



# Recycled Plastic

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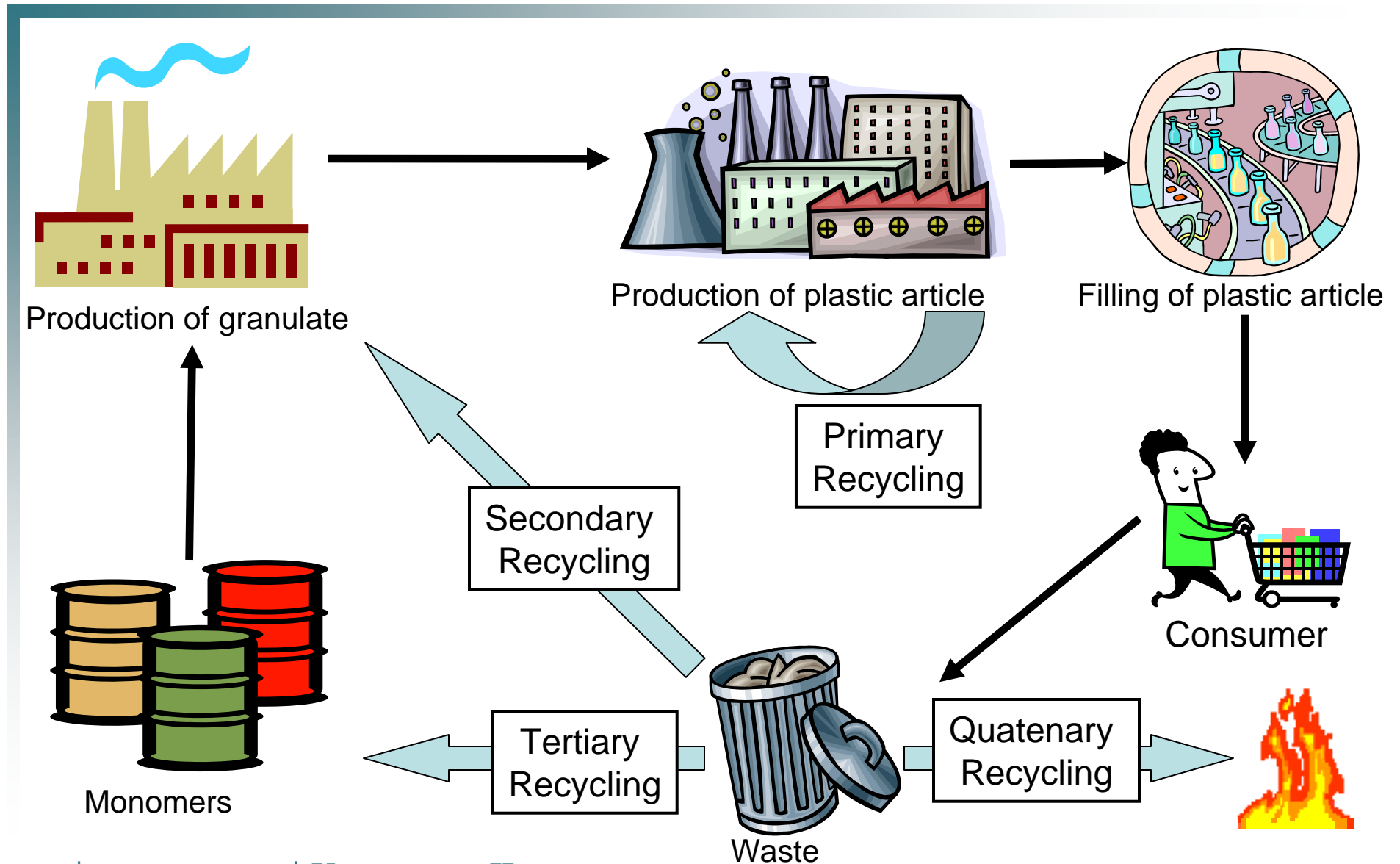
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# EU & recycled plastics

- Definition of recycle systems
- Present situation
  - EU
  - Member states
- Future situation
  - New EU legislation
  - New EU authorisation procedure
- Conclusions

# Plastic recycling



# Recycling characteristics

Name	Source	Recycle technique
Primary recycling	in house scrap	Reuse polymer
Secondary recycling	post consumer	Mechanical cleaning
Tertiary recycling	post consumer	Chemical retention of monomer(s)
Quaternary recycling	post consumer	Energy recovery

# Present legislation

## **Primary** recycling

- EU, no specific regulation. Final article must comply with framework regulation and 2002/72/EC)
- National level, not regulated.

Generally accepted that this can be done, as long as final material complies with applicable requirements.

