



ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO14025 and EN15804:2012 + A2:2019 for
Potassium Sol-Silicate Based Paint



Programme:	EPD Türkiye, a fully aligned regional programme www.epdturkey.org	The International EPD® System www.environdec.com
Programme operator:	EPD Türkiye: SÜRATAM – Turkish Centre for Sustainable Production Research & Design Nef 09 B Blok No:7/15 34415 Kağıthane/Istanbul, TURKEY	EPD International AB
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Geographical scope:	Türkiye	

PROGRAMME INFORMATION

Programme	EPD Türkiye, a fully aligned regional programme	The International EPD® System
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ISO standard ISO 21930 and CEN standard EN 15804 serves as the core Product Category Rules (PCR) Product Category Rules (PCR): 2019:14 Version 1.3.2, Construction Products and Construction Services, EN 15804:2012+A2:2019/AC:2021 for Sustainability of Construction Works

PCR review was conducted by: The Technical Committee of the International EPD® System.
Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.

Independent third-party verification of the declaration and data, according to ISO 14025:2006

EPD process certification

EPD verification

Third party verifier: Prof. Ing. Vladimír Kočí, Ph.D., MBA

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes

No

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.

COMPANY PROFILE

Myfix brand has been under the roof of Yıldız Yapı Kimyasalları San. ve Tic. Ltd. Şti. since 2011. By following the changing and developing technology, it has grown steadily and gained a respectable place in the sector. It is taking firm steps towards becoming a leading company in the sector with strong administrative and domestic capital.

In achieving the current position of the Myfix brand; the right knowledge, field experience, young and dynamic staff who are experts in their fields, and the strategies developed by them have been effective. With its strong R&D and production infrastructure, our company has created a quality product variety and service network that will meet all the expectations of the domestic and international market. By closely following the developments in the sector, we offer fast and precise solutions with a superior quality production approach that meets the requirements of internationally accepted standards. With this principle, we stand behind every job we respect.





PSP-15

POTASSIUM SOL-SILICATE
BASED PAINT

MYFIX
YAPI KIMYASALLARI

PSP-15

POTASYUM SOL-SİLİKAT
ESASLI BOYA

PSP-15 potasyum sol-silikat esaslı, pigmentli tavuk ve duvar boyasıdır.

