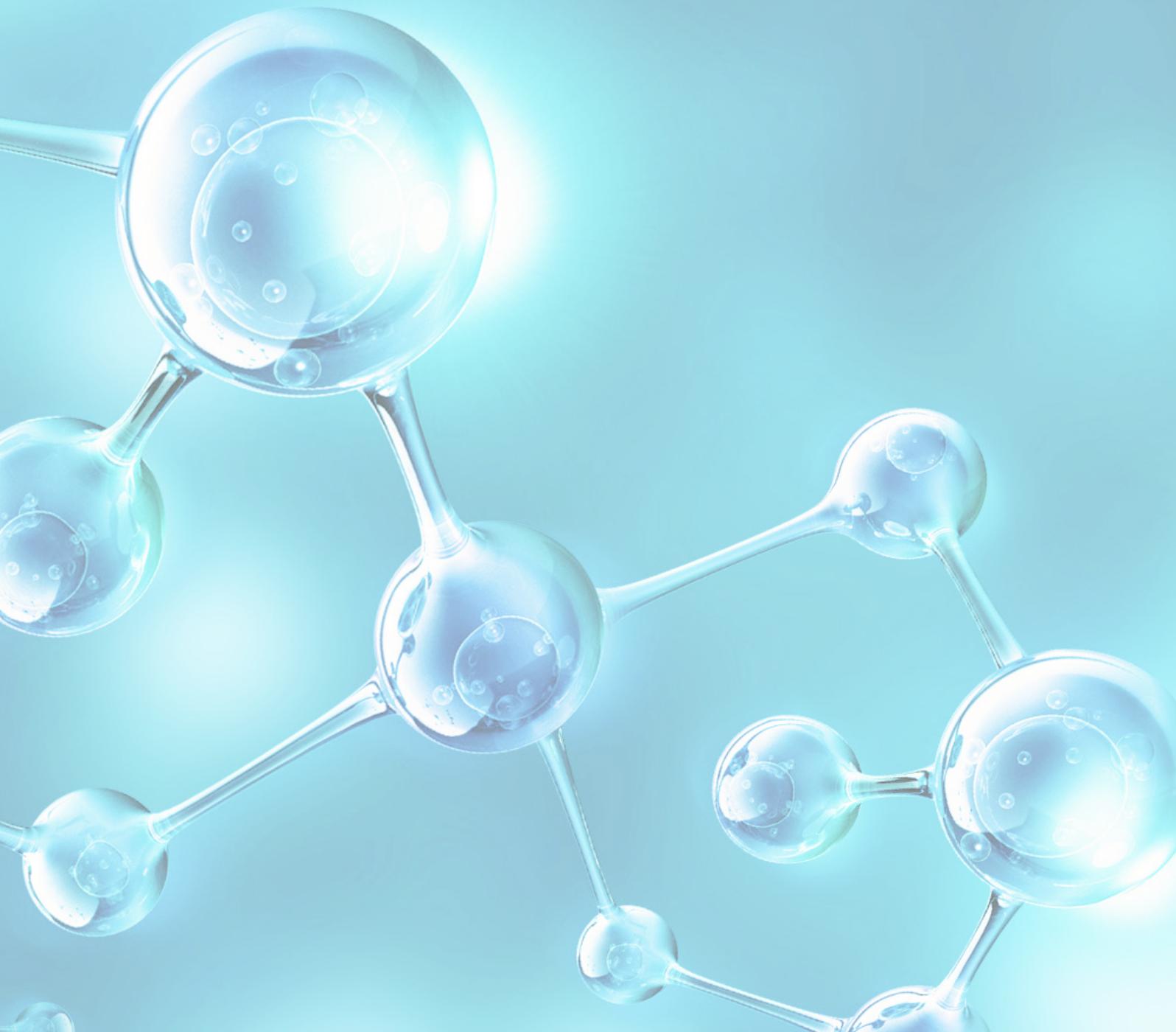




Resins  
Sustainability Solutions



# POLYNT COMPOSITES

Global leader for thermoset composites



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# Polynt Reichhold Group

After the merger on May 2017 the new Polynt-Reichhold Group is a global Company in the Intermediates, Coating and Composite Resins, Thermoset Compounds, Gel-coats and niche Specialties.

