR510
Gypsum Veneer Plaster
Vetonit AAC Masonry Mortar AAC520
Saveto Premium Fix
Vetoproof CM740
Vetotile Bond

5.2 Energy Resources (Total for the analyzed products listed in section 3.1)

	**A3** **Manufacturing**
Use of RENEWABLE primary energy fuels excluding renewable primary energy resources used as raw materials	0.01
Use of RENEWABLE primary energy fuels used as raw materials	<0.01
Total use of RENEWABLE primary energy fuels (primary energy and primary energy fuels used as raw materials)	0.01

Data in MJ, net calorific value

	A3 **Manufacturing**
Use of NON- RENEWABLE primary energy fuels excluding non- renewable primary energy resources used as raw materials	5.25
Use of NON-RENEWABLE primary energy fuels used as raw materials	<0.01
Total use of NON-RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials)	5.25

Data in MJ, net calorific value

5.3 Use of Resources (Total for the analyzed products listed in section 3.1)

The following resources use assessment refers to the production phases and do not include the distribution phase (A4).

	**A3 Manufacturing**	**Description**
Use of secondary material	<0.01	-

Data in Kg

	**A1-A4 Total use of water**
Total Amount of water used in indirect way	10819
Total amount of water used direct way	1.003

Data in m3

5.4 Waste Disposed (Total for the analyzed products listed in section 3.1)

The waste disposal assessment refers to the production phases (A1-A3), distribution phase (A4) is not included.

	**A3 Manufacturing**	**Description**
Hazardous waste disposed	<0.01	No hazardous waste disposed
Non-hazardous waste disposed	2.31E+01	Paper/plastic bags, paper cups, plastic/paper sheet/small wooden pieces/ sand more than 5 mm/cementitious powder or marble powder for mixers cleaning
Radioactive waste disposed	<0.01	No nuclear energy used

Data in kg

5.5 Other output flows (Total for the analyzed products listed in section 3.1)

The following output flows assessment refers to the production phases (A1-A3), distribution phase (A4) is not included.

	**A3 Manufacturing**
Components for re-use (Kg)	0
Materials for recycling (Kg)	2.31E+01
Materials Recycled In-house (Kg)	0
Materials for energy recovery (MJ)	0
Exported energy (MJ)	0

6.0 MANDATORY STATEMENTS

Explanatory material can be obtained from EPD owner and/or LCA author. Contact information can be found below. The verifier and The Program Operator do not make any claim or present any responsibility about the legality of the product.

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.

7.0 CONTACT INFORMATION

EPD Owner	Synaxis Saveto LLC. P.O.BOX 111902 ICAD 1 - Musafah Abu Dhabi Tel: (+971) 2 550 6555 Fax: (+971) 2 550 6444 Email: Info.uae@saveto.com
LCA Author	Alan B.Christopher, LCA Consultant GCAS Quality Certifications P.O.Box 65561, Dubai, UAE www.gcasquality.com info.dubai@gcasquality.com
Verifier	Professor Vladimír Kocí LCA Studio Šárecká 5,16000 Prague 6 - Czech Republic www.lcastudio.cz

8.0 REFERENCES

LCA Report: Life Cycle Inventory of Pre Mix Plasters by Synaxis Saveto LLC.

Software: Air.e LCA rev. 3.10.0.6 www.solidforest.com

Main database: Ecoinvent 3.6 www.ecoinvent.org

Geographical scope of the EPD: United Arab Emirates

Normative: ISO 14040:2006 “Environmental management -- life cycle assessment -- principles and framework”; ISO 14044:2006 “Environmental management -- life cycle assessment -- requirements and guidelines”; ISO 14020 “Environmental Labelling: General Principles”; ISO 14025:2006 “Environmental labels and declarations -- type III environmental declarations -- principles and procedures” and EN 15804.