YEREL
MUTEM

15
LT

PRODUCT INFORMATION

Product name: Potassium Sol-Silicate Based Paint

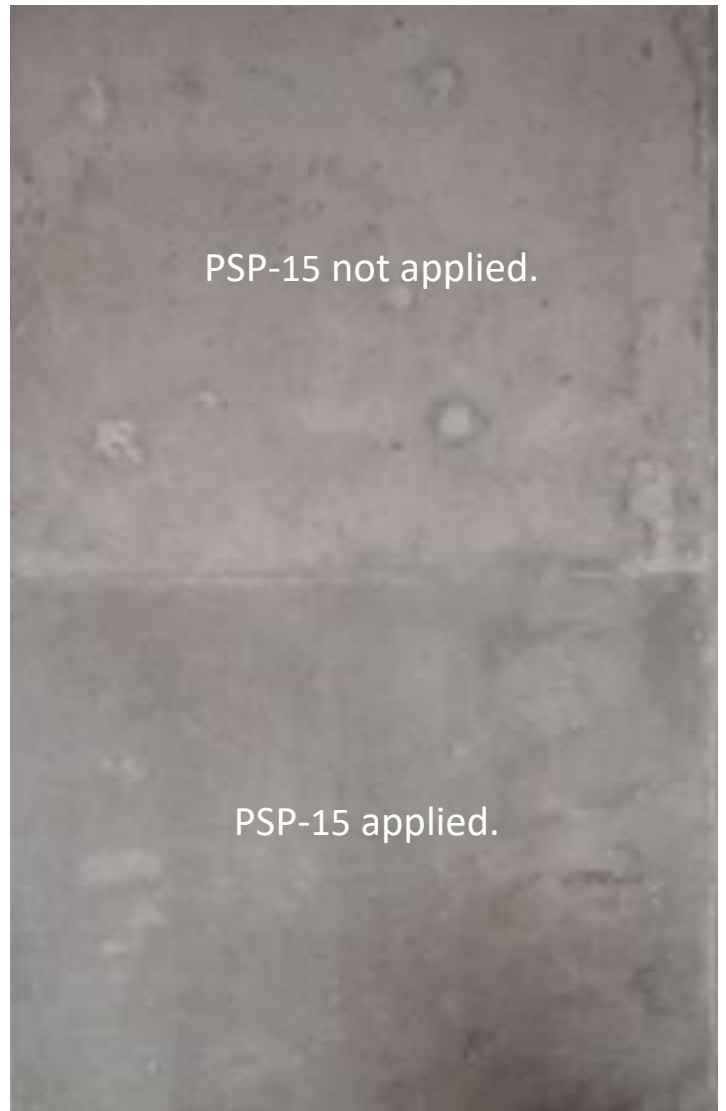
UN CPC code: 35110

Geographical scope: Türkiye

Myfix PSP-15 is a potassium sol-silicate based, pigmented ceiling and wall paint. With different dilution ratios, a colorful decorative image can be achieved with transparency effects even in a single tone. Dilution of Myfix PSP-15 product according to the desired image should be done with Myfix PSP-15 Diluete. It can be diluted from 1:5 to 1:20 concentrate. Water or any other product should not be added into it. It creates a weather-resistant film layer that protects the usage area.

Technical Properties

- It has an opaque and smooth appearance.
- It is UV resistant.
- It is resistant to weather conditions.
- It provides excellent adhesion to the applied surface.
- It does not cause blistering or shedding.
- Waterproof.
- It has high water vapor permeability.
- It is odorless.
- Since it is water-based, it can be used easily in closed areas.
- Since it is an environmentally friendly product, it can be preferred in green building projects (environmenta compliance certificates such as LEED, BREEAM and DGNB).
- Desired dilution for different transparency effect with PSP-15 Diluete rates can be provided.



SYSTEM BOUNDARY

Upstream			Core		Downstream											Other Environmental Information
Raw Material	Raw Material Transport	Manufacturing	Transport to Plant	Construction / Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction / Demolition	Transport to Disposal Site	Waste Processing	Disposal	Future reuse, recycling or energy recovery 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

The system boundary covers the production of raw materials, all relevant transport down to factory gate and manufacturing by Myfix (A1-A3). Besides, A4 stage that refers 'Transport to Site' is also added. These products are integral part of surface that can not be separated at their end of life stage, therefore C (EoL Stages) and D modules were not declared.

Upstream Process (A1: Raw Material Supply)

Production starts with raw materials. Raw material stage includes raw material extraction/preparation and pre-treatment processes before production.

Core Process (A2:Transportation and A3:Manufacturing)

Transport is relevant for delivery of raw materials and other materials to the plant and the transport of materials within the plant. 'Manufacturing' starts with the mixing of raw materials according to product formulation. The end products are then packaged in bags to be sold. Electric energy is consumed during manufacturing stage.

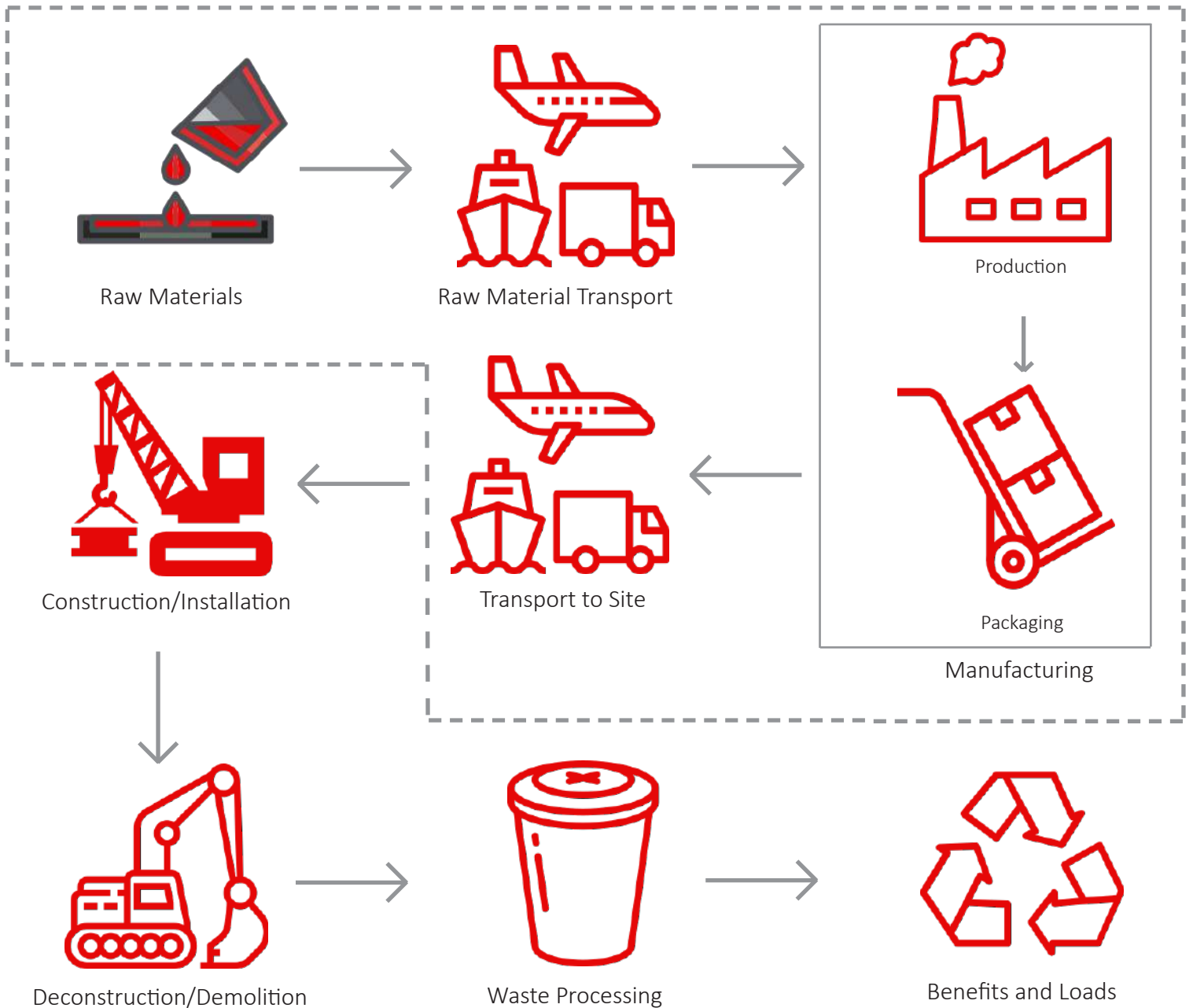
Downstream Processes (A4: Transport to Site)