This combination enhances the Group's leading position as a global vertically integrated specialty chemicals player, with significant global presence in Europe, North America and Asia, a strategy initiated by Polynt with the successful integration of PCCR and CCP in the last years and now further reinforced by Reichhold's global scale, extensive product portfolio and R&D competencies.

Polynt-Reichhold Group is known for its superior quality and impressive range of products and with its excellent distribution network it can provide first-class service to customers whatever their market. Customer Service and Technical Service teams are renowned for their customer focus, offering the best service even after products have left manufacturing.

The Group strives to keep customers satisfied, assisting them in producing premium quality products every time they use its products.

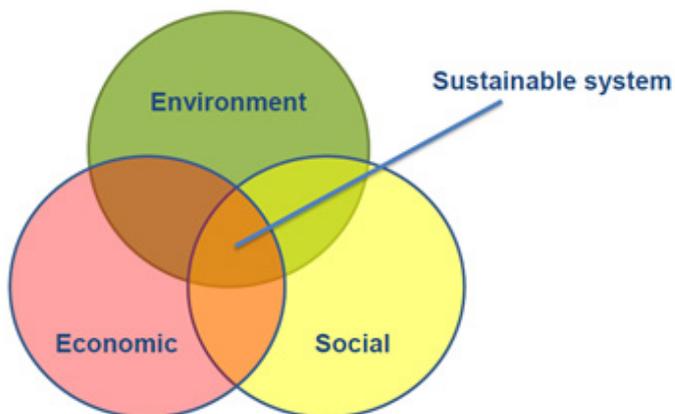
Product innovation is important for the Group's business and it's the reason for which it constantly works with customers to find solutions to problems.

Introducing new or improved products ensures that Polynt-Reichhold Group continue not only to deliver what the market wants and needs, but also when it is wanted and needed.

## Introduction to Sustainability

A widely accepted definition of Sustainability is to «meet the needs of the present without compromising the ability of future generations to meet their own needs» (Brundtland Commission, 1987).

Sustainable products are those that provide environmental, social and economic benefits while protecting public health and environment over their whole life cycle, from the extraction of raw materials until the final disposal.



Sustainability and sustainable development have become part of daily language so that Business and Sustainability are two inseparable concepts in any sector of activity.

In 2015 the United Nations signed the "17 sustainable development goals", aiming at both environment protection and people health and welfare enhancement.



# SUSTAINABLE DEVELOPMENT GOALS



The Chemical industry proactively contributes, directly or indirectly, to the achievement of the “sustainable development goals” and in particular:



**Ensure access to affordable, reliable, sustainable and modern energy for all.**



**Ensure sustainable consumption and production patterns.**



**Take urgent action to combat climate change and its impacts.**

Development of environmentally friendly, high performance materials and manufacturing process improvements are currently the most significant challenges in chemical sector as witnessed by Cefic (European Chemical Industry Council) 2017 Sustainability Report:

Cefic sustainability report

**Chemistry creates and inspires solutions and innovation for a sustainable future.**

The chemical industry has an important part to play in maintaining our growth and prosperity, and in our transition to a sustainable society.

**We are committed to this role.**  
Chemistry CAN.

“Responsible Care” is the global Chemical Industry voluntary Program to promote Sustainable Development according to values and behaviors oriented towards Safety, Health and Environment within overall Enterprise Social Responsibility.

The Responsible Care program is managed by Cefic in Europe since the nineties. Responsible Care® is the global chemical industry’s unique initiative to improve health, environmental performance, enhance security, and to communicate with stakeholders about products and processes.



