External Filler
by Berger Paints Emirates Ltd. Co. L.L.C.

Health Product Declaration v2.3

created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 1545037824
CLASSIFICATION: 09 90 00 Painting and Coating
PRODUCT DESCRIPTION: External Filler is ready to use exterior graded filler based on special Nano Emulsion of 100% pure acrylic binder. Can be applied straight to most fair-face surface such as concrete, plasterboard walls and ceilings, brick or block work for exterior and if required can use for interior also. External Filler can be subsequently overcoat with various range of paints finishes.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format
- (•) Nested Materials Method
- ( ) Basic Method

Threshold Disclosed Per
- ( ) Material
- (•) Product

Threshold Level
- (•) 100 ppm
- ( ) 1,000 ppm
- ( ) Per GHS SDS
- ( ) Other

Residuals/Impurities Evaluation
Completed in 7 of 7 Materials

Explanation(s) provided for Residuals/Impurities?
- (•) Yes ( ) No

For all contents above the threshold, the manufacturer has:

Characterized (•) Yes ( ) No
Provided weight and role.

Screened (•) Yes ( ) No
Provided screening results using HPDC-approved methods.

Identified (•) Yes ( ) No
Provided name and CAS RN or other identifier.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

NESTED MATERIAL | **MATERIAL OR SUBSTANCE** | *RESIDUAL OR IMPURITY*
GREENSCREEN SCORE | HAZARD TYPE

EXTENDER [LIMESTONE BM-3dg **QUARTZ** BM-1 | CAN | MAM | GEN **]**
BINDER [METHYL METHACRYLATE LT-P1 | END | SKI | PHY | EYE | MAM **BUTYL ACRYLATE** LT-UNK | SKI | EYE | MAM | REP | AQU **2-ETHYLHEXYL ACRYLATE** BM-2 | SKI | CAN | MAM | EYE | AQU **2-ACRYLAMIDO-2-METHYLPROPANESULFONATE** LT-UNK | EYE **]**
WATER [WATER BM-4 **] THICKENER [HYDROXYETHYL CELLULOSE** LT-P1 | END **] ADDITIVE [TEXANOL** LT-UNK | CAN | AQU **] BIOCIDE [KATHON 886** LT-P1 | MUL | SKI | AQU | MAM | EYE **FORMAMIDE** LT-1 | END | REP | MUL | DEV | CAN **] BUFFER [AMMONIA** LT-P1 | END | MUL | MAM | SKI | AQU | EYE | PHY **]**

Number of Greenscreen BM-4/BM3 contents ... 2

Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1, LT-1, BM-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD was produced using primary information from the manufacturer, including CAS numbers and SDS when needed. The manufacturer has made every effort to report the substances in this product to the listed threshold. This is a voluntary, self-reported effort. Any errors or omissions shall be considered a human error and therefore reported to the manufacturer. The manufacturer shall not be liable for omissions. All materials/substances present in the final product were screened at or above 100 ppm, and all potential hazards associated with the product have been disclosed.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): 7.0 Regulatory (g/l): 50
Does the product contain exempt VOCs: No
Are colorants available that do not increase the VOC content of the base paint when tinted: N/A

CERTIFICATIONS AND COMPLIANCE *See Section 3 for additional listings.*

VOC emissions: CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario
VOC content: MAS Certified Green - VOC Content

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.
Pre-checked for LEED v4.1 Option 1.

Third Party Verified?
- ( ) Yes
- (•) No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2025-06-26
PUBLISHED DATE: 2025-08-05
EXPIRY DATE: 2028-06-26

Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- *Basic Inventory method with Product-level threshold.*
- *Nested Material Inventory method with Product-level threshold*
- *Nested Material Inventory method with individual Material-level thresholds*

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

EXTENDER

%: 60.0000 - 75.0000

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: The threshold applied to Residuals and Impurities (R/I) is the same as that applied to intentionally added substances, i.e., 100 ppm or 1000 ppm. For this product, no actual material has been tested. Therefore, residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. Pharos and PubChem (formerly TOXNOT) are the main databases for researching potential residuals and impurities. Any R/I above the threshold shall be listed on the HPD; otherwise, if none are listed, then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES: The actual percenatge of composition has been withheld to protect proprietary formulation details and intellectual property rights.

LIMESTONE

ID: **1317-65-3**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2025-06-26 0:34:47**

%: **99.0000 - 99.9000** GreenScreen: **BM-3dg** RC: **None** NANO: **No** SUBSTANCE ROLE: **Filler**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: "Building materials, such as concrete and dimension stone (sandstone, granite, and limestone are examples) contain crystalline silica in the form of quartz." (USGS Crystalline Silica Primer). Limestone typically contains between 0.1% and 1% quartz. (MSHA MSDS & Specialty MSDS) - Pharos database

QUARTZ

ID: **14808-60-7**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2025-06-26 0:34:48**

%: **0.1000 - 1.0000** GreenScreen: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Residual**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
CAN	GHS - New Zealand	Carcinogenicity category 1
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Please refer to the substance notes for limestone.

BINDER **%: 10.0000 - 20.0000**

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: The threshold applied to Residuals and Impurities (R/I) is the same as that applied to intentionally added substances, i.e., 100 ppm or 1000 ppm. For this product, no actual material has been tested. Therefore, residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. Pharos and PubChem (formerly TOXNOT) are the main databases for researching potential residuals and impurities. Any R/I above the threshold shall be listed on the HPD; otherwise, if none are listed, then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES: The actual percenatge of composition has been withheld to protect proprietary formulation details and intellectual property rights.

METHYL METHACRYLATE ID: **80-62-6**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:49**

%: **40.0000 - 60.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
SKI	GHS - New Zealand	Skin sensitisation category 1
SKI	GHS - Malaysia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
PHY	GHS - New Zealand	Flammable liquids category 2
PHY	GHS - Japan	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
PHY	GHS - Malaysia	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
PHY	GHS - Australia	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List Precautionary list of substances recommended for avoidance
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products

SUBSTANCE NOTES: No GreenScreen score or hazard assessment exists for the given CAS RN per the Pharos database. To disclose all potential hazards associated with the polymer, it was analyzed into its likely constituent components. Data gaps were addressed using information sourced from the Pharos database and publicly available PDS/SDS documentation relevant to the material. It's important to note that the composition and ingredients listed are intended for informational and screening purposes only and are not 100% guaranteed to be present in the actual product.

