LAYMAN'S REPORT

Alina Life Formulations in an Open-Source Platform

Project code: LIFE17 ENV/LV/000318 | Duration: 01/07/2018 – 31/10/2024
Location: Riga, Latvia (EU)
Websites: lifealfio.com | paintsforlife.eu

WHY THIS PROJECT

Most people assume that water-based decorative paints are harmless. In reality, many of them still rely on **film-preservative biocides** – chemicals added to stop the paint from spoiling in the can.
These substances can:

- release into indoor air and dust,
- end up in wastewater when brushes and tools are washed, and
- contribute to the overall chemical load on people and the environment.

At the same time, the EU is tightening rules on hazardous substances through the **Biocidal Products Regulation**, the **Chemicals Strategy for Sustainability** and the **Green Deal**. Paint producers, especially small and medium-sized companies, urgently need practical alternatives that allow them to make **durable, attractive paints without toxic preservatives** – and to prove this to regulators, buyers and consumers.

LIFE-ALFIO was created to answer a simple question:
*"Can we keep paint stable and safe **without** relying on traditional film-preservative biocides – and make it easy for manufacturers to copy and scale the solution?"*

WHAT WE SET OUT TO DO

LIFE-ALFIO combined **new chemistry** with **open knowledge**:

A new mineral additive – ALINA organoclay

A patented organoclay material, added in small amounts to water-borne paints, helps keep them stable and resistant to spoilage **without film-preserving biocides**. It is:

- non-hazardous and inorganic,
- zero-VOC, and
- designed to match **EU Ecolabel** requirements for decorative paints.

An open online platform – PaintsForLife.eu

Instead of keeping the paint recipes and documentation confidential, the project developed an **open-source style platform** with:

- 16 validated paint formulations (indoor wall paints, primers, façade paints and other uses),
- technical data sheets, safety data sheets and quality-control instructions,
- educational articles, videos and tools to help **manufacturers, public buyers and consumers** make informed choices.

The vision was that **any qualified paint producer** could take the formulations and documentation, run a 1,000-litre pilot batch, and start offering safer, biocide-free products with much lower cost and effort than starting from scratch.

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WHAT WE BUILT AND DELIVERED

Technology and production

- **Organoclay production:** more than **10.4 tonnes** of ALINA organoclay were produced in Latvia using a pilot-scale line integrated into an industrial site. This demonstrated that the technology is suitable for industrial production, not just for laboratory samples.
- **Pilot paint batches: 16 × 1,000 L** pilot and exhibit batches of paints and coatings were manufactured – one for each of the 16 formulations – totalling **16,000 litres**. These recipes were designed to be **biocide-free and Ecolabel-aligned**.

Online platform and communication

- **PaintsForLife.eu platform:** from October 2020 to late 2025, the educational platform and formulation library attracted about **40,000 active users** and more than **275,000 interactions** (page views, downloads, clicks on tools and resources).
- **Project website lifealfio.com:** the project site provided information on LIFE-ALFIO objectives, news and deliverables and was visited by more than **5,000 users**.
- **Videos and media:**
  - three main project videos and a series of short social-media clips together reached **over 100,000 viewers** across TV, YouTube, Facebook and Instagram;
  - three articles in industry magazines and several national media appearances further increased awareness of biocide-free paints.
- **Events and conferences:** LIFE-ALFIO results were shared at national and EU-level events, including a final conference and panel discussion on eco-labels and safe paint choices.

LIFE-ALFIO was coordinated by **SIA ALINA** in **Riga, Latvia**, with scientific partners **University of Latvia** and **Riga Technical University**. Production trials were carried out in rented premises at an industrial site in Latvia, and the online platform reached users across the **European Union and beyond**.

HOW IT HELPS PEOPLE AND THE ENVIRONMENT

Traditional water-borne paints often use **organic biocides** dissolved in the liquid part of the paint. These molecules can slowly evaporate into indoor air or wash out into water.

ALINA organoclay follows a different logic:

- It is a **modified clay mineral** that helps control water activity and micro-environment in the paint.
- This improves stability in the can and supports the paint's structure on the wall.
- Because the material is inorganic and non-volatile, it does not evaporate or leach like classic biocides.

In LIFE-ALFIO, this approach was tested in many types of paints. The validated formulations showed that it is possible to meet **performance requirements** (coverage, durability, scrub resistance, etc.) and **stringent eco-criteria** while **removing film-preservative biocides** from the recipes.

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Environmental benefits

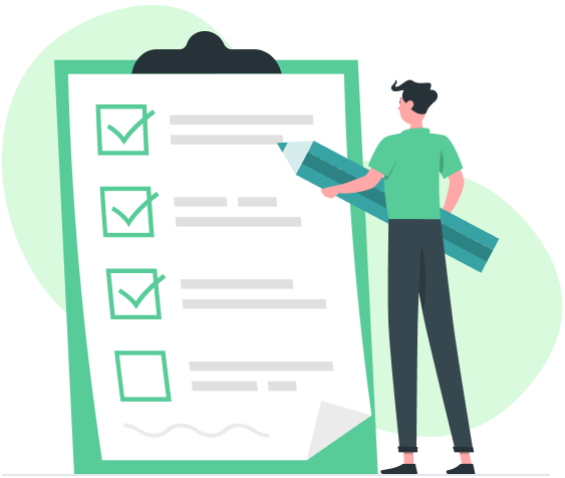
- **Less hazardous chemistry in homes and offices**
  By avoiding film-preservative biocides, the new formulations reduce one source of potentially harmful chemicals in indoor air and dust.
- **Support for EU "toxic-free environment" goals**
  Removing these biocides from everyday products contributes to long-term objectives under the **Green Deal** and the **Chemicals Strategy for Sustainability**, including better protection of water bodies and ecosystems.
- **Lower VOC levels**
  The 16 formulations were designed to meet **EU Ecolabel** VOC limits, reducing emissions that contribute to smog and indoor air problems.
- **Prevention instead of end-of-pipe solutions**
  The project focuses on **designing out** hazardous substances from the outset, which is more sustainable than relying on treatment of emissions or waste.