Responsible Care commits companies, national chemical industry associations and their partners to:

- Continuously improve the environmental, health, safety and security knowledge and performance of our technologies, processes and products over their life cycles so as to avoid harm to people and the environment
- Use resources efficiently and minimize waste
- Report openly on performance, achievements and shortcomings
- Listen, engage and work with people to understand and address their concerns and expectations
- Cooperate with governments and organizations in the development and implementation of effective regulations and standards, and to meet or go beyond them
- Provide help and advice to foster the responsible management of chemicals by all those who manage and use them along the product chain.

### **Life Cycle Assessment (LCA)**

Each raw material has its own eco-footprint. By optimizing the composition of the resin the overall environmental footprint (and thus Composites material) can be greatly improved. Life Cycle Assessment (LCA) is a methodology used to measure the environmental impact of a product (or a system) over a life cycle. It measures the environmental impacts from the extraction of raw materials, through processing, manufacture, refurbishment to eventual end of life and disposal.

#### **A life-cycle**

All products have an impact on the environment. This impact can occur at any time during the manufacture, use of the product or at end of life. These different stages are called collectively a life-cycle.

#### **Cradle-to-gate LCA**

Cradle-to-gate is an assessment of a partial product life cycle from resource extraction (cradle) to the factory gate (i.e., before it is transported to the consumer).

### **Life Cycle Assessment (LCA)**

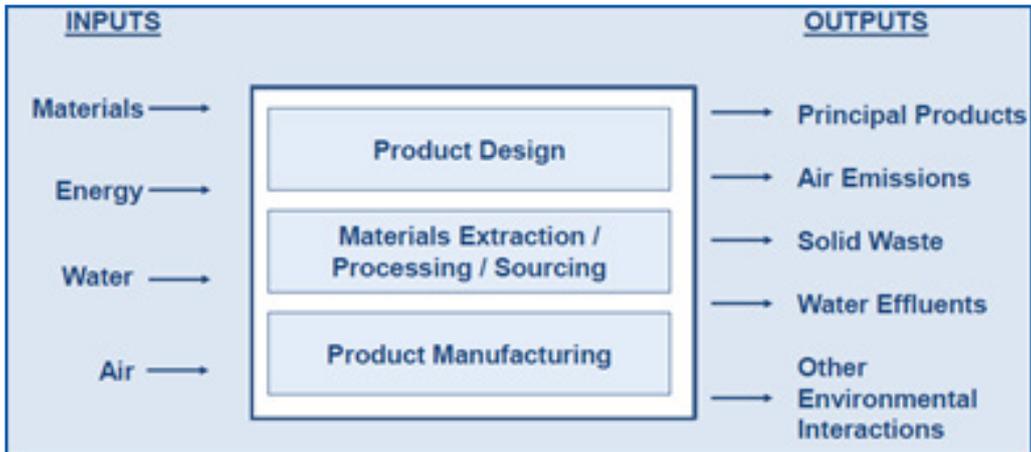
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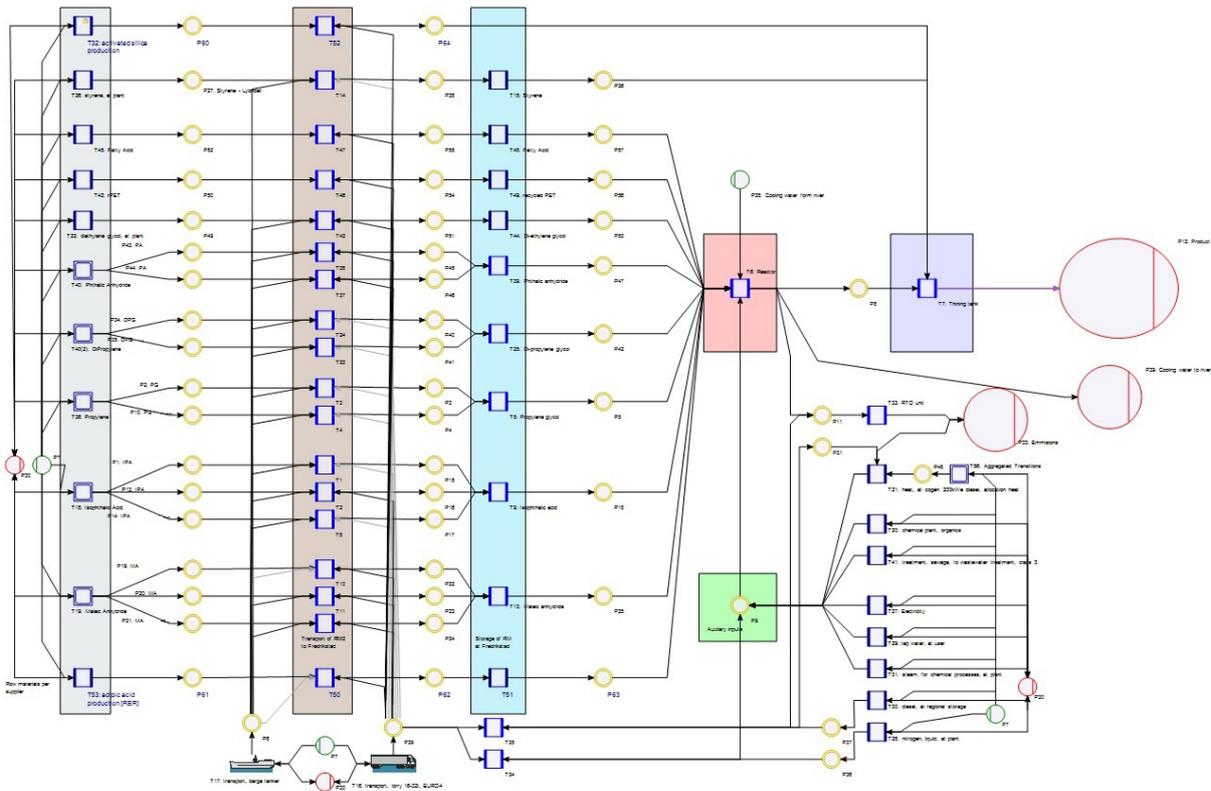
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### LCA Process