BUTYL ACRYLATE

ID: **141-32-2**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:49**

%: **10.0000 - 30.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	GHS - Australia	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
MAM	GHS - Japan	H331 - Toxic if inhaled [Acute toxicity (inhalation: vapor) - Category 3]
MAM	GHS - New Zealand	Acute inhalation toxicity category 3
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
SKI	GHS - New Zealand	Skin sensitisation category 1
REP	GHS - New Zealand	Reproductive toxicity category 2
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
EYE	GHS - Japan	H319 - Causes serious eye irritation [Serious eye damage / eye irritation - Category 2A]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents

SUBSTANCE NOTES: Please refer to the substance notes for methyl methacrylate.

2-ETHYLHEXYL ACRYLATE

ID: **103-11-7**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:47**

%: **10.0000 - 15.0000** GreenScreen: **BM-2** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
SKI	GHS - New Zealand	Skin irritation category 2
EYE	GHS - New Zealand	Eye irritation category 2
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 3
SKI	GHS - New Zealand	Skin sensitisation category 1
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]
AQU	GHS - Japan	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Please refer to the substance notes for methyl methacrylate.

2-ACRYLAMIDO-2-METHYLPROPANESULFONATE ID: **15214-89-8**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-07-31 9:17:41**

%: **1.0000 - 5.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Monomer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
EYE	GHS - New Zealand	Serious eye damage category 1

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Please refer to the substance notes for methyl methacrylate.

WATER **%: 10.0000 - 15.0000**

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Other: Water

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities are registered for this chemical per the Pharos database.

OTHER MATERIAL NOTES:

WATER ID: **7732-18-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:48**

%: **100.0000** GreenScreen: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES:

THICKENER **%: 0.4000 - 0.7000**

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: The threshold applied to Residuals and Impurities (R/I) is the same as that applied to intentionally added substances, i.e., 100 ppm or 1000 ppm. For this product, no actual material has been tested. Therefore, residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. Pharos and PubChem (formerly TOXNOT) are the main databases for researching potential residuals and impurities. Any R/I above the threshold shall be listed on the HPD; otherwise, if none are listed, then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES:

HYDROXYETHYL CELLULOSE ID: **9004-62-0**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:48**

%: **99.9000 - 100.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Viscosity modifier**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Residuals or impurities are quantitatively measured and listed in this HPD when greater than or equal to 100 ppm.

ADDITIVE **%: 0.1000 - 0.6000**

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Other: Organic compound

RESIDUALS AND IMPURITIES NOTES: The threshold applied to Residuals and Impurities (R/I) is the same as that applied to intentionally added substances, i.e., 100 ppm or 1000 ppm. For this product, no actual material has been tested. Therefore, residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. Pharos and PubChem (formerly TOXNOT) are the main databases for researching potential residuals and impurities. Any R/I above the threshold shall be listed on the HPD; otherwise, if none are listed, then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES:

TEXANOL ID: **25265-77-4**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:49**

%: **100.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Coalescent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
AQU	GHS - New Zealand	Hazardous to the aquatic environment - chronic category 3

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: No residuals or impurities are expected to be present at or above 100 ppm.

BIOCIDE **%: 0.1000 - 0.5000**

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Other: Organic compound

RESIDUALS AND IMPURITIES NOTES: The threshold applied to Residuals and Impurities (R/I) is the same as that applied to intentionally added substances, i.e., 100 ppm or 1000 ppm. For this product, no actual material has been tested. Therefore, residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. Pharos and PubChem (formerly TOXNOT) are the main databases for researching potential residuals and impurities. Any R/I above the threshold shall be listed on the HPD; otherwise, if none are listed, then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES:

KATHON 886 ID: **55965-84-9**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:49**

%: **70.0000 - 80.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Antimicrobial Pesticide**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H301 - Toxic if swallowed [Acute toxicity (oral) - Category 3]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H310 - Fatal in contact with skin [Acute toxicity (dermal) - Category 1 or 2]
SKI	GHS - Australia	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
AQU	GHS - Australia	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Korea	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]
SKI	GHS - Korea	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1]
MAM	GHS - Korea	H301 - Toxic if swallowed [Acute toxicity (oral) - Category 3]
MAM	GHS - Australia	H301 - Toxic if swallowed [Acute toxicity (oral) - Category 3]
MAM	GHS - Korea	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 2]
MAM	GHS - Australia	H330 - Fatal if inhaled [Acute toxicity (inhalation) - Category 1 or 2]
MAM	GHS - Korea	H310 - Fatal in contact with skin [Acute toxicity (dermal) - Category 1]
MAM	GHS - Australia	H310 - Fatal in contact with skin [Acute toxicity (dermal) - Category 1 or 2]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Core Restrictions

SUBSTANCE NOTES: The percentages listed are typical and do not represent the actual concentration.

FORMAMIDE ID: **75-12-7**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:50**

%: **10.0000 - 30.0000** GreenScreen: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Antimicrobial Pesticide**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
REP	EU - Annex VI CMRs	Reproductive Toxicity - Category 1B
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1B]
DEV	GHS - Australia	H360Df - May damage the unborn child. Suspected of damaging fertility [Reproductive toxicity - Category 1A or 1B]
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H360D - May damage the unborn child [Reproductive toxicity - Category 1A or 1B]
REP	GHS - New Zealand	Reproductive toxicity category 1
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
REP	EU - SVHC List	Toxic to reproduction - Candidate list
REP	EU - REACH Annex XVII CMRs	Reproductive toxicants: Category 1B

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Some Solvents
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 All Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES: The percentages listed are typical and do not represent the actual concentration.

BUFFER **%: 0.0100 - 0.0800**

PRODUCT THRESHOLD: 100 ppm | RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes | MATERIAL TYPE: Other: Inorganic compound

RESIDUALS AND IMPURITIES NOTES: The threshold applied to Residuals and Impurities (R/I) is the same as that applied to intentionally added substances, i.e., 100 ppm or 1000 ppm. For this product, no actual material has been tested. Therefore, residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. Pharos and PubChem (formerly TOXNOT) are the main databases for researching potential residuals and impurities. Any R/I above the threshold shall be listed on the HPD; otherwise, if none are listed, then no residuals or impurities are common in that substance above the threshold.

