

Your partner for sustainability certification

practical oriented | reliable | efficient



In the 14th year of sustainability




- ➔ National certification scheme for **biofuels** REDcert-DE in **2010**
- ➔ International REDcert-EU scheme for **biofuels** with European recognition since **2012**
- ➔ Voluntary REDcert² scheme for **food and feed** since **2015**
- ➔ Extension of the REDcert² scheme for the **chemical industry** since **2018**


Our shareholders



Overview of REDcert schemes




Renewable fuels



**recognized by the
European Commission**



Food & Feed



Chemistry



**voluntary scheme, SAI gold status (food/feed)
constant development hand in hand with industry**



**Transfer of concepts and expertise
to additional industrial sectors**

Transparency and identity



Scheme principles



Scheme principles for the certification of sustainable material flows in the chemical industry

Version: RC² 1.3

Mechanical processing



Requirements for the mechanical processing of products of the chemical industry

Version: RC² 1.0

Logo and claims (not yet updated)



Guidelines governing the use of the REDcert² logo and the representation of claims for products made from sustainable material flows

Version: RC² 1.1

Specifics for Recycling



Specific requirements for recycling processes in the chemical industry

Version: RC² 1.1

Checklists

Checklist for the inspection of interfaces, operating sites and suppliers of sustainable material flows in the chemical industry (REDcert², Version: 1.3, Date: 1.2.2024)

Participant no.	Inspection organisation	Internal inspection report no. of the inspection body

Please enter all information legibly!!!
Consent/operating site
(Stamp if applicable)

Company name: _____
Address: _____
Person responsible: _____
Inspection information: _____
Inspection date: _____ of _____ at 08:00h to _____ at 16:00h
Inspection type: Scheduled scheme inspection Follow-up inspection
Name of the inspector: _____
Scope of application: REDcert² client: industry
Material flows: Biobased Biomass-derived Chemically recycled Mechanically recycled
Material flow specification: regenic regenic Renewable energy

Inspection result	Classification	Measures
100%	<input type="checkbox"/> No non-conformities REDcert² requirements are completely satisfied	No corrective measures required
75 - 99%	<input type="checkbox"/> Minor non-conformities REDcert² requirements are largely satisfied	Issue recommendations, agree on corrective measures, check implementation
< 75% or N/A	<input type="checkbox"/> Major non-conformities/non-conformities REDcert² requirements are not fulfilled	Issue recommendations, report to REDcert² within 24h after the inspection (Internal inspection: Noted)

Follow-up inspection required? No Yes Proposed date: _____
Copy received

Signature of the inspector: _____ Signature of scheme participant (person responsible): _____
or secretary: _____
Date: _____ Signature of the person responsible at the certification body: _____

© REDcert²

Checklist for the inspection of interfaces, operating sites and suppliers of sustainable material flows in the chemical industry (REDcert², Version: 1.3, Date: 1.2.2024)

