

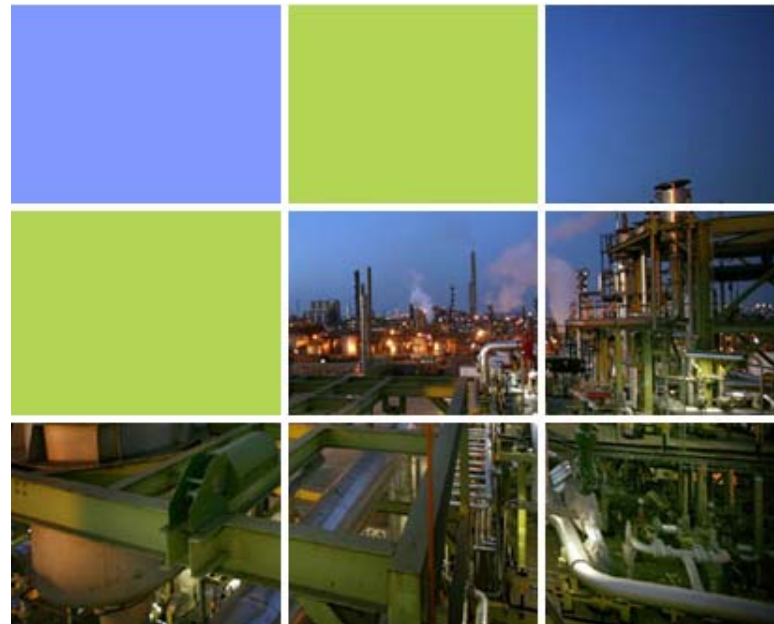
SASOL
reaching new frontiers



REACH
***How does it affect your
business?***

Plastics Federation of South Africa

23 April 2008
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Sasol Group Services SH&E Centre





Outline

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- What is the aim of REACH?
- Why REACH?
- How will REACH work?
- How does REACH address polymers?
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 - *Monomer, co-monomer and additive registration for EU companies*
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- What is your role in REACH?
- Participation of Non-EU Companies in REACH?
- What do we do next?
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What is REACH?

Legislative framework on Chemicals in the European Union

REACH:

Registration	(>1 ton per year)
Evaluation	(>100 tons per year)
Authorization and Restriction	(substances of high concern*)
Chemicals	(all chemicals)

*

CMR's of Category 1 and 2 – Carcinogens, Mutagens and Reproductive Toxins

PBT's – Persistent, Bioaccumulative and Toxic in the Environment

vPvB's – Very Persistent Very Bioaccumulative in the Environment



What is the aim of REACH?

- *Improve:* Protection of **Human Health** and the **Environment**
- *Enhance:* **Competitiveness** of **EU chemicals** industry
- *Promote:* **Alternative methods** for the assessment of hazardous substances
- *Ensure:* **Free circulation** of **safe and approved substances** on the **internal market** of the EU

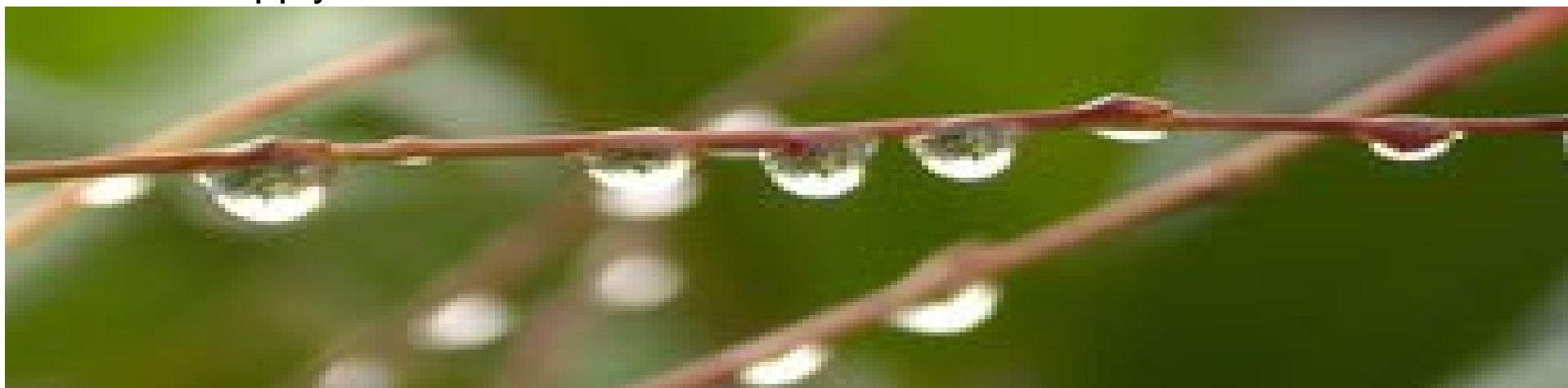
**“Greener products” have an advantage in the EU market
but
the EU is controlling the terms of trade**





Why REACH?

