

Request for Industrial Partners (16/11/2021)

Project title: Sustainable PROduction of Multi-reactive Isocyanates

Acronym: PROMIS

Project ID	
Type	ICON
Period	2 years
Starting date	2022
Total project budget	TBD
Subsidy percentage	According to SBO and O&O regulations
Current industrial partners	Confidential
Catalisti contact	Aron Deneyer (adeneyer@catalisti.be)

Project description

Introduction

Today, polyurethane (PU) foams are widely used due to their unique and superior properties. In most applications, polyurethanes are obtained by reacting a polyol part and an isocyanate part. For foam applications, aromatic diisocyanates (monomers) such as toluene diisocyanate (TDI) and methylene diphenyl diisocyanate (MDI) are typically used. Production of these monomers is based on phosgenation of the corresponding diamines, with all raw materials tracing back to fossil resources (BTX).

In the light of the “green deal: chemicals strategy for sustainability”, the chemical and plastic industry is looking for safer and more sustainable alternatives. In order to achieve this, two main strategies seems to be possible with regard to the isocyanate part of PU. The first strategy is developing a new bio-based value chain, going from renewable feedstock over process technology towards interesting isocyanates. The second strategy is focusing on the circularity of the process, thus recycling PU and reusing the corresponding isocyanates.

Goals

The goal of this project is to obtain **multi-reactive isocyanates (MICs)** *via* two different, but complementary approaches:

- Sustainable production of **new MICs from bio-based building blocks**, leveraging on their inherent unique functionalities;
- Purification and modification of **MICs resulting from PU recycling processes**.

The purpose of this project is to have a strong consortium that covers the entire PU value chain. In addition, it would be valuable to have a company with expertise in PU recycling in order to close the PU loop. Being successful in this project, the gained information will lead to the production of bio-based multi-reactive isocyanates and renewable PU value chains in Flanders and beyond.

Request

The current industrial consortium consists of:

- a global producer of PU insulation materials;
- a global producer of PU adhesives, sealants and foams.

To complete the consortium, Catalisti is searching for complementary partners, namely:

- an industrial partner with expertise in **producing isocyanates**;
- an industrial partner with expertise in **recycling PU**.

RfP PROMIS

How to reply to this request

Please send an **email before 08/12/2021** to Aron Deneyer (adeneyer@catalisti.be) with nverdonck@catalisti.be in CC, and **briefly describe your interest and potential contribution** to the project. Based on all offers, the current industrial partners will determine together with Catalisti which partners can join the consortium. After submission of your offer, you can be contacted by phone to further elaborate your offer. The partner decision will be communicated on December 24th 2021 at the latest.

Important notice: Partners that wish to participate in this project are required to be member of the Flemish spearhead cluster whose domain of activity covers the partner's contribution to the project. For more information, please contact Aron Deneyer (adeneyer@catalisti.be).

Contact

Please contact Aron Deneyer (adeneyer@catalisti.be, +32 472 375 260) if you have questions concerning this RfP.

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