Examples for REDcert² certified chemical companies



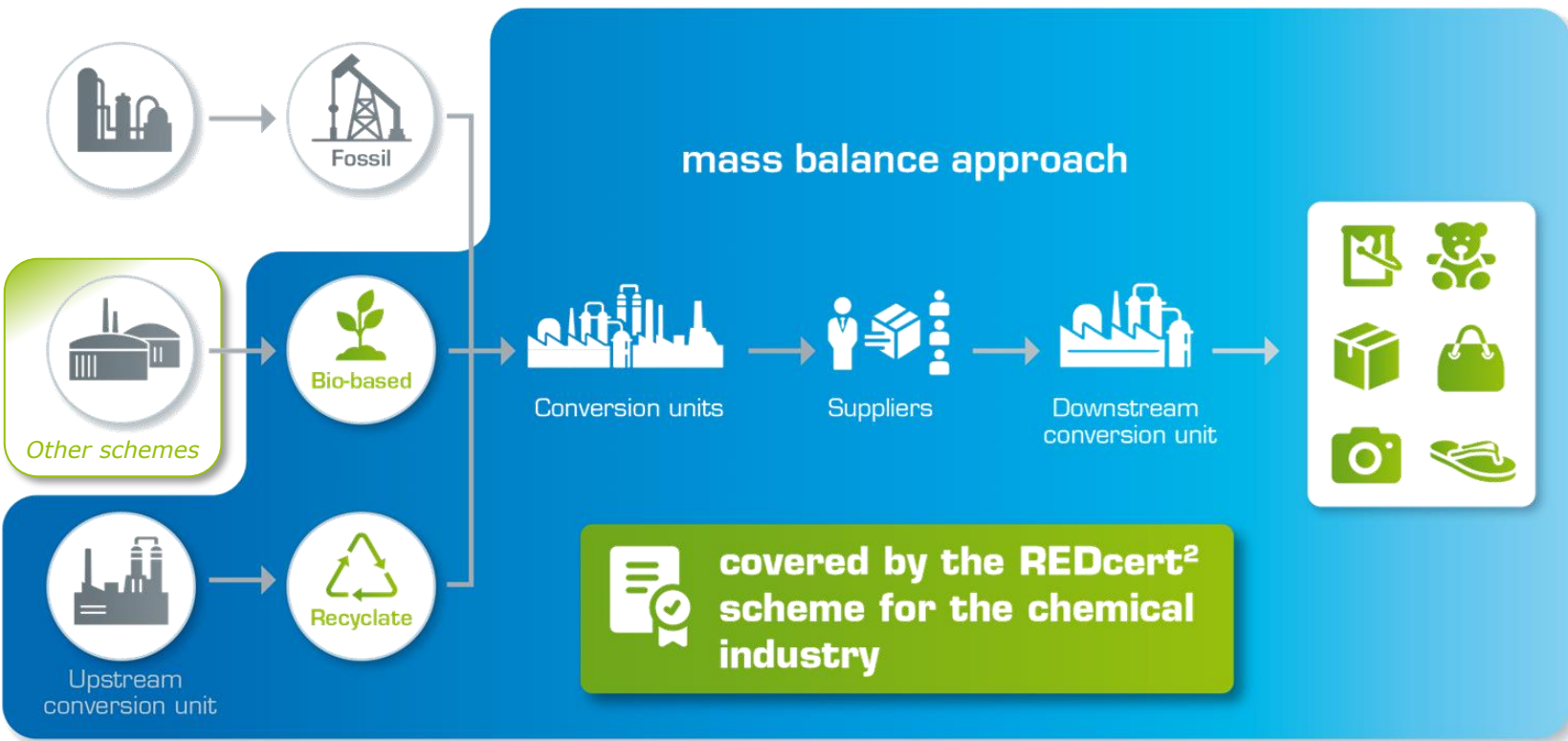
Chain of custody



Raw Materials

Intermediates, Products









Consumer Goods



- ➔ Covers the whole value chain from raw material to products
- ➔ Individual product certificates
- ➔ Optional GHG emission and green electricity certification
- ➔ Acceptance of renewable raw materials and intermediates from selected other certification schemes
- ➔ Neutral third-party certification

Acceptance of other certification schemes



Certification scheme		Biomass	Recyclates	Intermediates
REDII voluntary schemes ¹		✓	✗	✓
ISCC Plus		✓	✓	✓
RSB		✓	✓	✓
SAI-benchmarked ²		✓	✗	✗
FSC		✓	✗	✗
PEFC		✓	✗	✗
EUCertPlast ³		✗	✓	✗
RecyClass ³		✗	✓	✗