OTHER MATERIAL NOTES:

AMMONIA ID: **7664-41-7**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2025-06-26 0:34:51**

%: **99.9000 - 100.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Buffer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances

SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H331 - Toxic if inhaled [Acute toxicity (inhalation) - Category 3]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
EYE	GHS - New Zealand	Serious eye damage category 1
EYE	GHS - Japan	H318 - Causes serious eye damage [Serious eye damage / eye irritation - Category 1]
SKI	GHS - Japan	H314 - Causes severe skin burns and eye damage [Skin corrosion / irritation - Category 1]
SKI	GHS - Australia	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
MAM	GHS - New Zealand	Acute inhalation toxicity category 3
AQU	GHS - New Zealand	Hazardous to the aquatic environment - acute category 1
AQU	GHS - Korea	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
SKI	GHS - Korea	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1]
SKI	GHS - New Zealand	Skin corrosion category 1B
MAM	Québec CSST - WHMIS 1988	Class D1A - Very toxic material causing immediate and serious toxic effects
MAM	GHS - Malaysia	H331 - Toxic if inhaled [Acute toxicity (inhalation) - Category 3]
SKI	GHS - Malaysia	H314 - Causes severe skin burns and eye damage [Skin corrosion/irritation - Category 1A or 1B or 1C]
EYE	GHS - Malaysia	H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1]
MAM	GHS - Australia	H331 - Toxic if inhaled [Acute toxicity (inhalation) - Category 3]
PHY	GHS - Korea	H220 - Extremely flammable gas [Flammable gases - Category 1]
PHY	Québec CSST - WHMIS 1988	Class B1 - Flammable gases
PHY	GHS - Japan	H220 - Extremely flammable gas [Flammable gases - Category 1]
AQU	GHS - Malaysia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]
AQU	GHS - Australia	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]

MAM	GHS - Korea	H331 - Toxic if inhaled [Acute toxicity (inhalation) - Category 3]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.1 Product Standard Restricted Substances - Effective July 1, 2024 Cosmetics and Personal Care Products

SUBSTANCE NOTES: Residuals or impurities are quantitatively measured and listed in this HPD when greater than or equal to 100 ppm.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS — **CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Berger Paints Emirates Ltd. Co. L.L.C. P.O. Box 27524, Al Qouz 1, Dubai, U.A.E.
CERTIFICATE URL:

ISSUE DATE: 2023-09-15 00:00:00
EXPIRY DATE:

CERTIFIER OR LAB: Middle East Testing Services L.L.C.

CERTIFICATION AND COMPLIANCE NOTES: Report # MR-180823-250

VOC CONTENT — **MAS Certified Green - VOC Content**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Berger Paints Emirates Ltd. Co. L.L.C. P.O. Box 27524, Al Qouz 1, Dubai, U.A.E.
CERTIFICATE URL:

ISSUE DATE: 2023-07-28 00:00:00
EXPIRY DATE:

CERTIFIER OR LAB: Wimpey Laboratories LLC

CERTIFICATION AND COMPLIANCE NOTES: This is not a MAS Certified Green – VOC Content certification; however, it is the only available option to comply with the HPDC requirements. The third-party certifier reported the VOC content, Wimpey Laboratories LLC, under report # WD-R-230720-0609

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

Recommended Areas Of Application

Area of Use : Mainly for Exterior, can be also use for Interior.
Substrate : Concrete, Plaster board walls, Ceiling, Brick or Block work.

Surface Preparation

The performance of this coating is directly related to the degree of surface preparation.
• Ensure surface is clean, dry and free from all contaminants.
• Surface must be sound and free from laitance.
• Remove laitance by wire brush or sweep blast.
Note: Fungal growth should be treated with Bison Fungicidal Solution. After drying, one coat of Plastaseal Penetrating Sealer can be applied if required.

Application Details

• Ensure adequate ventilation during application and drying.
• Do not apply when humidity exceeds 95% and condensation is likely.
• Surface temperature should be 3°C or more above dew point.
• Stir the contents thoroughly before and during use, with a broad flat stirrer, using an upward lifting action.
• External Filler is used for filling surface irregularities, indentations and undulations to produce a smooth and level surface prior to painting
• External Filler can also be used for renovation and refurbishment of existing buildings.
• External Filler is adherent to most surfaces-old and new.
• Because of its excellent hiding power, it can cover any blemishes or imperfections on the existing surface.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Berger Paints Emirates Ltd. Co. L.L.C.**
ADDRESS: **P.O. Box 27524, Al Qouz 1, Dubai, U.A.E.**
Dubai, Dubai 27524
COUNTRY: **United Arab Emirates**

WEBSITE: **https://www.asianpaints.com/**
CONTACT NAME: **Shirouz Sharafuddeen**
TITLE: **Officer - Technology**
PHONE: **00971-43391000**
EMAIL: **shirouz.sharafuddeen@asianpaints.com**

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY

Hazard Types

AQU Aquatic toxicity
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
LAN Land toxicity
MAM Mammalian/systemic/organ toxicity
MUL Multiple
NEU Neurotoxicity
NF Not found on Priority Hazard Lists
OZO Ozone depletion
PBT Persistent, bioaccumulative, and toxic
PHY Physical hazard (flammable or reactive)
REP Reproductive
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
UNK Unknown

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
BM-2 Benchmark 2 (use but search for safer substitutes)
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (due to insufficient data)
LT-P1 List Translator Possible 1 (Possible Benchmark-1)
LT-1 List Translator 1 (Likely Benchmark-1)
LT-UNK List Translator Benchmark Unknown
NoGS No GreenScreen.

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Inventory Methods:

Nested Method / **Material Threshold** Substances listed within each material per threshold indicated per material
Nested Method / **Product Threshold** Substances listed within each material per threshold indicated per product
Basic Method / **Product Threshold** Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- *a method for the assessment of exposure or risk associated with product handling or use,*
- *a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and

for compliance with the HPD standard noted.

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO14025 and EN15804:2012 + A2:2019 for

External Filler

Programme:	The International EPD® System www.environdec.com
Programme operator:	EPD International AB Stockholm, SWEDEN
Local Operator:	EPD International AB, EPD MENA
EPD registration number:	S-P-10781
Publication date:	2023-09-20
Validity date:	2028-09-19
Geographical scope:	Oman

EPD®
THE INTERNATIONAL EPD® SYSTEM

MENA EPD
THE INTERNATIONAL EPD SYSTEM

ECO PLATFORM
EPD
VERIFIED

TRANSFORMING THE WORLD THROUGH COLOURS.

PROGRAMME INFORMATION

Programme	The International EPD® System	EPD International AB Box 210 60 SE-100 31 Stockholm/SWEDEN www.environdec.com info@environdec.com

ISO standard ISO 21930 and CEN standard EN 15804 serves as the core Product Category Rules (PCR)
Product Category Rules (PCR): 2019:14 Version 1.2.5, 2024-12-20, Construction Products and CPC 54 Construction Services, EN 15804:2012 + A2:2019 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

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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.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

COMPANY PROFILE

Since its foundation in 1942, Asian Paints has come a long way to become India's leading and Asia's third largest paint company, with a turnover of around USD 4 billion. We operate in 16 countries and has 26 manufacturing facilities in the world, servicing consumers in over 60 countries.

The company has come a long way since its small beginnings in 1942. It was set up as a partnership firm by four friends who were willing to take on the world's biggest, most famous paint companies operating in India at that time. Over the course of 25 years, Asian Paints became a corporate force and India's leading paints company. Driven by its strong consumer-focus and innovative spirit, the company has been the market leader in paints since 1967. Today, it is double the size of any other paint company in India. Asian Paints manufactures a wide range of paints for decorative and industrial use.