- Streamlining and improving chemical legislation (EU)
- Responsibility for chemicals risk management moves to the chemical industry (burden of proof)
- EU can take additional measures on highly dangerous substances
- Stimulation of innovation, product substitution and risk management
- Expanding communication of chemical information up and down the supply chain



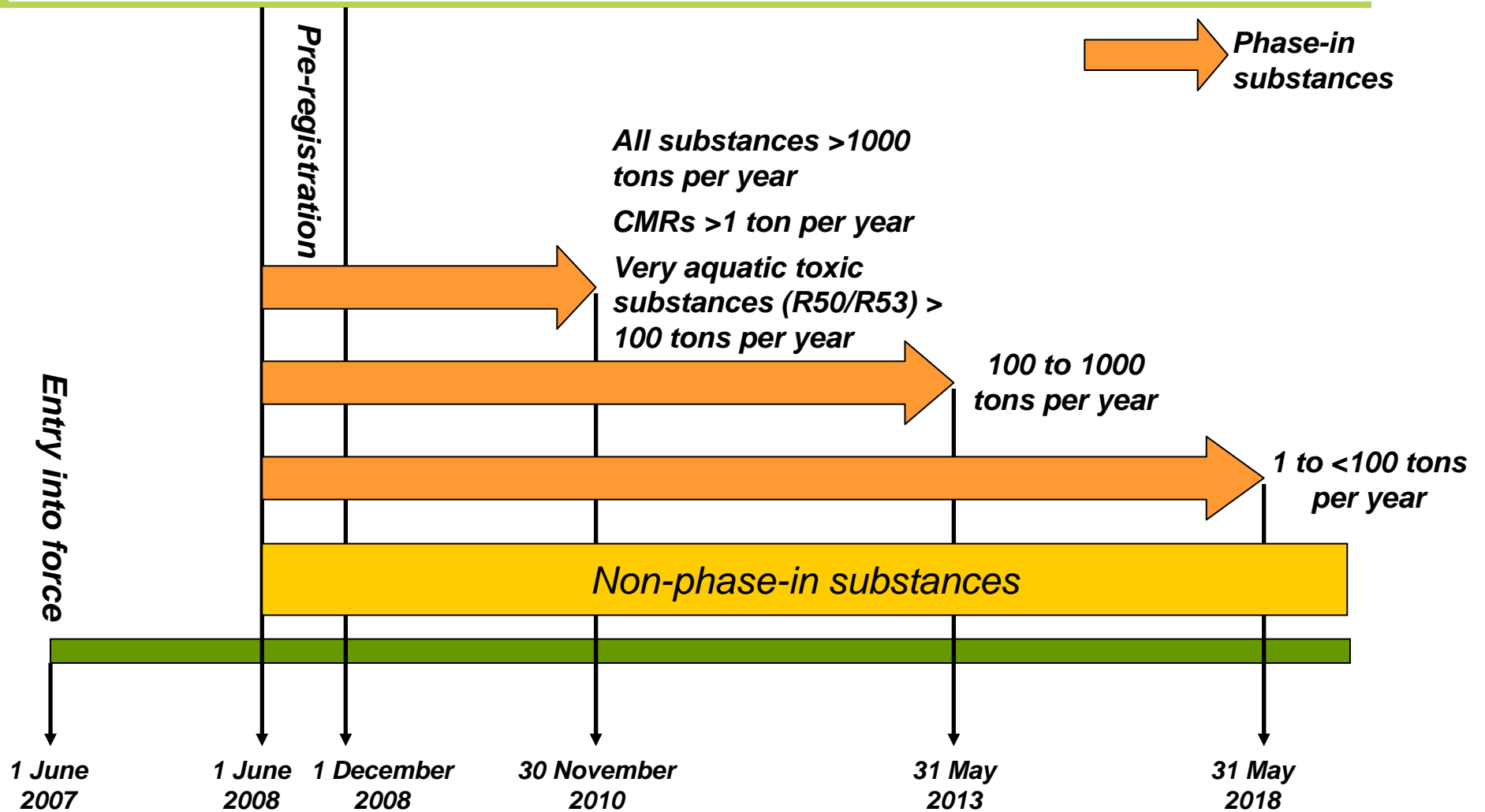


How will REACH work?

