

LIFE-TRIALKYL



LIFE14/ENV/IT/000346

P Platform General Assembly, 1° December 2016- Maria Cristina Pasi-Project coordinator

LIFE TRIALKYL aims at developing an innovative and sustainable continuous process to produce quality trialkyl phosphites



Italmatch chemicals SpA (ITA)-Coordinating beneficiary

Sviluppo Chimica SpA(ITA)-Associated beneficiary

Sveriges tekniska forskningsinstitut AB (SWE)-Associated Beneficiary

EXPECTED IMPACT

HIGH ENVIRONMENTAL SUSTAINABILITY in

- **Water management:** 100% water consumption saving (640.000l/yr) and 100% waste water saving (320.000l/yr)
- **Energy consumption:** 20-30% energy reduction (29.6tCO₂eq./yr)
- **Tipology of intermediates and by-products** (avoidance of tertiary amines, chlorinated solvents)

EXPECTED IMPACT

SOCIO ECONOMIC IMPACT

- **Generation of a social care chemical industrial product.**
 - Phenol free trialkyl phosphites
 - avoiding 160.000 t/yr globally of harmful chemicals and at least 786t/yr related to Italmatch Chemicals consumption)
 - VOCs < 5ppm
- EU regained **leadership** in the segment to serve EU and extra EU Enterprises
- Enhancement of the Circular Economy in the Chemical Industry

POLICY IMPLICATION

- **EU and Global Registration of the new technology:** restart EU production of sustainable TriAlkyl Phosphites (ECHA)
- **Embracement of the Horizon 2020 programme and its special sectors**

Water and Phosphorus Platforms

- **New partnerships** with downstream sectors within several industry segments
- **Co-development** within the circular economy concept with the agro industry starting from Italy to Global

The team



The project at a glance

LIFE-TRIALKYL

Chemicals are an essential part of European Union Citizens' daily lives. The EU chemicals sector is a strategic segment for the EU. Chemistry is in every aspect of our daily lives even though we often don't see.

However, if not properly used and controlled, some chemicals could be difficult to manage in the environment.

Various specific phosphorus derivatives are used in a wide range of applications, including pesticides, flame retardants, plastics, childcare products and pharmaceuticals.

The main objectives of the project are to:

- Set up an innovative, sustainable and efficient industrial continuous process to obtain high quality Trialkyl Phosphites
- Increase awareness about alternative, sustainable and eco-friendly chemical processes in the chemical industry
- Analyze the whole process from a Life-Cycle Assessment perspective
- Reduce energy consumption in the process by 20-30%, 100% recovery of solvents and elimination of waste water treatment
- Avoid the production of hazardous intermediaries and by-products and the use of dangerous chemicals for waste water treatment
- Reduce water consumption and avoid waste water production compared to current production processes

The LIFE-Trialkyl Project will also have a relevant socio economic impact, in particular:

- Generation of a social care chemical industrial product
- EU regained leadership in the chemical additives segment to serve EU and extra EU Enterprises
- Enhancement of the circular economy in the chemical industry

"LIFE-Trialkyl Project aims at fostering the innovative technologies to develop eco-sustainable chemicals"

LIFE-TRIALKYL
in short

Project acronym	LIFE-Trialkyl
Project reference	LIFE14 ENV/IT/000346
Funding	LIFE Programme of the European Union
Topic	Environment
Total Budget	2,243,969.00 €
Start and end date	16 July 2015 to 16 October 2018
Duration	36 months
Leader	Italmatch Chemicals S.p.A.
Partners	SC Sviluppo chimica S.p.A., SP Technical Research Institute of Sweden
Project Locations	Lombardia (IT), Västsverige (SE)

For more information
visit our website: www.life-trialkyl.eu

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With the contribution of the LIFE Programme of the European Union under grant agreement LIFE14/ENV/IT/000346

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Thank you all very
much

for your attention

and for your

contributions!

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Italmatch Chemicals