Asian Paints Berger has a strong manufacturing base in the Middle East, with dedicated plants in Dubai, Sohar, and Bahrain. These fully automated units create our range of Middle East specific products. They are equipped with aseptic processing areas, computerised dosing stations to create finely calibrated formulations, R&D centres that incubate innovative paint technologies, and automated loading bays to respond to orders in an agile fashion.

Our team thrives on a culture of inclusivity, and we lay emphasis on collaboration. Our folks have a strong sense of ownership and revel in the open and interactive work culture. Innovation and invention are of prime importance in any organisation and in our industry, doubly so. Performance and agility are highly valued at Asian Paints Berger. Diversity is cherished and nourished, as we believe our people's unique perspectives can add strength and creativity to the Asian Paints Berger offering.

Continuous learning is the key to the growth of the individual and the organisation. Training forms an important part of the experience at Asian Paints Berger – leadership qualities are reinforced, and competencies are upgraded. We also regularly recruit new and emerging talents from top institutes.

The group has a strong presence in five regions of the world, including Middle East, South Asia, South East Asia and South Pacific, through its five corporate brands – Asian Paints Berger, Asian Paints, SCIB Paints, Apco Coatings, Taubmans, and Kadisco.

COMPANY PROFILE

Driven by Research

Asian Paints Berger's success lies in its unrelenting R & D and its association with international professional bodies. We access the latest worldwide trends through our network of Technology Centres around the globe. As a result of these persistent efforts, Asian Paints Berger's product range is designed to be weatherproof, acting as an effective means of protection against the various destructive and corrosive elements of nature.

Our R&D plays many roles:

- It supports manufacturing in process cycle time reduction and enhances productivity.
- Solves environmental issues by minimising waste generation and through recycling.
- Supports marketing with technical tools/USPs to sell new products.
- Assists the Materials department by discovering raw material alternatives, so that they can negotiate better with vendors or, have the flexibility to find new suppliers.

Certified Quality Approvals

Asian Paints Berger is strongly committed to quality, and our operations in the Middle East are ISO 9001, ISO 14001 and ISO 45001 certified.

Besides being backed by various international third party certificates like Taywood Engineering (Australia), Geoscience Laboratories (USA) and PRA (UK), Asian Paints Berger has also obtained approvals from leading companies in the Middle East such as BAPCO, SABIC, ARAMCO, PDO, JSRS etc. to ensure that only the best products reach customers.

PRODUCT INFORMATION

Product name:	External Filler
UN CPC code:	35110
Geographical scope:	Oman

External Filler is a water based ready to use exterior graded filler based on special Nano Emulsion of 100% pure acrylic binder. Can be applied straight to most fair-face surface such as concrete, plaster board walls and ceilings, brick or block work. - for exterior and if required can use for interior also. External Filler can be subsequently overcoated with various range of paints finishes.

Recommended Areas of Application

Area of Use: Mainly for Exterior, can also be used for Interior
Substrate: Concrete, Plaster board walls, Ceiling, Brick or Block work.

Technical Data

Colour	: White
Sheen Variants	: Matt
Volume Solids	: 65 ± 2%
Pack Size	: 3.5 Ltr, 18 Ltr
Theoretical Coverage	: Recommended Dry Film Thickness per coat, min. 1 mm
Theoretical Spread	: 0.4 Sqm/Ltr
Practical Coverage	: For estimation of practical covering capacity, following factors to be taken into account: surface profile, uneven application, over spray, losses in container and equipment etc.

Drying time @25°C

Touch dry	Overcoating Interval (Min)	Overcoating Interval (Max)
3 hours	10 hrs	Indefinite

Applications Details

- Ensure adequate ventilation during application and drying.
- Do not apply when humidity exceeds 95% and condensation is likely.
- Surface temperature should be 3°C or more above dew point.
- Stir the contents thoroughly before and during use, with a broad flat stirrer, using an upward lifting action.
- External Filler is used for filling surface irregularities, indentations and undulations (not more than 2 mm) to produce a smooth and level surface prior to painting
- • External Filler can also be used for renovation and refurbishment of existing buildings however it is recommended to apply Plastaseal Penetrating sealer first, then to apply External Filler.
- Because of its excellent hiding power, it can cover any blemishes or imperfections on the existing surface.
- For the building where live cracks are present, it is recommended consult a structural engineer before application, for repairing the live cracks.

**For detailed system recommendation based on specific requirements please contact Asian Paints Berger Executive.*

SYSTEM BOUNDARY

	Product Stage			Construction Process Stage		Use Stage							End of Life Stage				Benefits and Loads
	Raw Materials Supply	Transport	Manufacturing	Transport From the Gate to the Site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction & Demolition	Transport	Waste Processing	Disposal	Reuse-Recycling-Recovery Potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules Declared	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Geography	GLO	GLO	OM	GLO	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Data Used	>90%				-												
Variation - products	0%				-												
Variation - Sites	0%				-												

(X= Included in LCA, ND= Not Declared, NR= Not Related)

This EPD's system boundary is cradle to grave. The results of the LCA with the indicators as per EPD requirement are given in the following tables for product manufacture (A1, A2, A3), construction process stage (A4). According to EN 15804+A2:2019 standard, if the product or material is physically integrated with other products during installation then they cannot be physically separated at the end of life stage. For this reason, modules C1-C4 and Module D are excluded.

A1: Raw Material Supply

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

A2: Transportation

Transport is relevant for delivery of raw materials and other materials to the plant and the transport of materials within the plant. Transport of raw materials to production site is taken as the weight average values for transport from supplier for the year of 2022.