- *Applicability:* Substances manufactured in or imported into the EU in quantities of 1 ton or greater per year
- *Responsibility:* Manufacturers and Importers in the EU
- *Process:*
 - *Pre-registration*
 - *Registration*
 - *Evaluation*
 - *Authorization or Restriction*
- *Timing:*
 - *REACH entered into force on 1 June 2007*
 - *First target date is 1 December 2008 – Pre-registration completed*
 - *Timetable for Registration of substances with ECHA*



Timetable for the registration of substances under REACH





How does REACH address Polymers?

Definitions

Polymer substance

- Over 50% of the weight of the substance consists of polymer molecules
- The amount of polymer molecules presenting the same molecular weight must be less than 50% weight percent of the substance

Polymer molecule

- Contains a sequence, at least 3 monomer units, covalently bound to another monomer unit/ reactant

Monomer unit

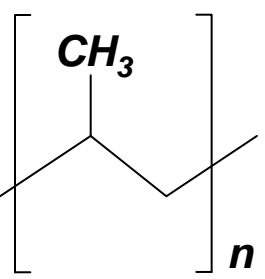
- Reactant form of a monomer substance in a polymer

Sequence

- Continuous string of monomer units within the molecule that are covalently bond to one another and are interrupted by units other than monomer units



How does REACH address Polymers? Definitions in context

	Example 1	Example 2	Example 3
n = 1	0%	40%	5%
n = 2	10%	20%	10%
n = 3	85%	15%	20%
n = 4	5%	12%	30%
n = 5	0%	8%	20%
n = 6	0%	5%	10%
n = 7	0%	0%	5%
Sum	100%	100%	100%



How does REACH address Polymers? Registration requirements for EU Companies

- Polymer substances are exempt e.g. PVC, PP, LDPE
- Monomer substances need to be registered
- Co-monomers need to be registered
- Residual substances and impurities are exempt
- Stabilizing additives (unbound) are exempt
 - *Heat stabilizer*
 - *Light stabilizer*
 - *Anti-oxidant*
- Other performance enhancing additives need to be registered





How does REACH address Polymers?

Monomer, co-monomer and additive registration for EU Companies

- If an actor up the supply chain (e.g. manufacturer of monomers) haven't already registered the monomer and
- If both the following conditions are met, a monomer registration must be submitted:
 - *The polymer consists of 2% w/w or more of such monomer substance (s) or other substance(s) in the form of monomeric units and chemically bound substance(s)*
 - *The total quantity of such monomer substance(s) or other substance(s), ending up in the final polymer substance as unbound or chemically bound to the polymer, makes up 1 ton per year.*

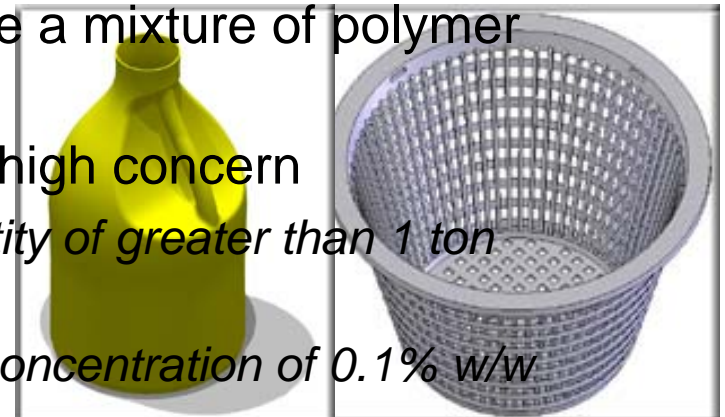




How does REACH address Polymers?

Polymer articles registration requirements for EU Companies

- Requirements for articles under REACH is based on the substances contained in those articles
- The registration of a substance in an article is required if
 - *Substance is present in the article in a quantity of greater than 1 ton per year per producer or importer; and*
 - *If the substance is intended to be released under normal or foreseeable conditions of use*
- These normal registration requirements for articles under REACH are therefore not applicable to polymer articles
- A polymer article should be considered to be a mixture of polymer substances
- Notification requirements for substances of high concern
 - *Substance is present in the article in a quantity of greater than 1 ton per year per producer or importer; and*
 - *Substance is present in the article above a concentration of 0.1% w/w*





What is your role in REACH?

