

## TECHNOLOGY OFFER: GLYCEROL (POLYOLS) CARBONATE

### OVERVIEW

**Description:** Process , Pilot , Product , R&D knowledge , Other

**Benefit summary:** Higher purity glycerol carbonate obtained by reacting glycerol and urea.

**Development summary:** The process has been studied at lab scale.

**IP Summary:** The technology is supported by 3 granted patents.

### Novelty

- **Technology Benefit description:** Process for synthesizing polyol-carbonates, including glycerol carbonate, which comprises reacting a polyol with urea in the presence of a catalyst, extracting produced NH<sub>3</sub> and extracting the carbonate with a selected solvent.
- **Technology differentiation versus competition (and Uniqueness):** High purity glycerol carbonate can be recovered thanks to selective solvent extraction.

### Development

- **Technology Readiness Level (Scale):** TRL 1 ; 2 ; 3 ; 4 ; 5 ; 6 ; 7 ; 8 ; 9
- **Development Status summary:** The process has been studied at lab scale, and glycerol carbonate was isolated.

### Intellectual Property

Patent Application / Granted				
Priority Patent Number	Title	Countries	Status	Priority date
EP08 305653.1	Synthesis of Polyol carbonate from polyols	CN; JP, CA*	Granted	08/10/2008

This patent has been filed as a Foreground of the TopCombi FP6 project, and was an accessible Background in EuroBioRef. \* Patent was also filed in other countries where the patent is pending.

### Provider

- **Technology provided by:** ARKEMA FRANCE / CIRCC
- **Related Expertise:**

Partner	Academic/Industry	Research / Pilot / Demonstration / Other
ARKEMA	INDUSTRY	Research

Other Owners of shared Foreground		
CIRCC	ACADEMIC	Patent has been filed with CIRCC inventors. An ownership agreement exists.

### Technical Details

- **Long description:** Process for synthesizing polyol-carbonates which comprises reacting a polyol with urea in the presence of a catalyst, extracting produced NH<sub>3</sub> in the course of the process, and with at least one step of the process, with addition of a selective solvent for polyol carbonate allowing to extract it from the reaction medium.
- **Technology offer can be coupled with the Technology offer on combined production of cyclic carbonated and Fatty nitriles.**



Instrument: Large Scale Collaborative Project  
Thematic Priority: FP7-ENERGY.2009.3.3.1

Grant Agreement: 241718

## Licensing

- **Collaboration type sought:** Collaboration for technology development, Licensing, Transfer of IP.
- **Support provided:** Documentation, R&D (for CIRCC)

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08305653.1 8 October 2008 (08.10.2008) EP
- (71) **Applicant (for all designated States except US):** ARKEMA FRANCE [FR/FR]; 420, rue d'Estienne d'Orves, F-92700 Colombes (FR).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** DUBOIS, Jean-Luc [FR/FR]; 190, rue du Coteau, F-69390 Millery (FR). ARESTA, Michele [IT/IT]; Consorzio Interuniversitario Reattività Chimica e Catalisi-CIRCC, Piazza Giulio Cesare 21, I-70124 Bari (IT). DIBENEDETTO, Angela [IT/IT]; Consorzio Interuniversitario Reattività Chimica e Catalisi-CIRCC, Via Confalonieri 42, I-70022 Altamura (IT). FERRAGINA, Carla [IT/IT]; Via Raffaella De Cesare 36, I-00179 Roma (IT). NOCITO, Francesco [IT/IT]; Consorzio Interuniversitario Reattività Chimica e Catalisi-CIRCC, Via M. Boiardo 7, I-74100 Taranto (IT).
- (74) **Agent:** SAUVAGEOT, Olivier; Arkema France, 420, rue d'Estienne d'Orves, F-92705 Colombes Cedex (FR).
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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- Published:**
- without international search report and to be republished upon receipt of that report (Rule 48.2(g))

### CONTACT DETAILS:

**Name:** Jean-Luc DUBOIS

**Address:** Arkema France, DRD – Corporate R&D, 420 Rue d'Estienne d'Orves, 92705 Colombes, France

**E-mail:** jean-luc.dubois@arkema.com

**Phone number:** +33 4 72 39 85 11

**Name:** Michele ARESTA

**Address:** CIRCC

**E-mail:** michele.aresta@uniba.it

**Phone number:** +39 080 544 2084

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