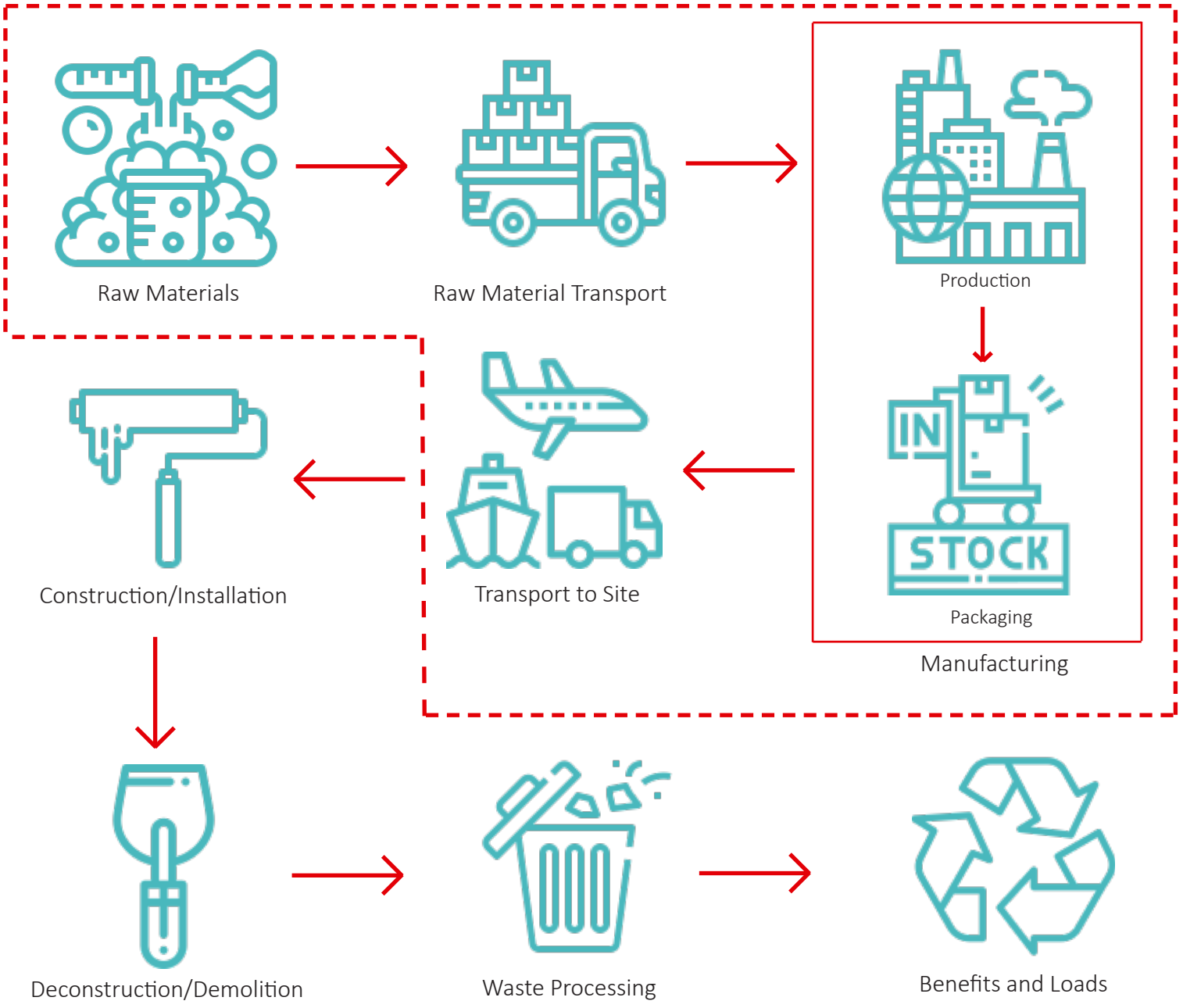
A3:Manufacturing

Manufacturing prosses comprises of mixing the chemicals using electric energy to form the paint. Then, the final products are quality checked and packaged for delivery.

A4: Transport to Site

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

System Boundary of the LCA Study



LCA INFORMATION

Functional Unit	1 kg
Goal and Scope	This EPD evaluates the environmental impacts of 1 kg of external filler
System Boundary	The system boundary covers A1 – A3 product stages and A4 transport referred as 'Raw material supply', 'Transport', 'Manufacturing', and 'Transport to Client'
Estimates and Assumptions	There are no additional product scenarios developed for this EPD.
Cut-Off Rules	No cut-off is applied. All raw materials and energy inputs are included. Any inventory for which no data available is amount to less than 1% in weight.
Background Data	This LCA modeling was done SimaPro 9.3 LCA software using the Ecoinvent 3.9.1
Geographical Scope	The geographical scope of this EPD is Oman.
Data Quality	Raw materials, energy and water consumption, waste and raw material & product transport data is collected from production site. RSL is 10 years provided that it complies with the conditions of use. RSL depends on application area and usage.
Period Under Review	All primary data collected from Asian Paints is for the period year of 2022.
Allocations	There are no co-products in the production of paint products. Hence, there is no need for co-product allocation.
Reach Regulation	The product does not contain any substance of very high concern (SVHC) and is subject to authorization under the REACH Regulation.
Comparability	A comparison or an evaluation of EPD data is only possible where EN 15804+A2 has been followed, and the same building context and product-specific characteristics of performance are taken into account and the same stages have been included in the system boundary. According to EN 15804 A2, EPD of construction products may not be comparable if they do not comply with this standard.
Packaging	Paint products produced by Asian Paints is delivered to end users with plastic (PP) packaging and PE tape.

Composition of Product

Product Components	Weight, %	Post Consumer Material Weight, %	Renewable Material Weight, %
Filler	40-60	0	0
Water	20-40	0	0
Binder	5-20	0	0
Others	0-5	0	0
Additives	Rest	0	0

Packaging Contents

Product Components	Weight, kg	Post Consumer Material Weight, %	Renewable Material Weight, %
PE Tape	0.0005	0	0
Metal Drum	0.0552	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

LCA RESULTS

LCA RESULTS

Environmental Impacts for 1 kg External Filler						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
GWP - Fossil	kg CO_2 eq	655E-3	84.9E-3	183E-3	923E-3	38.5E-3
GWP - Biogenic	kg CO_2 eq	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
GWP - Luluc	kg CO_2 eq	696E-6	43.9E-6	199E-6	940E-6	19.8E-6
GWP - Total	kg CO_2 eq	658E-3	85.0E-3	186E-3	929E-3	38.5E-3
ODP	kg CFC-11 eq	22.6E-9	1.27E-9	1.94E-9	25.8E-9	575E-12
AP	mol H+ eq	4.52E-3	356E-6	771E-6	5.65E-3	136E-6
EP - Freshwater	kg P eq	202E-6	6.76E-6	47.5E-6	257E-6	3.12E-6
EP - Marine	kg N eq	765E-6	114E-6	170E-6	1.05E-3	44.7E-6
EP - Terrestrial	mol N eq	8.22E-3	1.21E-3	1.66E-3	11.1E-3	474E-6
POCP	kg NMVOC	3.22E-3	446E-6	614E-6	4.28E-3	183E-6
ADPE	kg Sb eq	10.8E-6	264E-9	514E-9	11.6E-6	123E-9
ADPF	MJ	10.2E+0	1.19E+0	4.03E+0	15.4E+0	541E-3
WDP	m^3 depriv.	352E-3	5.19E-3	43.6E-3	401E-3	2.40E-3
PM	disease inc.	42.3E-9	6.81E-9	11.3E-9	60.4E-9	3.05E-9
IR	kBq U-235 eq	31.6E-3	1.00E-3	12.2E-3	44.7E-3	461E-6
ETP - FW	CTUe	6.12E+0	662E-3	544E-3	7.33E+0	302E-3
HTTP - C	CTUh	830E-12	76.5E-12	147E-12	1.05E-9	34.8E-12
HTTP - NC	CTUh	23.5E-9	1.68E-9	2.81E-9	28.0E-9	776E-12
SQP	Pt	3.28E+0	691E-3	381E-3	4.35E+0	322E-3
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					
Disclaimer 1	This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.					
Disclaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.					