# Present legislation

## Secondary recycling

- EU, no specific regulation. Final article must comply with framework regulation and 2002/72/EC)
- Member states:
  - May be used, but a mandatory pre registration requirement exists (example Belgium)
  - May be used, but a 'voluntary' guideline exists (example France)
  - May be used (example Germany)
  - May not be used (example Italy)

# Belgium (1)

- Mandatory registration
- Process is evaluated
- Technical dossier must be filed
- Applicable for all types of plastics
- Final product must comply with plastic measures + Framework Regulation
- Approval of use issued for 5 years, and is renewable after request in writing

## Belgium (2)

- Through August 2007, 9 processes have been authorized
- Dossier and evaluation report of evaluator is confidential. Opinion of scientific committee is public.

# France (1)

- No specific legislation on recycling of plastics, only Framework Regulation
- A dossier must be available confirming that it meet the requirements of Framework Regulation (recycled material = safe)
- Guidelines/Advice from the AFSSA (French EFSA) are published

# France (2)

- AFSSA Guideline on secondary recycling
  - *Applies to PET*
  - *A challenge test using 5 model contaminants is described*
  - *PET flakes spiked at 500-1000 ppm/component*
  - *At least 99% of the contaminants must be removed*
  - *Migration of contaminants may be 1.5 µg/kg*

# Present legislation

## **Tertiary recycling**

- EU states that there is no need for registration, monomers and final article must comply with requirements of 2002/72/EC and Framework Regulation
- However, some member states (Belgium) have a pre-registration system
- However, some member states (France) have guidelines

# Future Legislation



**WARNING:**

The following sheets contain information from draft legislation, the content may change before it is officially adopted !

# New EU Recycling Regulation

- Does apply to:
    - *Secondary recycling*
  - Does **NOT** apply to:
    - Primary recycling
    - Tertiary recycling
    - Recycled plastics behind a barrier
- } *may be used if in compliance with 2002/72/EC and framework regulation*
- Expected publication end 2007/beginning 2008
  - Audits possible
  - Labeling of the recycled content of final materials and articles is voluntary
  - Guidelines for preparation of a technical dossier will be issued by EFSA 6 months after the publication of Regulation in the OJ

# EU requirements

- Input must be food compliant
- Processes authorized, not sites!
- Recycling process must be
  - validated using a challenge test *or* using a closed loop
  - authorised by EU
  - managed under quality system (EC) 2023/2006, which will be amended to include new requirements for recycled materials
- Final product must meet requirements of Plastics Directive and Framework Regulation

# EU recycling dossier

- The name and address of the applicant
- Name of the process
- Characterization of the input
- Description of the challenge test or closed loop system
- Characterization of the recycled material
- Description of any restrictions on the conditions of use for recycled material
- A summary of the dossier.

# EU technical dossier

- Name and address of the recycler
- Detailed description of the recycling process
- A risk analysis of the recycling process + critical points + measures taken to minimize and control the risk
- The food contact applications covered
- The specifications of the plastic output: plastic output intended for the manufacture of plastic materials and articles to be used in a specific food contact application should meet the requirements that are appropriate for this use
- Protocol and results of the challenge test performed

# EU challenge test

1. Plastic is contaminated with model contaminants representing potential polar/non-polar and volatile/non-volatile contaminants
2. Contaminated plastic run through recycling process
3. Decontamination effect determined and effect on potential migration calculated or migration determined

# EU decision published

- name of the recycling process
- name and address of authorization holder
- short description of the recycling process
- date from which the authorization is effective
- EC Register number of the authorized recycling process