¹: see list: https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en

²: see online: <https://saiplatform.org/resource-centre/fsa/>

³: only mechanically recycled material according to EU15343:2008

Chain of custody models



- Different chain of custody models defined in ISO 22095:2020

Book & claim



Not allowed

Decoupling material and characteristics

Mass balance



Input/output balance and attribution of sustainability

Segregation & controlled blending



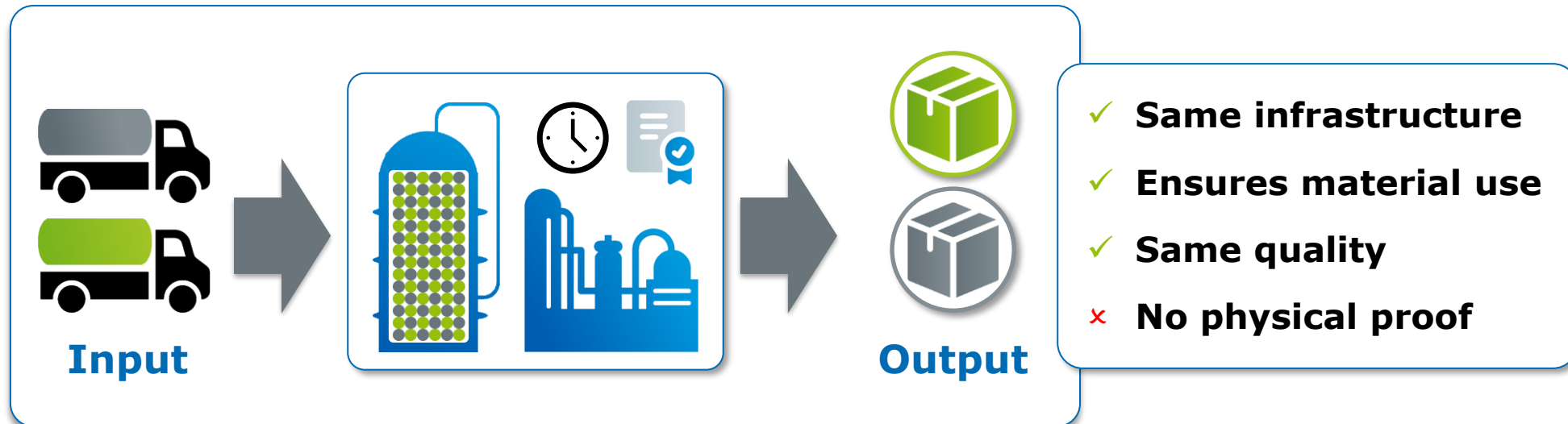
Input/output balance and knowing sustainable proportion

Identity preservation



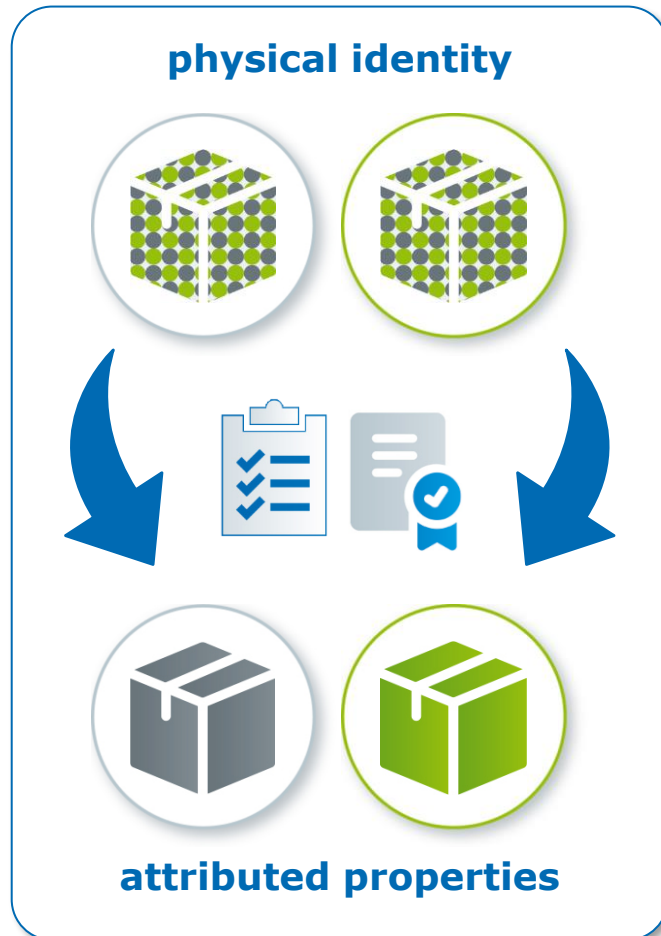
No mixing of materials with varying characteristics

Principles of mass balancing



- ➔ Accounting method established in other markets (e.g. biofuels, wood, food, methane or electricity)
- ➔ Sustainable material can be stored, mixed and co-processed with conventional material
- ➔ Physical flow of the materials is not followed; actual physical content can vary
- ➔ Possibility of attribution/allocation of sustainability aspects to products

Principles of Attribution



- ➔ Unproportional accumulation of sustainable characteristics: “redistribution of properties”
- ➔ Physical use of the sustainable material is guaranteed
- ➔ Physical content of „sustainable atoms“ is not guaranteed
- ➔ Verification by analytical methods is impossible
- ➔ Transparency by third-party certification
- ➔ High quality is ensured (e.g. less downcycling effects)

What is the „sustainable share“?