LCA RESULTS

Resource Use for 1 kg External Filler						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
PERE	MJ	656E-3	14.9E-3	150E-3	822E-3	6.88E-3
PERM	MJ	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
PERT	MJ	656E-3	14.9E-3	150E-3	822E-3	6.88E-3
PENRE	MJ	10.2E+0	1.19E+0	4.03E+0	15.4E+0	541E-3
PENRM	MJ	000.0E+0	000.0E+0	000.0E+0	000.0E+0	000.0E+0
PENRT	MJ	10.2E+0	1.19E+0	4.03E+0	15.4E+0	541E-3
SM	kg	000E+0	000E+0	000E+0	000E+0	000E+0
RSF	MJ	000E+0	000E+0	000E+0	000E+0	000E+0
NRSF	MJ	000E+0	000E+0	000E+0	000E+0	000E+0
FW	m^3	7.15E-3	200E-6	1.55E-3	8.91E-3	92.0E-6
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.					

Waste Ouput Flows fo1 kg External Filler						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
HWD	kg	000E+0	000E+0	2.88E-3	2.88E-3	000E+0
NHWD	kg	000E+0	000E+0	395E-6	395E-6	000E+0
RWD	kg	000E+0	000E+0	000E+0	000E+0	000E+0
CRU	kg	000E+0	000E+0	000E+0	000E+0	000E+0
MFR	kg	000E+0	000E+0	000E+0	000E+0	000E+0
MER	kg	000E+0	000E+0	000E+0	000E+0	000E+0
EE (Electrical)	MJ	000E+0	000E+0	000E+0	000E+0	000E+0
EE (Thermal)	MJ	000E+0	000E+0	000E+0	000E+0	000E+0
Acronyms	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.					

Climate Impact						
Impact Category	Unit	A1	A2	A3	A1-A3	A4
*GHG-GWP	kg	657E-3	85.0E-3	185E-3	927E-3	38.5E-3

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.

/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)

/PCR for Construction Products and Construction Services/ Prepared by IVL Swedish Environmental Research Institute, Swedish Environmental Protection Agency, SP Trä, Swedish Wood Preservation Institute, Swedisol, SCDA, Svenskt Limträ AB, SSAB, The International EPD System, 2019:14 Version 1.3.1

/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

/Asian Paints/ www.asianpaintsarabia.com/

VERIFICATION & REGISTRATION

Programme	The International EPD® System www.environdec.com	EPD® THE INTERNATIONAL EPD® SYSTEM MENA EPD THE INTERNATIONAL EPD SYSTEM
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asianpaints
BERGER

STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL (VOC) EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS VERSION 1.2-CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH)

(Emission testing method for California Specification 01350)

Laboratory Report

1. Introduction

Middle East Testing Laboratory L.L.C (METS) were contacted by Berger Paints Emirates Ltd Co LLC, and requested to perform 14 day's emission test as per CDPH Method.

Client	: Berger Paints Emirates Ltd Co LLC PO Box: 27524, Al Qouz Industrial Area 1, Opp TCTI Factory Dubai, United Arab Emirates
Report No	: MR-180823-250
Reporting Date	: 15/09/2023
Tested by	: SH
Date of Analysis	: 18/08/2023-12/09/2023
Issue No	: 01 (Re-Issue Date: N/A)

2. Sample Information

Sample Description	: Berger External Filler

3. Brief Evaluation of the Results:

	TVOC and Individual VOC's of Concern		Formaldehyde	
	Criterion	Compliance	Criterion	Compliance
MS-180823-284	TVOC: <0.5 mg/m³	**PASS**	≤9.0µg/m³	**PASS**
	Individual VOC: < Limit	**PASS**		

Details are furnished in the following pages

Prepared by
for
Chemist
Material Science Division (MSD)
Employee Code: METS AJ EC 180

ميديل ايست لخدمات الفحص - ذ.م.م
METS
P.O.Box: 31442, Ajman - U.A.E.
Middle East Testing Services - L.L.C

Verified by
Team Head
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Employee Code: METS AJ EC 110

Form MRF 40 Issue No:2

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4. Test Method

Standard Method for the Testing and Evaluation of VOC Emissions from Indoor Sources using Environmental Chambers, version 1.2 of January 2017 by the California Department of Public Health (CDPH Method).

For evaluation of test results the principle of shared risk is applied, i.e. for a max limit, a result Less than or equal to the limit complies and a result Greater than the limit does not comply.

5. Sample Preparation

The Berger External Filler was mixed vigorously until it is fully homogenous and coated on a steel plate which has an area of 0.36 m^2

6. Test Procedure

Principle: To determine the specific emission rates of VOC's emitted from the tested specimen. The test was conducted in a small scale environmental chamber at specified constant conditions of temperature, relative humidity, ventilation rate and product loading factor. The chamber is considered to be a constantly stirred tank reactor. As the air in the chamber is fully mixed, VOC concentrations measured at the chamber exhaust represents the air concentrations in the chamber. From the airflow rate into the chamber, the VOC concentration, and the exposed surface area of the specimen, an area-specific emission rate or emission factor is calculated using the steady-state form of the mass-balance model.

The specimens were placed in a separate conditioning container in a room with controlled climate conditions of temperature 23 ± 1°C and 50 ± 4 % RH. After 10 days ± 5 h of conditioning the specimens were placed in a 1 m^3 emission chamber of stainless steel. Air samplings, minimum duplicates, were carried out after 24, 48 and 96 hours in the chamber.

Conditions in the emission chamber

Chamber volume	: 1.0 m^3, stainless steel
Temperature	: 23 ± 1°C
Relative humidity	: 50 ± 4 % RH
Area of test specimen	: 0.36 m^2
Area specific air flow rate	: 2.0 m^3/m^2 h
Air exchange rate	: 1.0 h^{-1}
Air velocity at specimen surface	: 0.1 – 0.3 m/s

The air samples from the chamber was collected into a collection vessel containing sorbent materials. VOC's are determined by GC comparing the chromatographic retention time and mass spectrum of the unknown to the corresponding parameters for the pure compound analyzed on the same. Matching retention times and mass spectra provide positive, confirmed identifications.