Transport of final product to site is taken as the weight average values for transportation for the year of 2022.

LCA INFORMATION

Declared Unit	1 kg of Potassium Sol-Silicate Based Paint
Time Representativeness	Average data for the year of 2022
Database(s) and LCA Software Used	Ecoinvent 3.9.1 and SimaPro 9.5

System Boundary of the LCA Study



Composition of Product

Product Components	Weight, %	Post Consumer Material Weight, %	Renewable Material Weight, %
Water	60-65	0	0
Pigment	10-20	0	0
Potassium Silicate	5-15	0	0
Acrylic	2-7	0	0
5 Micron Calcite	1-5	0	0
Additives	<1	0	0

Packaging Contents

Product Components	Weight, kg	Post Consumer Material Weight, %	Renewable Material Weight, %
PE Bucket	0.750	0	0

Information on Biogenic Carbon Content According to EN15804+A2

Biogenic Carbon Content	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0



MORE INFORMATION

The results of the LCA with the indicators as per EPD requirement are given in the LCA result tables. All energy calculations were obtained using Cumulative Energy Demand (LHV) methodology, while fresh water use is calculated with selected inventory flows in SimaPro according to the PCR.

There are no co-products in the production. Hence, there is no need for co-product allocation.

Energy consumption and transport datasets were allocated based on the average production figures for the year of 2022, and weighted average of environmental impacts for the Potassium Sol-Silicate Based Paint were presented.

Accordingly, hazardous and non-hazardous waste amounts were also allocated based on the average waste arisings for the period of 2022.

All the waste resulting from the main production and related processes is managed as per Waste Management Plan of MYFIX in accordance with Turkish laws and regulations.

No substances included in the Candidate List of Substances of Very High Concern for authorisation under the REACH Regulations are present in the surface hardener manufactured by MYFIX, either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).



PSP-15 not applied.

PSP-15 applied.