### LCA Phases

Polynt actively collaborates with customers to carry-out cradle to end-life LCA assessments.

# Polynt sustainability initiatives and commitment

Polynt is actively engaged with sustainable development and operates internal management systems that prioritize Safety, Quality and Efficiency which encompass a commitment to environmental, social and economic health, the "triple bottom line".

Polynt joined Responsible Care program several years ago.

As of 2003, Polynt adopted an environment management system certified according to ISO 14001 norm. Such certification has been gradually upgraded and most Polynt sites are now certified according to ISO 14001:2015, as it can be seen in the following page.





# Certificat

## Certificate

N° 2001/16471.12

AFNOR Certification certifie que le système de management mis en place par :  
*AFNOR Certification certifies that the management system implemented by:*

### POLYNT COMPOSITES FRANCE

*pour les activités suivantes :*  
*for the following activities:*

**CONCEPTION, DEVELOPPEMENT, FABRICATION, EXPEDITION  
ET LIVRAISON DE RESINES POLYESTER ET VINYL ESTER, DE GEL COATS,  
DE COLLES, DE RESINES EPOXY ET AGENTS NETTOYANTS.  
FABRICATION, EXPEDITION ET LIVRAISON D'ADDITIFS  
POUR REVETEMENTS, ADHESIFS ET MASTICS.**

**DESIGN, DEVELOPMENT, MANUFACTURING, SHIPPING AND DELIVERY  
OF POLYESTER AND VINYL ESTER RESINS, GEL COATS, BONDING PASTES,  
EPOXY RESINS AND CLEANING AGENTS. MANUFACTURING, SHIPPING  
AND DELIVERY OF COATING ADDITIVES, ADHESIVES AND SEALANTS.**