Fossil material



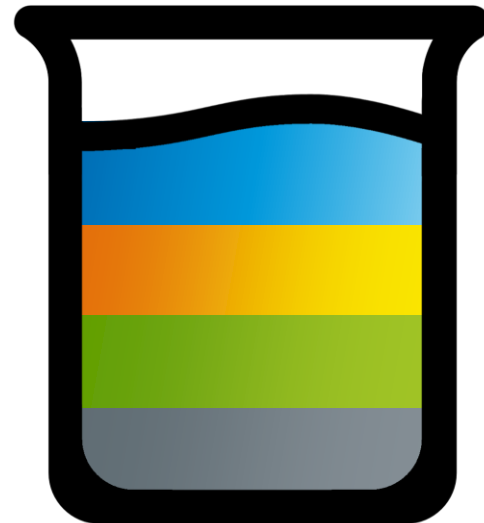
Sust. Biomass



Recyclates



Inorganics



Substitution degree:

➔ Share = $\frac{\text{biomass} + \text{recyclates}}{\text{biomass} + \text{recyclates} + \text{fossil}}$

- ➔ Only certified biomass and recyclates are considered, inorganics are neglected

Biogenic content:

➔ Content = $\frac{\text{biomass}}{\text{total weight}}$

- ➔ Careful: biogenic ≠ sustainable!

Recycled content:

➔ Content = $\frac{\text{recyclates}}{\text{total weight}}$

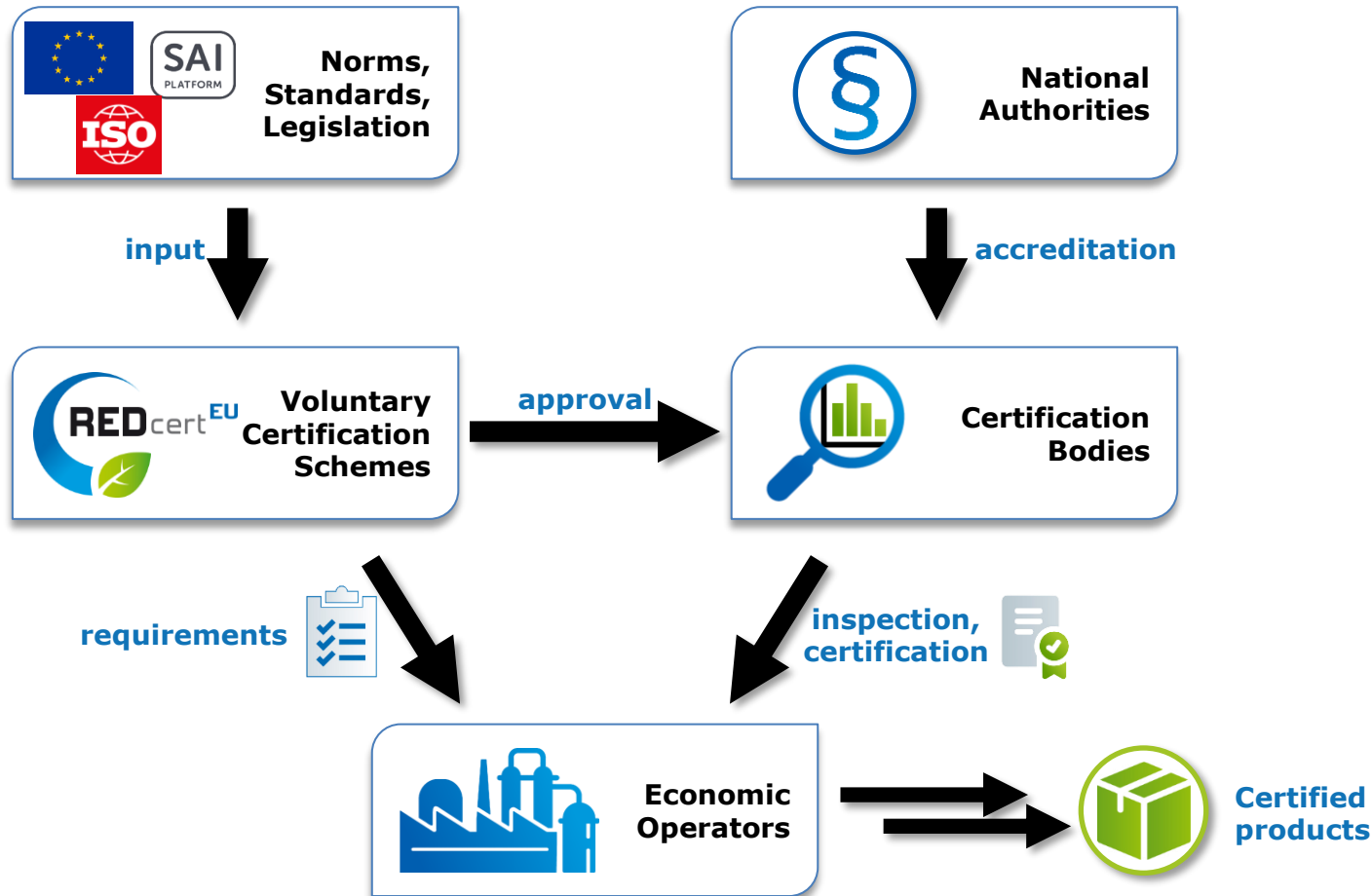
- ➔ Limited to specific waste materials (e.g. post consumer waste) in some markets