The capillary column used is RXi-624 Sil MS – 30m x 0.32mm x 1.8µm. The mass/charge ratio is used for compound identification. The total volatile organic compounds (TVOC) means compounds eluting between and including n-hexane to hexadecane, having boiling points in the range of about 60-250 °C. The emission rate of TVOC is quantified with known equivalent standard and includes all compounds ca ≥ 1 µg/m3 in the chamber. Minimum duplicate air samples were taken and the results are mean values. Sampled volumes are 3 to 8 L.

The samplings of formaldehyde and acetaldehyde were carried out with DNPH samplers. The samplers were analyzed similar to ISO 16000-3:2011(Indoor air--Part 3: Determination of formaldehyde and other carbonyl compounds – Active sampling method). This means analysis on a liquid chromatograph with absorbance detector. Duplicate air samples were taken and the results are mean values. Sampled volumes were 60 to 80 L.

7. Results

The results in Table 1, 2 and 3 are expressed as concentrations in the test chamber and as area specific emission rates. Calculation of emission rate from chamber concentration:

$$SER_{I} = \frac{Conc\ X\ n}{L}$$

SER_I = area specific emission rate, in µg/m²h

Conc = concentration of a VOC in the chamber, in µg/m³

n = air exchange rate, in changes per hour

L = loading factor, in m²/m³ (area of sample/volume of chamber)

Test results of TVOC and formaldehyde after 24 hours and 48 hours

Table 1
Test results of Berger External Filler, after 24 h

Volatile organic compound	CAS number	Retention time (min)	Concentration in the chamber (µg/m³)	Emission rate (µg/m²h)
After 24 h:				
TVOC (C6 – C16)	--	5.9-40.1	< 20	< 50
Formaldehyde	50-00-0	--	< 1	< 1

Table 2
Test results of Berger External Filler, after 48 h

Volatile organic compound	CAS number	Retention time (min)	Concentration in the chamber (µg/m³)	Emission rate (µg/m²h)
After 48 h:				
TVOC (C6 – C16)	--	5.9-40.1	< 20	< 50
Formaldehyde	50-00-0	--	< 1	< 1

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Test results of TVOC and VOCs after 96 hours
Table 3

Volatile organic compound	CAS number	Retention time (min)	Concentration in the chamber ($\mu g/m^3$)	Emission rate ($\mu g/m^2h$)
TVOC (C6 – C16)	--	5.9-40.1	< 20	< 50
Identified substances:				
No substances identified	--	--	< 2	< 4
Volatile Carcinogens [1]		5.9-40.1		
No substances identified	--	--	< 1	< 1
Substances outside TVOC:				
VVOC (< C6)		4.5 – 6.2		
No substances identified	--	--	< 2	< 4
SVOC (C16 – C22)		37.9 - 50.0		
No substances identified	--	--	< 2	< 4
Formaldehyde	50-00-0	--	< 1	< 1
Acetaldehyde	75-07-0	--	< 1	< 1

Test results of Berger External Filler, after 96 h

[1)] Volatile carcinogens = VOCs according to EU Regulation No 1272/2008 Annex VI, cat 1A and 1B

The emission results in Table 4 are expressed as area emission rates (in µg/m2h) and as concentrations in a standard private office and in a standard school classroom (in µg/m3). Calculation of concentration of VOC in the standard private office from emission rate:

$$C = (SER \times A) \div (n \times V)$$

C = concentration of VOC in the private office, in $\mu g/m^3$
SER_a= area specific emission rate of the tested product, in $\mu g/m^2h$
A = surface area of the tested product, in m, here 33.4 m, (wall area)
n = air ventilation rate, in changes per hour, here 0.68 h^{-1}
V = volume of a private office in m^3, here 30.6 m^3

In the standard private office, the floor area is 11.1 m2, the wall area is 33.4 m2, door & other millwork 1.89 m2 and wall base area 1.27 m2. In a standard school classroom, the floor area is 89.2 m2, the wall area is 94.6 m2, wall base area 9.68 m2, air ventilation rate 0.82 h-1 and the volume of the room is 231 m3. Wall area is used for the calculations.

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Test results of the estimated concentrations in a standard private office and a standard school classroom scenarios according to the target VOCs according to one-half of the CREL list (compound 1-35) and non-listed compounds:

Table 4

Estimated concentrations in a standard private office and a standard school classroom

No	Volatile organic compound	CAS number	Emission rate ($\mu g/m^2h$)	Concentration in private office ($\mu g/m^3$)	Concentration in school classroom ($\mu g/m^3$)
1.	Acetaldehyde	75-07-0	n.d	< 3	< 1
2.	Benzene	71-43-2	n.d	< 0.3	< 0.3
3.	Carbon disulfide	75-15-0	n.d	< 3	< 1
4.	Carbon tetrachloride	56-23-5	n.d	< 3	< 1
5.	Chlorobenzene	108-90-7	n.d	< 3	< 1
6.	Chloroform	67-66-3	n.d	< 3	< 1
7.	Dichlorobenzene (1,4-)	106-46-7	n.d	< 3	< 1
8.	Dichloroethylene (1,1)	75-35-4	n.d	< 3	< 1
9.	Dimethylformamide (N,N-)	68-12-2	n.d	< 3	< 1
10.	Dioxane (1,4-)	123-91-1	n.d	< 3	< 1
11.	Epichlorohydrin	106-89-8	n.d	< 3	< 1
12.	Ethylbenzene	100-41-4	n.d	< 3	< 1
13.	Ethylene glycol	107-21-1	n.d	< 3	< 1
14.	Ethylene glycol monoethyl ether	110-80-5	n.d	< 3	< 1
15.	Ethylene glycol monoethyl ether acetate	111-15-9	n.d	< 3	< 1
16.	Ethylene glycol monomethyl ether	109-86-4	n.d	< 3	< 1
17.	Ethylene glycol monomethyl ether	110-49-6	n.d	< 3	< 1
18.	Formaldehyde	50-00-0	n.d.	< 3	< 1
19.	Hexane (n-)	110-54-3	n.d	< 3	< 1
20.	Isophorone	78-59-1	n.d	< 3	< 1
21.	Isopropanol	67-63-0	n.d	< 3	< 1
22.	Methyl chloroform	71-55-6	n.d	< 3	< 1
23.	Methylene chloride	75-09-2	n.d	< 3	< 1
24.	Methyl t-butyl ether	1634-04-4	n.d	< 3	< 1
25.	Naphthalene	91-20-3	n.d	< 3	< 1

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Table 4 Cont.