## *Data on plastic input*

- any conditions/restrictions concerning the plastic input

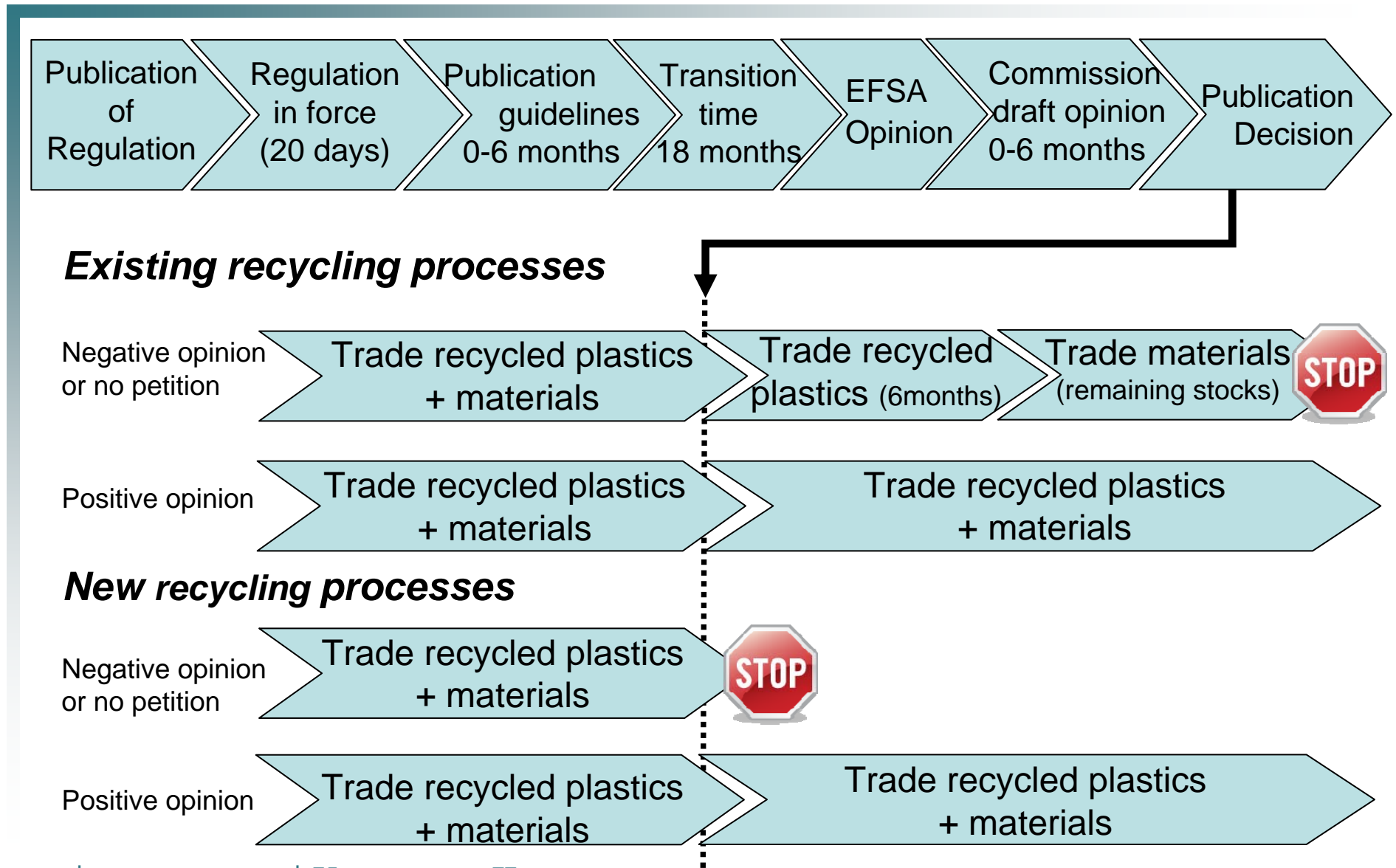
## *Process*

- any conditions/restrictions concerning recycling process

## *Recycled plastic*

- any criteria to characterize the recycled plastic
- restrictions in the application (final product, food type, contact conditions)
- any requirements concerning monitoring the compliance of the recycling process with the conditions of the authorization

# EU timing



# EU confidentiality

- Information may be marked as confidential (must be verifiable justification)
- The following information cannot be considered confidential:
  - the name/address of the applicant
  - the name of recycling process
  - information of direct relevance to the safety assessment
  - the analytical methods
- The Commission shall determine which information should be kept confidential (applicant will be informed)
- In case of a withdrawn application, all information indicated by applicant as confidential shall be treated as confidential
- The Authority shall supply the Commission and the Member States with all information in its possession on request.
- If circumstances require in order to protect human health, information can be made public

# Declaration of compliance

(in addition to requirements of art. 9 of 2002/72/EC)

## Plastic materials and articles

- A declaration that only recycled plastic from an authorized recycling process has been used listing the EC Register number of the authorized recycling process.

## Recycled plastic

- The declaration that the recycling process has been authorized listing the EC Register number of the authorized recycling process
- The declaration that the plastic input, the recycling process and the recycled plastic meet the specifications for which the authorization has been given.
- The declaration that a quality assurance system according to Annex Point B to Regulation 2023/2006 is in place (new).

# EU conclusions

## Present status

- The legal status of use of recycled plastic differs from EU member state to EU member state
- In many EU member states only compliance with Framework Regulation is required

## Future developments

- A new EU Regulation will be published soon
- Secondary recycling processes must be authorized, requiring the submission of a petition
- Primary and tertiary recycling excluded, but must be safe
- Recycled material behind a barrier excluded; but must comply with requirements described in 2002/72/EC



# Thank you!

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