Requirements on bill of materials and on certified products



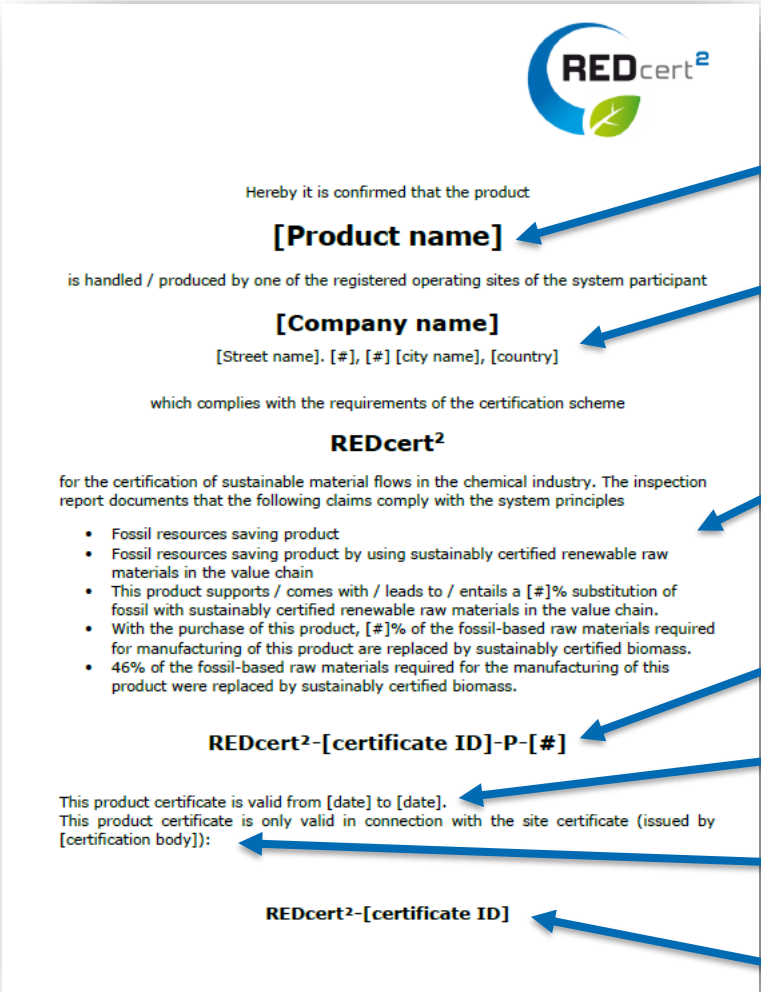
- ➔ The **minimum substitution quantity** of fossil raw materials with renewable materials is **20%**
- ➔ The actual value will be included in the individual product certificate
- ➔ Quality control is required, plant-specific calculations
- ➔ Bill of material is available and a max. deviation of 5% is allowed

Neutral third-party inspection



- ➔ The basic system is based on the renewable energy directive and adapted to the chemical industry
- ➔ Three-party system for maximum independence
- ➔ Certification takes place on site and covers companies as well as products