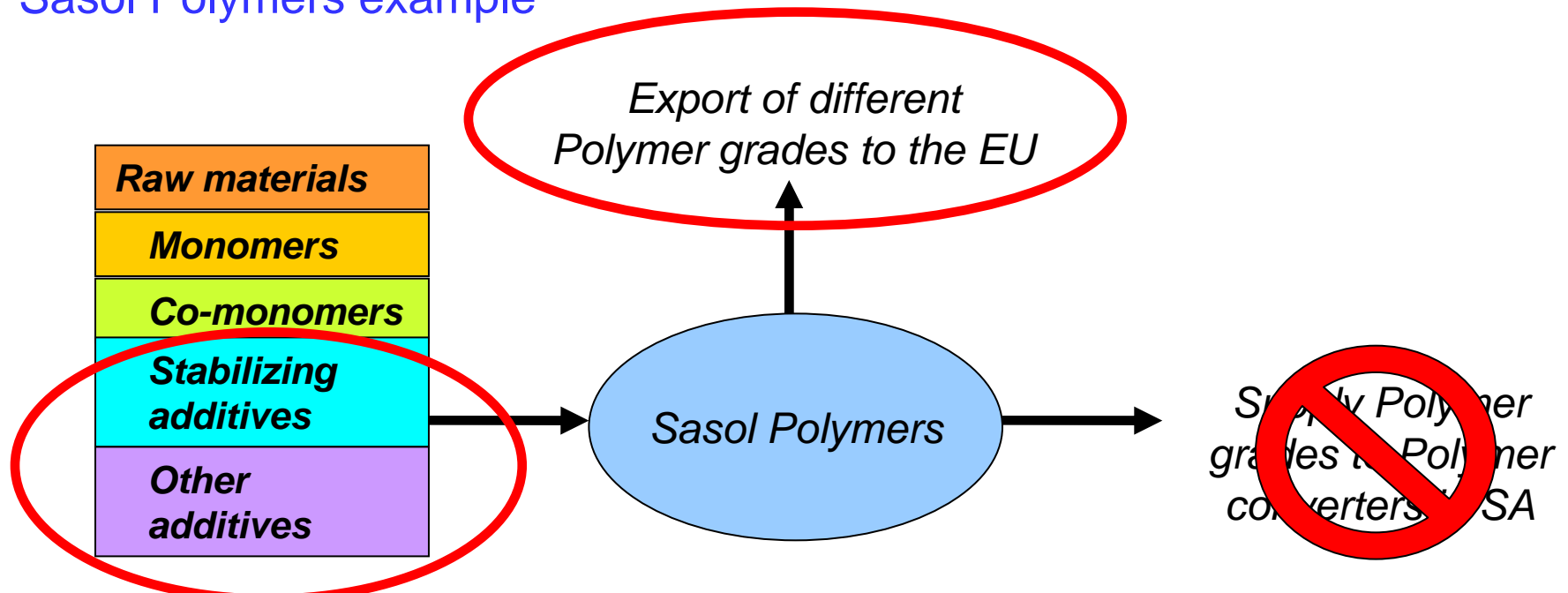
Determining the role of the Non-EU Company in the Polymer Supply Chain

Role	Raw Material supplier	Polymer manufacturer	Polymer article manufacturer*
Substances	Monomers Co-monomers Non-stabilizing additives Stabilizing additives	Polymer Non-stabilizing additives Stabilizing additives Residual substances Impurities	Polymer Non-stabilizing additives Stabilizing additives Residual substances Impurities Additional additives
REACH applicability	Do the raw materials originate from the EU?	Does any of the substances originate from the EU? Are the polymers marketed in the EU?	Does any of the substances originate from the EU? Are the articles marketed in the EU?






* Other polymer manufacturers include polymer curing, polymer functionalization via grafting and controlled polymer degradation such as visbreaking

Participation of Non-EU companies in REACH




Sasol Polymers example



Polymer grades consists of

- Polymer substances 
- Additives   
- Residual substances and additives 

Polymer substances consists of

- Monomers 
- Co-monomers 
- Other additives from other countries 

Appoint an "Only representative"



How does REACH address Polymers?

Appointing an “Only representative” for a Non-EU Company

- To fulfill the obligations of importers under REACH
- Required to be a natural or legal person established in the EU
- Background on handling of substances and its information
- Keep information on quantities and customers sold to and the supply of the latest SDS
- Inform customers of the appointment
- Proof of assigning an “Only representative”
- Get control over the registration process
- Avoid disclosure of potentially sensitive information to the importers in the EU
- Relieves importer from their obligation under REACH – become downstream users
- Several Non-EU Companies can appoint one “Only representative”



What do we do next?

- Determine your involvement in REACH
 - *Ask the question of where there are any interactions with the EU*
- If involved, define further action
 - *Determine inventories of substances exported to the EU*
 - *Define whether it fulfills the requirements*
 - *Physical composition, percentages & quantities*
 - *Exemptions*
 - *Identify actions to be taken in collaboration with other actors in the supply chain*
- If there is a need for Registration
 - *Appoint a legal entity in the form of an “Only representative”, in the EU*
 - *Prepare for pre-registration in order to submit information*





Additional information on REACH

European Chemicals Agency ECHA Website

www.echa.europa.eu

“Guidance for monomers and polymers” June 2007

<http://reach.jrc.it/>



Questions

