



Flumroc AG

has successfully achieved Cradle to Cradle Certified® Gold for the product(s) under the name:

Flumroc Schweizer Steinwolle/Swiss Stone Wool «Generation FUTURO» – GOLD

Certification Number
6490

Standard Version
4.0

Lead Assessment Body
Vugge til Vugge ApS

Material Health
Assessment Body
ARCHE Consulting

Effective Date
22 December 2023

Expiration Date
21 December 2026

Number of final manufacturing sites: 1 (Switzerland)

Number of tier 1 suppliers by country: Germany (2); Switzerland (1); France (1); Belgium (1).

Number of suppliers of high-risk components and raw materials by country: 0

Water Use at Flumroc's Switzerland facility:

FY 2021 Groundwater Withdrawal: 112.010 M3; Third-party water Withdrawal: 13895 M3; Discharges to third-party: 5500 M3; Discharges to freshwater: 120.405 M3; Discharges to wastewater: 11.000 M3

A handwritten signature in blue ink, appearing to read "Elwyn Grainger-Jones".

Elwyn Grainger-Jones
Executive Director
Cradle to Cradle Products Innovation Institute

C2C Certified Material Health Certificate™

GOLD LEVEL



ISSUED TO Flumroc AG

Flumroc Schweizer Steinwolle/Swiss Stone Wool «Generation FUTURO» - GOLD

STANDARD VERSION 4.0 EFFECTIVE DATE 22 December 2023 EXPIRATION DATE 21 December 2026

LEAD ASSESSMENT BODY Vugge til Vugge ApS MATERIAL HEALTH ASSESSMENT BODY ARCHE Consulting

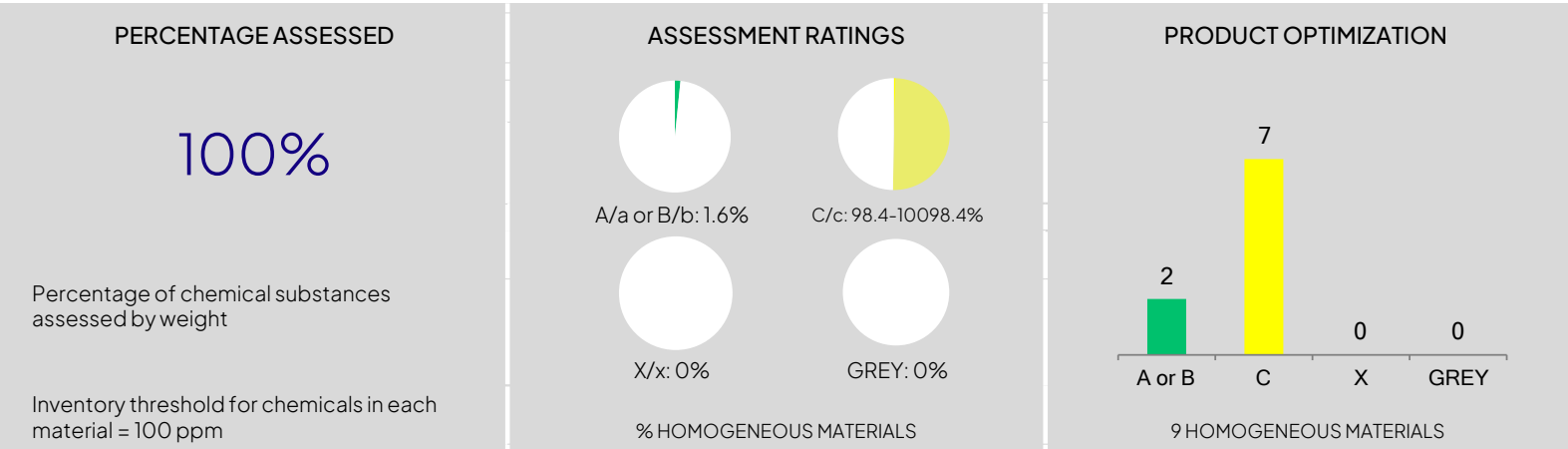
PHASES AND PROCESSES CONSIDERED IN THE CHEMICAL TOXICITY ASSESSMENT
 Final manufacturing; Professional use; Use; Intended end of use: recycling; Unintended end of use: landfilling, incineration, uncontrolled burning, release to the environment

PRODUCTS COVERED
 Number of final manufacturing sites: 1 (Switzerland)
 Number of tier 1 suppliers by country: Germany (2); Switzerland (1); France (1); Belgium (1).
 Number of suppliers of high-risk components and raw materials by country: 0

Water Use at Flumroc's Switzerland facility:
 FY 2021 Groundwater Withdrawal: 112.010 M3; Third-party water Withdrawal: 13895 M3; Discharges to third-party: 5500 M3; Discharges to freshwater: 120.405 M3; Consumption: 0 M3