Product certificates



Product name (typically catalogue name)

Name and address of the certified company

Generic advertisement claims based on the product list (product category, sustainable share, green electricity)

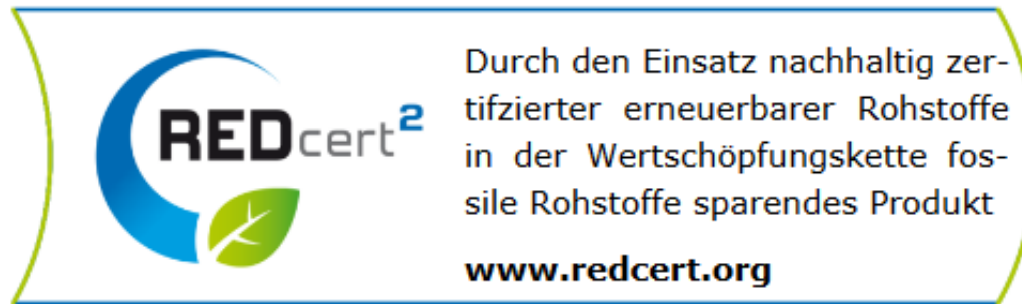
Unique product ID

Period of validity

Responsible certification body

Company certificate ID

Product seal update



2018 initial version



2022/23 intermediary version

- ➔ The product label should be improved for the B2C context in response to the green claims directive
- ➔ The last version presented is too limited to meet the requirements (legal concerns)
- ➔ New draft version is available, but individualized claims will be problematic

Past examples

REDcert GmbH
204 Follower:innen
23 Std. · 🌱

Henkel und BASF setzen im Rahmen einer vierjährigen Kooperation auf das REDcert² Zertifizierungssystem. Im Rahmen der Kooperation werden in der Produktion von BASF fossile Rohstoffe durch nachwachsende #Rohstoffe zur Herstellung von ... mehr anzeigen

Product Name	INCI Name
Microcare [®] Eco EHG	Ethylhexylglycerin
Microcare [®] Eco PTG	Pentylene Glycol
Microcare [®] Eco HXD	1,2-Hexanediol
Microcare [®] Eco CLG	Caprylyl Glycol
Microcare [®] Eco DCG	Decylene Glycol
Microcare [®] Eco PE	Phenoxyethanol
Microcare [®] Eco PEHG	Phenoxyethanol, Ethylhexylglycerin



100% of the fossil-based raw materials required for the manufacturing of this product were replaced by sustainably certified biomass.

CLARIANT ACHIEVES 100% GREEN ELECTRICITY CONSUMPTION AT KNAPSACK PRODUCTION SITE

Automotive | Building & Construction | Plastics & Polymers | Transportation | Ecotain

EgoBalance[®]
Sustainable Yarn

Wir sind sehr stolz darauf, dass wir REDcert² zertifiziert sind und unseren Kunden, aber auch dem Verbraucher, damit ein glaubwürdiges PCR-Versprechen geben können*

Henrik Großekämper
Geschäftsführer groku Kunststoff GmbH

12h PROTECTION
Schützende Oberweiche

12h PROTECTION
Schützende Oberweiche

German Quality

I am pure[®]
Super sicher fürs Baby
100% Chlorin, 100% Wasser, 100% natürlich, 100% ohne tierische Stoffe

I am delicate[®]
Super sanft zur Haut
With 100% Chlorin, 100% Wasser, 100% natürlich, 100% ohne tierische Stoffe

I am eco[®]
Super umweltfreundlich
Made with 100% green electricity. 100% bio-based, 100% recycled material

MADE WITH BIOMASS BALANCE METHOD

CO₂

SCAN ME



REDcert²

One of the fundamental aims is reducing greenhouse gas emissions and make a lasting contribution to resource conservation in line with socio-ecological and sustainable economic criteria.

responsibility
by participating in a collective and comprehensive certification scheme.

REDcert² scheme
ensures the certification of sustainable material flows in the chemical industry.



By choosing EgoBalance[®], carpet manufacturers can contribute to a reduced greenhouse gas footprint and give carpet consumers more sustainable products and services.