*a été évalué et jugé conforme aux exigences requises par :*  
*has been assessed and found to meet the requirements of:*

### ISO 14001 : 2015

*et est déployé sur les sites suivants :*  
*and is developed on the following locations:*

Route d'Arras CS 50019 FR-62320 DROCOURT

Ce certificat est valable à compter du (année/mois/jour)  
*This certificate is valid from (year/month/day)*

2017-02-14

Jusqu'au  
*Until*

2019-02-25

Ce document est signé électroniquement. Il constitue un original électronique à valeur probatoire.  
*This document is electronically signed. It stands for an electronic original with probatory value.*

**Franck LEBEUGLE**  
**Directeur Général d'AFNOR Certification**  
*Managing Director of AFNOR Certification*

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Some sites (for example San Giovanni Valdarno) are also certified according to EMAS, “Eco-Management and Audit Scheme (EMAS). EMAS is part of voluntary tools included in the V European Program to protect the environment Polynt decided to agree to.



Continuous Process improvement is targeted by a Team of more than 100 researchers focused on the following objectives:

- CO / CO<sub>2</sub> emission reduction through proprietary catalyst technology improvement
- Recovery and recycle of energy self-produced by converting heat into energy leading to energy consumption reduction
- Recovery and re-use of by-products in order to minimize and sometimes completely eliminate waste
- Whenever possible utilize non-dangerous raw materials at equal performing end-use products

## Polynt sustainable technologies

Polynt has all the knowledge, resources and capabilities to help customers to develop more sustainable products utilizing the below technologies:

- Lower emission
  - Low styrene content
  - Low styrene emission
  - Styrene-free solutions
  - UV curing
- Cobalt-free
- Use of bio-based raw materials
- Use of recyclable materials
- LCA (Life Cycle Analysis) capabilities
- Through GMP-compliant materials and plants

Polynt efforts have been recognized with the “Product Stewardship” Award by Federchimica for the category “Large Enterprises” in 2013. These research avenues continue with high focus in all Polynt R&D Centers all over the world enriched by technologies acquired in the most recent years. Tailored-made, more sustainable products have been developed for a large variety of market applications (Wind Energy, Marine, Building & Construction, Transportation).



Low density Composites and higher performing plasticizers aiming at vehicle weight reduction leading to lower energy consumption and CO / CO<sub>2</sub> emission reduction are just an example.

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This makes it possible to compare the environmental impact of specific raw materials and production processes, identifying areas requiring improvements and selecting the most environmentally friendly scenarios for product manufacturing. Polynt strives to develop with LCA in focus to ensure that all new product developments have lower environmental impacts.

REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation in force as of June 01, 2007 plays a fundamental role in managing chemical products in Europe.

The registration process of chemical substances and of no-longer polymers, which began in 2007 and ended in 2018, enabled a structured data base collection of toxicological and eco-toxicological properties of the registered chemicals.

In the last ten years, ECHA (European Chemical Agency) has been working in close contact with companies in order to identify risk hazards of chemical substances and best working practices to protect human being and environment.

Polynt has registered around 100 substances, has been an active member of several consortia and has cooperated with the entire Supply Chain in order to get its product range compliant with the current legislation.

Each chemical product, since the very beginning of its production through its utilization till the end of its life cycle and disposal, must be managed in a safe and responsible manner in order to mitigate or prevent any possible adverse impact on human health and environment.

Cefic and ECHA are currently collaborating to make sure that safe use of each substance is properly



communicated through the whole Supply Chain.

Polynt Product Stewardship, Chemical Management e REACH experts are available to inform and support customers about correct and safe use of its products (Material Safety Data Sheet, Exposure Scenario reading and interpretation), specific REACH norms (CE Legislation n. 1907/2006 and following edits) and CLP (Legislation on Classification, Labeling and Packaging CE n. 1272/2008 and following edits).



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