PRODUCT OPTIMIZATION SUMMARY

- Cradle to Cradle Certified Restricted Substances List compliant
- Material Health optimization strategy not required
- No exposure to EU CLP Category 1 & 2 Carcinogens, Mutagens and Reproductive toxicants or Substances of Very High Concern; Carbon-bonded halogens are <1% of each material (exemptions apply)
- Meets VOC emissions testing requirements for: **Low VOC** Very Low VOC
- VOC content requirements not applicable
- Product is optimized for material health (no grey or x-assessed chemicals)
- Process chemicals are assessed and optimized
- Actions taken to reduce and eliminate emissions of hazardous chemicals in the product's supply chain



More information at www.c2ccertified.org/

MHC #6490

Cradle to Cradle Certified® Circularity Data & Cycling Instructions

Product Name: **Generation FUTURO - GOLD**

Certification Level: **Gold**

Company Name: **Flumroc AG**

Product Circularity Level: **Gold**

Certification #: **6490**

Circular Sourcing	1	Cycled content type:	
		Description of cycled content source:	Recycling content is average per year. Pre-consumer is mainly production waste and by-products from steel industry post-consumer is mainly stone wool from building deconstruction.
	2	Potential contaminants tested in recycled content:	Toxic metals, Radioactivity
		Description of tests conducted and recycled content materials tested:	The stone wool is tested for toxic metals and radioactivity according to the requirements in the C2C Geological Materials Assessment Methodology.
	3	Biomass source of renewable material in the product:	Agricultural by-products
		Description of renewable material source:	56% of the binder consists of glucose.
Circular Design	4	Potential contaminants tested in renewable content:	
		Description of tests conducted and renewable materials tested:	
	5	Source of virgin non-renewable material in the product:	Geologic (70% - 80%)
		Description of virgin non-renewable material source:	Stones from quarry (CH, A, D), Cement used in briquettes.
	6	Potential contaminants tested in virgin non-renewable content:	Radioactive elements , Toxic metals
		Description of tests conducted and non-renewable materials tested:	Stones from quarry (CH, A, D), Cement used in briquettes.
Circular Systems	1	Product's intended cycle:	Designed for technical cycling
	2	Design for maintenance, repair, or refurbishment:	Not designed for maintenance, repair, or refurbishment
	3	Product defined functional use period:	50 years and longer
	4	Intended cycling pathway(s):	Reuse, Recycling
Circular Systems		Description of tests conducted to support cycling via the intended pathway(s):	
	1	Circularity, material health, or other related certifications or standards, that have been obtained for the product, restricted substance/chemical lists and/or related chemical or circularity regulations:	Eurofins Air Comfort gold; EUCEB; RAL
	2	Intended disassembly and extraction scenarios:	Product is designed for clean extraction (without damaging or contaminating product or building)
Circular Systems	3	Reverse logistics mechanism in place for extraction and reprocessing of the product:	De-installation and extraction (through dedicated take-back), Transport (through dedicated take-back), Drop-off point (through dedicated take back), Reprocessing of materials (through dedicated take-back)
		Description of reverse logistics in place for extraction and reprocessing of the product:	Under the section "Making Reverse Logistics Work" on the website linked below, the Rockcycle scheme's reverse logistics are illustrated: https://www.rockwool.com/group/about-us/sustainability/rockcycle/ Flumroc also has partnerships with dedicated take-back companies. These companies de-install, extract, collect, and then transport the end-of-use stone wool products to their facilities.
Cycling Instructions	1	Procedure for identification of homogeneous materials in the product intended for cycling:	The stone wool fibers are considered compatible for high-value recycling. End-of-life Generation FUTURO products can be remelted in the cupola oven at 1500 degrees Celsius. This process substitutes virgin stone melt ingredients without any loss of product quality, functionality, or material durability. Additionally, the remelted material does not contain any low-value additives.
	2	Instructions for the cleaning, maintenance, and repair of the product or a link to where these instructions may be found (if cleaning, maintenance, or repair is required during product use):	No maintenance or repair is required during the product's use phase. This information is also stated in the Environmental Product Declaration (EPD) for Generation FUTURO products. The EPD is available on the website provided below: https://www.flumroc.ch/fileadmin/Dateiliste/flumroc/Downloads/30_Zertifikate/35_EPD/EPD_Generation_FUTURO__08.2021.pdf
	3	Instructions for the extraction, recovery, disassembly, and reprocessing of the product or a link to where these instructions may be found:	Used stone wool or cuttings can be returned to Flumroc. At Flumroc, recycling material is shredded, mixed with other raw materials, and melted for the production of new stone wool. Since the product is only sold in Switzerland, the take-back system is applicable only to that country. The information sheet for Flumroc stone wool waste, provided in the "Download" section of the link below, describes how end-of-use stone wool products should be collected, quality-checked, and stored for transportation back to the facility. https://www.flumroc.ch/services/recycling