LCA RESULTS

Environmental Impacts for 1 kg of Potassium Sol-Silicate Based Paint

Impact Category	Unit	A1	A2	A3	A1-A3	A4
GWP - Fossil	kg CO ₂ eq	7.10E-01	4.38E-03	5.41E-04	7.15E-01	1.20E-01
GWP - Biogenic	kg CO ₂ eq	2.41E-03	2.79E-06	4.77E-05	2.46E-03	9.22E-05
GWP - Luluc	kg CO ₂ eq	1.00E-03	1.68E-06	6.70E-07	1.01E-03	5.64E-05
GWP - Total	kg CO ₂ eq	7.14E-01	4.38E-03	5.90E-04	7.19E-01	1.20E-01
ODP	kg CFC-11 eq	3.01E-08	8.94E-11	7.97E-12	3.02E-08	2.62E-09
AP	mol H+ eq	4.63E-03	2.10E-05	2.04E-06	4.65E-03	4.03E-04
EP - Freshwater	kg P eq	1.77E-04	2.69E-07	1.87E-07	1.77E-04	8.53E-06
EP - Marine	kg N eq	6.05E-04	8.42E-06	6.44E-07	6.14E-04	1.40E-04
EP - Terrestrial	mol N eq	6.39E-03	9.04E-05	5.33E-06	6.48E-03	1.48E-03
POCP	kg NMVOC eq	2.54E-03	3.21E-05	1.88E-06	2.57E-03	6.28E-04
ADPE	kg Sb eq	7.28E-06	9.31E-09	3.22E-09	7.30E-06	3.23E-07
ADPF	MJ	1.57E+01	6.24E-02	7.24E-03	1.58E+01	1.75E+00
WDP	m ³ depriv.	3.47E-11	4.35E-02	1.88E+00	1.92E+00	6.59E-04
PM	disease inc.	4.17E-08	6.09E-10	3.15E-11	4.24E-08	1.21E-08
IR	kBq U-235 eq	4.93E-02	6.78E-05	9.79E-05	4.95E-02	2.21E-03
ETP - FW	CTUe	2.13E+01	3.00E-02	2.48E-03	2.13E+01	8.43E-01
HTTP - C	CTUh	5.55E-10	1.76E-12	4.45E-13	5.57E-10	5.19E-11
HTTP - NC	CTUh	8.88E-09	3.71E-11	6.57E-12	8.92E-09	1.26E-09
SQP	Pt	2.20E+00	5.02E-02	4.11E-03	2.25E+00	1.78E+00
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.					
Legend	A1: Raw Material, A2: Raw Material Transport, A3: Manufacturing, A1-A3: Sum of A1, A2 and A3, A4: Transport to Site					



Resource Use for 1 kg of Potassium Sol-Silicate Based Paint

Impact Category	Unit	A1	A2	A3	A1-A3	A4
PERE	MJ	5.94E-01	7.89E-04	8.70E-04	5.96E-01	2.57E-02
PERM	MJ	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
PERT	MJ	5.94E-01	7.89E-04	8.70E-04	5.96E-01	2.57E-02
PENRE	MJ	1.57E+01	6.24E-02	7.23E-03	1.58E+01	2.57E-02
PENRM	MJ	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
PENRT	MJ	1.57E+01	6.24E-02	7.23E-03	1.58E+01	2.57E-02
SM	kg	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
RSF	MJ	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
NRSF	MJ	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
FW	m ³	8.59E-03	1.08E-05	3.87E-06	8.60E-03	3.49E-04

Waste & Output Flows for 1 kg of Potassium Sol-Silicate Based Paint

Impact Category	Unit	A1	A2	A3	A1-A3	A4
HWD	kg	0	0	3.43E-6	3.43E-6	0
NHWD	kg	0	0	0	0	0
RWD	kg	0	0	0	0	0
CRU	kg	0	0	0	0	0
MFR	kg	0	0	0	0	0
MER	kg	0	0	0	0	0
EE (Electrical)	MJ	0	0	0	0	0
EE (Thermal)	MJ	0	0	0	0	0

Acronyms
 PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water, HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy, Thermal.

Legend
 A1: Raw Material, A2: Raw Material Transport, A3: Manufacturing, A1-A3: Sum of A1, A2 and A3, A4: Transport to Site

Climate Impact

Impact Category	Unit	A1	A2	A3	A1-A3	A4
*GHG-GWP	kg	7.15E-01	4.39E-03	5.62E-04	7.20E-01	1.20E-01

GHG-GWP = Global Warming Potential total excl. biogenic carbon following IPCC AR5 methodology

* The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013

REFERENCES

/GPI/ General Programme Instructions of the International EPD® System. Version 4.0. EN ISO 9001/ Quality Management Systems - Requirements EN ISO 14001/ Environmental Management Systems Requirements

/ISO 14020:2000/ Environmental labels and declarations — General principles

/EN 15804:2012+A2:2019/ Sustainability of construction works - Environmental Product Declarations — Core rules for the product category of construction products

/ISO 14025/ DIN EN ISO 14025:2009-11: Environmental labels and declarations - Type III environmental declarations — Principles and procedures

/ISO 14040/44/ DIN EN ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework (ISO14040:2006) and Requirements and guidelines (ISO 14044:2006)

/ISO 14040/44/ DIN EN ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework (ISO14040:2006) and Requirements and guidelines (ISO 14044:2006) PCR 2019:14 Construction products (EN 15804:A2) (1.3.2) prepared by IVL Swedish Environmental Research Institute, EPD International Secretariat, date 2022-11-01.

/The International EPD® System/ The International EPD® System is a programme for Type III environmental declarations, maintaining a system to verify and register EPD®s as well as keeping a library of EPD®s and PCRs in accordance with ISO 14025. www.environdec.com

/Ecoinvent / Ecoinvent Centre, www.ecoinvent.org

/SimaPro/ SimaPro LCA Software, Pré Consultants, the Netherlands, www.pre-sustainability.com

VERIFICATION & REGISTRATION

Programme	EPD registered through fully aligned regional programme: EPD Türkiye www.epdturkey.org	The International EPD® System www.environdec.com
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