HERGESTELLT AUS 100% NACHHALTIGEN MATERIALIEN (Massenbilanzverfahren)*

SUPPORTING THE BIOECONOMY
ISCC CERTIFIED
Plastic

REDcert²

NUK

* Hierbei handelt es sich um nachhaltige Materialien, die sich durch das ISCC PLUS (Kunststoff) und REDcert² (Silikon) zertifizierte Massenbilanzverfahren zu 100% auf natürliche Rohstoffe zurückführen lassen.



GLYSANTIN

Kühlerschutz Konzentrat
Engine coolant concentrate

Dreifachschutz gegen Korrosion, Überhitzung und Frost
Three-fold protection against corrosion, overheating and frost

REDcert²

100% massenbilanziertes Produkt mit einer Einsparung von bis zu 90% CO₂-Emissionen/100% massenbilanziertes Produkt mit up to 90% CO₂ emission savings.

Die Berechnung des CO₂-Fußabdrucks wurde von TÜV Rheinland bestätigt. Carbon footprint calculation confirmed by TÜV Rheinland.

REDcert² certified

The REDcert² standard is the new standard on

ECO BALANCE

151-190E
UV Grundfüller, dunkelgrau
UV primer filler, dark grey

REDcert² certified

https://www.wacker.com/cms/en-us/about-wacker

sikkens

ALPHATEX SF

Hoge dekking, schrobvast

REDcert²

ALPHATEX SF

PRODUCED USING BI-BASED MATERIALS

CO₂

REDcert²

Legal background



Brussels, 22.3.2023
COM(2023) 166 final
2023/0085 (COD)

Proposal for a
DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
on substantiation and communication of explicit environmental claims (Green Claims Directive)



53% of green claims give vague, misleading or unfounded information



40% of claims have no supporting evidence



Half of all green labels offer weak or non-existent verification



There are 230 sustainability labels and 100 green energy labels in the EU, with vastly different levels of transparency

EN

EN

Source: environment.ec.europa.eu/topics/circular-economy/green-claims_en

Current draft versions



Bei der Herstellung dieses Produktes (ohne Verpackung) wurden 20 % der fossilen Rohstoffe durch zertifiziert nachhaltige Materialien ersetzt.

www.REDcert2.info



Bei der Herstellung dieses Produktes wurden rechnerisch 20 % der fossilen Rohstoffe unter Verwendung des REDcert² **Massenbilanzansatzes** durch zertifiziert nachhaltige nachwachsende Rohstoffe ersetzt.

www.REDcert2.info



Dieses Produkt besteht aus 20 % zertifizierten recycelten Materialien.

www.REDcert2.info

➔ Preliminary versions

➔ Two-part structure: seal and “flag” with explanatory text

➔ Different colors

- Blue: general sustainable product
- Green: made from certified biomass
- Red: made from recycled waste

➔ Monochromatic design for easier processing

We are happy to answer your questions!



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RED II vs. ISO norms: different approaches to LCAs

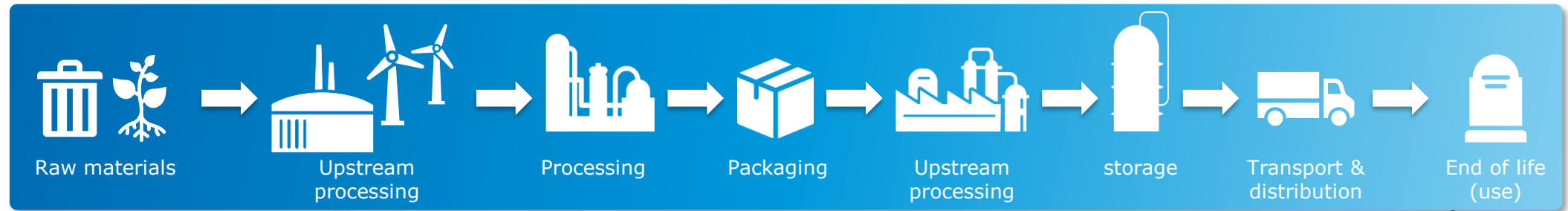


Renewable Energy Directive

Growth of plants is not considered a negative emission.
Waste is considered climate neutral (0 GHG).

Exact system limits are specified by RED II.

Emission of CO₂ from bio-sources is considered climate neutral.



Relevant ISO norms

Carbon embedded in plants is considered a negative emission.
Recycled waste can be included in the LCA of the source material as a "second life".

Exact system limits may depend on the specific scenario.

Any end of life emission is to be included.