Economic benefits

- **Ready-to-use formulations**
  Paint manufacturers can save significant development time and testing costs by starting from the LIFE-ALFIO recipes rather than designing their own systems from scratch.
- **Simpler documentation**
  The project delivers full documentation packs (TDS, SDS, quality-control guidance) that can be adapted, helping companies to comply with regulatory and customer requirements at lower cost.
- **Future business potential**
  The technology and platform create new opportunities for:
  - supply of organoclay additives,
  - licensing of formulations, and
  - advisory services around eco-label-aligned paints.

Social benefits

- **Health protection**
  Reducing exposure to certain hazardous preservatives in indoor environments supports better long-term health, especially for sensitive groups such as children, elderly people and workers who frequently handle paints.
- **Public awareness**
  Through articles, videos, podcasts and social media, the project reached **tens of thousands** of citizens with simple messages about choosing safer paints and reading labels.
- **Capacity building**
  Public procurement officers, architects and builders gained practical tools to demand safer products, creating a demand signal that can shift the market.



WHAT HAPPENS NEXT (AFTER-LIFE)

Even though the LIFE project has ended, the partners plan to continue the journey:

Technology and supply

- Maintain and improve the organoclay production technology, aiming for a capacity of up to **120 tonnes per year** through partner manufacturing.

Formulations and evidence

- Keep the 16 validated formulations updated and extend the portfolio as new applications are tested.
- Continue the work on **EU Ecolabel certification** with the reorganised competent body, using the extensive documentation already prepared.

Platform and communication

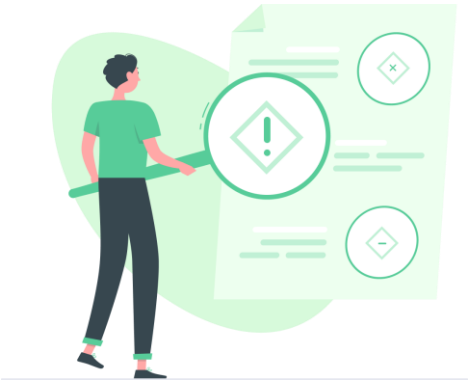
- Maintain **paintsforlife.eu** and **lifealfio.com** for at least five years after project end, updating case studies, buyer tools and educational content.

Policy and market dialogue

- Share experience with other EU projects, regulators and industry groups to support broader uptake of non-biocidal technologies and robust eco-labels.

The goal is that, by 2030, **biocide-free decorative paints** based on LIFE-ALFIO know-how will no longer be a niche innovation but a normal choice in DIY stores, professional supply chains and public buildings.

HOW TO USE THE RESULTS



Paint manufacturers

- can request access to the relevant formulation pack via the project or platform;
- run a 1,000 L pilot batch using their own equipment;
- adapt the recipe if needed and move into commercial production with organoclay instead of film-preservative biocides.

Binder and raw-material suppliers

- can integrate the organoclay concept into their own product ranges and offer "biocide-free ready systems" to downstream paint producers.

Public procurers and large private buyers

- can use the platform's **buyer toolkit** – including example tender text and "eco-label or equivalent" guidance – to request non-biocidal, eco-aligned paints in calls for tenders.

Consumers and NGOs

- can use **paintsforlife.eu** to learn how to read labels, understand eco-labels and ask for safer paint options in retail stores and renovation projects.

Because the formulations, documentation and educational materials are available online, the concept can be replicated by many actors in different countries without large upfront licensing fees.

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LATVIAN SUMMARY (ĪSS KOPSAVILKUMS)

LIFE-ALFIO projektā tika izstrādāta **minerālu piedeva ALINA organomāls**, ar kuru iespējams atteikties no **biocīdiem ūdens bāzes krāsās**. Paralēli izveidota **publiska tiešsaistes platforma PaintsForLife.eu** ar gatavām, Ecolabel prasībām atbilstošām krāsu receptēm un praktiskiem materiāliem krāsu ražotājiem, iepircējiem un patērētājiem.

Projekta laikā:

- saražoti vairāk nekā **10,4 t organomāla** pilotražošanā;
- izveidotas un 1 000 L mērogā pārbaudītas **16 jaunās krāsu receptes** (kopā 16 000 L);
- platformu un mājaslapu apmeklēja vairāk nekā **45 000 lietotāju**, radot vairāk nekā **300 000 mijiedarbību**;
- ar video, publikācijām un sociālajiem tīkliem sasniegti vairāk nekā **200 000 cilvēku**.

Pēc projekta beigām partneri plāno turpināt tehnoloģijas attīstību, uzturēt platformu vismaz piecus gadus un pabeigt Ecolabel sertifikācijas procesu, lai **biocīdu nesaturošas krāsas** kļūtu par ikdienas izvēli Latvijas un Eiropas tirgū.

CONTACTS & LINKS

Coordinating Beneficiary: SIA ALINA | Riga, Latvia | solvita@alina-premium.com
Project site: www.lifealfio.com | Platform: www.paintsforlife.eu

Paints for life

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