No	Volatile organic compound	CAS number	Emission rate ($\mu g/m^2h$)	Concentration in private office ($\mu g/m^3$)	Concentration in school classroom ($\mu g/m^3$)
26.	Phenol	108-95-2	n.d	< 3	< 1
27.	Propylene glycol monomethyl ether	107-98-2	n.d	< 3	< 1
28.	Styrene	100-42-5	n.d	< 3	< 1
29.	Tetrachloroethylene	127-18-4	n.d	< 3	< 1
30.	Toluene	108-88-3	n.d	< 3	< 1
31.	Trichloroethylene	79-01-6	n.d	< 3	< 1
32.	Vinyl acetate	108-05-4	n.d	< 3	< 1
33-35	Xylenes (m-, o-, p-)	108-38-3, 95-47-6, 106-42-3	n.d	< 3	< 1
	TVOC (C6 – C16)	-	< 20	< 30	< 10
	SVOC (C16 – C22)	-	<2	<3	<1

ND = Not detected (detection limit is approx. 2 $\mu g/m^2h$)

Evaluation of the test results

The tested product Test results of Berger External Filler complies with the requirements of the Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers, version 1.2, 2017, by the California Department of Public Health.

The test results can be used to evaluate compliance with the indoor air emission requirements of LEEDv4 and BREEAM International (2016), see Table 5 and 6. The sample is evaluated as a wall product.

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Table 5.
Standard private office: Compliance with LEEDv4 and BREEAM International (2016)

	Concentration in private office (mg/m3)	**Maximum allowable conc.** (mg/m3)	**PASS / FAIL**
LEEDv4			
TVOC	**<0.010**	0.5 mg/m3 or less	**PASS**
		between 0.5 and 5.0 mg/m3	-
		5.0 mg/m3 or more	-
Acetaldehyde	**< 0.003**	0.070	**PASS**
Formaldehyde	**< 0.003**	0.009	**PASS**
Single VOC compounds found with defined CREL:	**n.d.**	According to list of CREL (see App 3)	**PASS**
BREEAM International (2016)			
TVOC	**<0.010**	1.0 (emission criteria)	**PASS**
		0.3 (exemplary level emission criteria)	**PASS**
SVOC	**< 0.003**	0.1 (exemplary level emission criteria)	**PASS**
Carc cat 1A+1B	**< 0.001**	0.001	**PASS**
Formaldehyde	**< 0.003**	0.06 (emission criteria)	**PASS**
		0.01 (exemplary level emission criteria)	**PASS**

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Table 6.
Standard school classroom: Compliance with LEEDv4 and BREEAM International (2016)

	Concentration in private office (mg/m3)	**Maximum allowable conc.** (mg/m3)	**PASS / FAIL**
LEEDv4			
TVOC	**<0.010**	0.5 mg/m3 or less	**PASS**
		between 0.5 and 5.0 mg/m3	-
		5.0 mg/m3 or more	-
Acetaldehyde	**< 0.001**	0.070	**PASS**
Formaldehyde	**< 0.001**	0.009	**PASS**
Single VOC compounds found with defined CREL:	**ND**	According to list of CREL (see App 3)	**PASS**
BREEAM International (2016)			
TVOC	**<0.010**	1.0 (emission criteria)	**PASS**
		0.3 (exemplary level emission criteria)	**PASS**
SVOC	**<0.001**	0.1 (exemplary level emission criteria)	**PASS**
Carc cat 1A+1B	**< 0.001**	0.001	**PASS**
Formaldehyde	**< 0.001**	0.06 (emission criteria)	**PASS**

Appendices:

1. Target CREL VOCs and their maximum allowable concentrations

For further clarification of reports, please contact qc@metslab.com

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APPENDIX I

Sl. No	Volatile organic compound	CAS number	Maximum allowable conc. ($\mu g/m^3$)
1.	Acetaldehyde	75-07-0	70
2.	Benzene	71-43-2	0.3
3.	Carbon disulfide	75-15-0	400
4.	Carbon tetrachloride	56-23-5	20
5.	Chlorobenzene	108-90-7	500
6.	Chloroform	67-66-3	150
7.	Dichlorobenzene (1,4-)	106-46-7	400
8.	Dichloroethylene (1,1)	75-35-4	35
9.	Dimethylformamide (N,N-)	68-12-2	40
10.	Dioxane (1,4-)	123-91-1	1 500
11.	Epichlorohydrin	106-89-8	1.5
12.	Ethylbenzene	100-41-4	1 000
13.	Ethylene glycol	107-21-1	200
14.	Ethylene glycol monoethyl ether	110-80-5	35
15.	Ethylene glycol monoethyl ether acetate	111-15-9	150
16.	Ethylene glycol monomethyl ether	109-86-4	30
17.	Ethylene glycol monomethyl ether acetate	110-49-6	45
18.	Formaldehyde	50-00-0	9
19.	Hexane (n-)	110-54-3	3 500
20.	Isophorone	78-59-1	1 000
21.	Isopropanol	67-63-0	3 500
22.	Methyl chloroform	71-55-6	500
23.	Methylene chloride	75-09-2	200
24.	Methyl t-butyl ether	1634-04-4	4 000
25.	Naphthalene	91-20-3	4.5
26.	Phenol	108-95-2	100
27.	Propylene glycol monomethyl ether	107-98-2	3 500
28.	Styrene	100-42-5	450
29.	Tetrachloroethylene	127-18-4	17.5
30.	Toluene	108-88-3	150
31.	Trichloroethylene	79-01-6	300
32.	Vinyl acetate	108-05-4	100
33-35	Xylenes (m-, o-, p-)	108-38-3, 95-47-6, 106-42-3	350

Target CREL VOCs and their maximum allowable concentrations

NOTE: No traceability details were provided by client.

-End of Report-

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WIMPEY LABORATORIES L.L.C.

LABORATORY REPORT

BERGER PAINTS EMIRATES LTD CO (L.L.C.)
P.O .Box 27524
Dubai, UAE

Report No: WD-R-230720-0609
Sample No: WD-S-230720-0570
Report Date: 28/07/2023

Introduction: Further to the request received from **M/s. BERGER PAINTS EMIRATES LTD CO (L.L.C.)** on 20th July 2023, the sample of Paint was tested and the results are as follows.

Sample Type : Paint
Request Number : WD-Q-230720-0124
Sample date received : 20/07/2023
Date of Test : 20/07/2023-28/07/2023
Tested by : AY

General Information

Name of the Product : Berger External Filler

Results of Analysis

Test	Method	Unit	Result
VOC Content	USEPA 24	g/L	7.0

Remarks: None

Signed for and on behalf of Wimpey Laboratories LLC

WIMPEY LABORATORIES L.L.C. P.O.BOX: 123279, DUBAI, U.A.E.

Anandu VS
Section Incharge Chemistry – Specialty

Test results relate only to the samples tested.
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-End of text-

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