PUReSmart

PolyUrethane Recycling Towards
a Smart Circular Economy

Deliverable

D6.13 Workshop 2

WP6 – Communication, Dissemination and Exploitation

Project Information

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Document status

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Name	Position in project	Organisation	Date	Visa
	WP Leader	REF		
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V1	15/12/2022	First version	Jan Willems / REF
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Table of content

Publishable Summary

This report describes the activity carried out for the PUReSmart dissemination workshop "Polyurethane Recycling" on 01/12/2022, as well as its organization procedures, organized by REF with the consortium partner's help.

The program of this workshop was the following:

- Foam-to-foam recycling via the use of Covalent Adaptable Networks, sorting of polyurethane foams i.f.o chemolysis, and results of the Smart Chemolysis, recovering both PU components polyol and TDA, and the valorisation of the recycled polyol, recycled isocyanate in flexible polyurethane foam
- The contribution of chemical recycling in achieving a sustainable circular economy, via the PUReSmart technology, plus the opportunities and barriers for scale-up: a TIS-perspective on innovation for chemical recycling of flexible PU foam.

Presentations and pictures of the workshop can be found on: https://www.puresmart.eu/final-workshop/

Executive summary

1 Description of the deliverable objective and content

This report describes the activity carried out for the PUReSmart dissemination workshop "Polyurethane Recycling" on 01/12/2022", as well as its organization procedures, organized by REF with the consortium partner's help.

2 Brief description of the state of the art

N.A.

3 Deviation from objectives and corrective actions

It was a live workshop taking place at Recticel Engineered Foams, Damstraat 2, 9230 Wetteren, Belgium.

4 Innovation brought and technological progress

N.A.

5 Analysis of the results

70 people registered, and 56 participated in this workshop.

Besides interest from the academic world, a lot of industry players were present.

List of companies: REF, Tempur, Cofel, The Vita Group, Unilin Insulation, SAFAS Polyurethane Technologies, Milliken Europe BV, SABA Dinxperlo, Eco-Mobilier, Ascorium Industries, Redwave, Covestro, Forvia, Remondis, BASF Polyurethanes, Repsol, Evsicon, EFC, TripleHelix, NEVEON Holding GmbH.

Important Industries' Association present: Ebia, Chemical Recycling Europe, Europur

6 Impact of the results

The workshop aimed at presenting the results of the PUReSmart project. For the first time in PU history, proving that flexible PU foam is circular, by successful valorisation of PU building blocks in flexible PU foam – using 100% recycled polyol and 100% recycled isocyanate with satisfying comfort foam specifications.

Knowledge spread on the recycling of plastics, and more specific on the chemical recycling route of polyurethanes in the PUReSmart project.

7 Related IPR

N.A.

8 Publishable information

N.A. – as dissemination level of this document is 'public'.

9 Conclusion

The PUReSmart dissemination workshop "Polyurethane Recycling" on 01/12/2022 was successful, seeing the numerous presence of different companies and institutes /universities.

Deliverable report

1 Preparation of the workshop

1.1. Date and location

This workshop has been organized on December 1st 2022 by REF.

The main topics of this workshop:

- Foam-to-foam recycling via the use of Covalent Adaptable Networks, sorting of polyurethane foams i.f.o chemolysis, and results of the Smart Chemolysis, recovering both PU components polyol and TDA, and the valorisation of the recycled polyol, recycled isocyanate in flexible polyurethane foam
- The contribution of chemical recycling in achieving a sustainable circular economy, via the PUReSmart technology, plus the opportunities and barriers for scale-up: a TIS-perspective on innovation for chemical recycling of flexible PU foam.

Place: Recticel Engineered Foams (Damstraat 2/B-9230 Wetteren, Belgium)

1.2. Schedule

9:00 – 9:45 Welcome coffee

9:45 – 10:00 Welcome plus introduction about PUReSmart – Bart Haelterman

10:00 – 10:30 Michel Baumgartner, Europur : "EU Green Deal and Recycling from a flexible PU perspective"

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10:30 – 11:00 Johan Winne (UGENT) / Lucie Imbernon (REF): "Towards foam-to-foam recycling via the use of Covalent Adaptable Networks"

11:00 – 11:30 Katharina Ander (REDWAVE): 'Smart sorting of polyurethane foams'

11:30 – 12:00 Karin Clauberg (COVESTRO): "Smart Chemolysis: Recycling of polyurethane mattress foams, recovering both PUcomponents polyol and TDA"

12:00 – 13:00 Sandwich Lunch

13:00 – 13:30 Subramaniam Iswar (REF): "Smart Chemolysis: Valorisation of PU building blocks (recycled polyol, recycled isocyanate) in flexible polyurethane foam"

13:30 – 14:00 Simone Maranghi / Alessandra Zamagni (Ecoinnovazione): "The contribution of chemical recycling in achieving a sustainable circular economy – The case of PUReSmart technology"

14:00 – 14:30 Jonas Van Gaubergen (UGENT): "Opportunities and barriers for scale-up: a TIS-perspective on innovation for chemical recycling of flexible PU foam" +questions

14:30 – 14:50 Coffee break

14:50 – 15:20 John Sewell Secretary General, Chemical Recycling Europe: "Chemical recycling"

15:20 – 15:50 Closing – Bart Haelterman General conclusion

15:50 – 17:20 Closing reception

1.3. Workshop promotion

The workshop has been disseminated by the consortium directly to their contacts, through the website and Linkedin page of the PUReSmart project.

2 The workshop

2.1. Content and speakers

Content:

The presentations are available on the project website: https://www.puresmart.eu/final-workshop/

General (non-confidential) results of the project were developed.

Speakers:

The speakers were mainly issued from the project partners. Two of them were belonging to external associations, Europur and Chemical Recycling Europe, to share the broader interest of the recycling and the potential European impact of PURESMART.

Bart Haelterman, REF

Michel Baumgartner, Europur

Johan Winne, UGent

Lucie Imbernon, REF

Katharina Ander, Redwave

Karin Clauberg, Covestro

Subramaniam Iswar, REF

Simone Maranghi, Ecoinnovazione

Jonas Van Gaubergen, UGent

John Sewell, Chemical Recycling Europe

Photos of the event: see link https://www.puresmart.eu/dt_gallery/final-workshop/

3 Achievements

70 people registered, and 56 participated in this workshop.

Presentations were sent to all participants after the event and are made public on https://www.puresmart.eu/final-workshop/