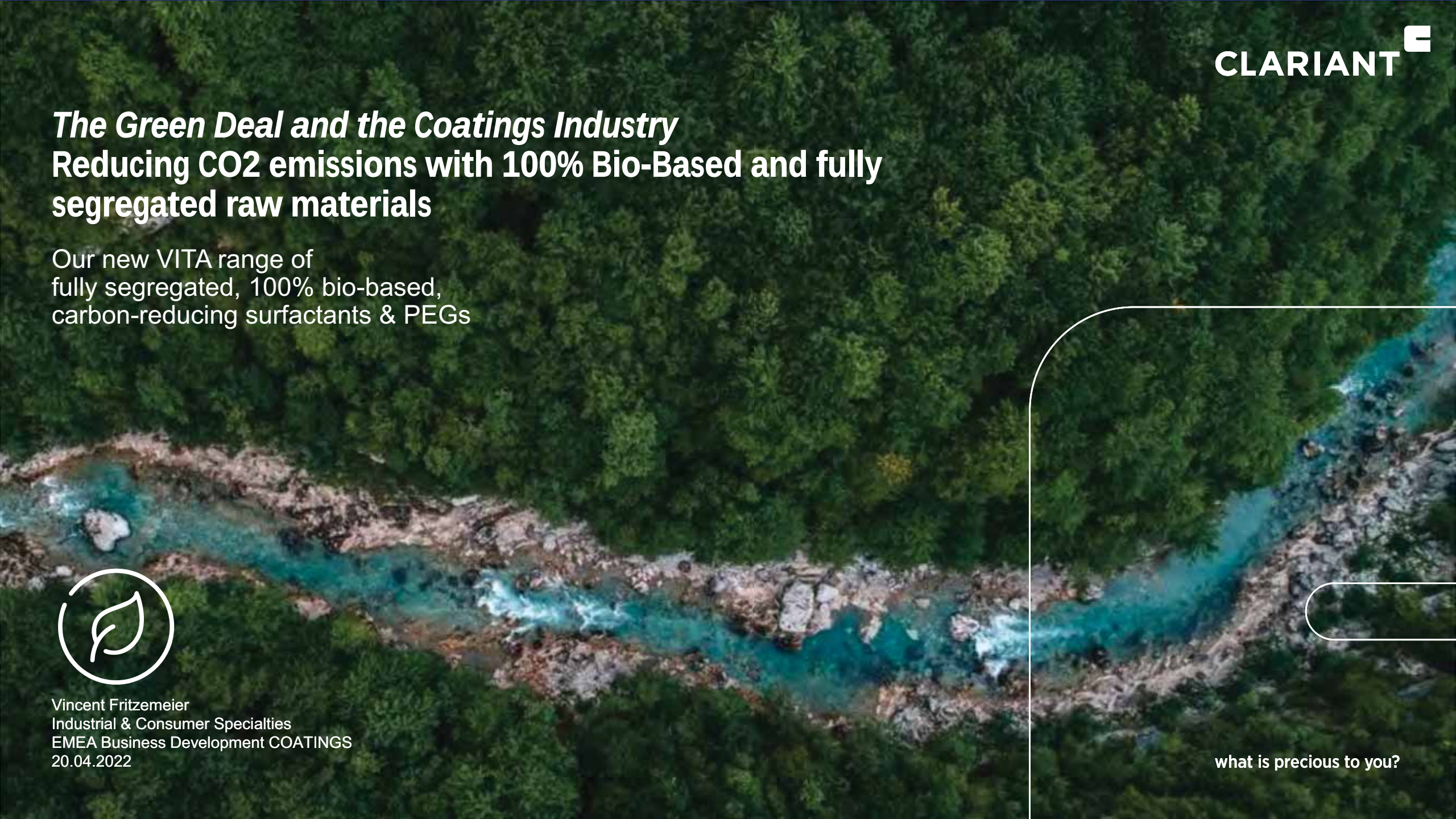


CLARIANT

The Green Deal and the Coatings Industry
Reducing CO2 emissions with 100% Bio-Based and fully segregated raw materials

Our new VITA range of
fully segregated, 100% bio-based,
carbon-reducing surfactants & PEGs

Vincent Fritzemeier
Industrial & Consumer Specialties
EMEA Business Development COATINGS
20.04.2022

what is precious to you?

Clariant at a Glance – a Globally Leading Company in Specialty Chemicals

3860

Sales 2020 (CHF m) from continuing operations

578

EBITDA 2020 (CHF m) from continuing operations

3

Core Business Areas

13235

Total staff 2020 (FTE)[2]

799

Net result 2020 (CHF m) of total Group[1]

15.0%

EBITDA margin 2020 from continuing operations

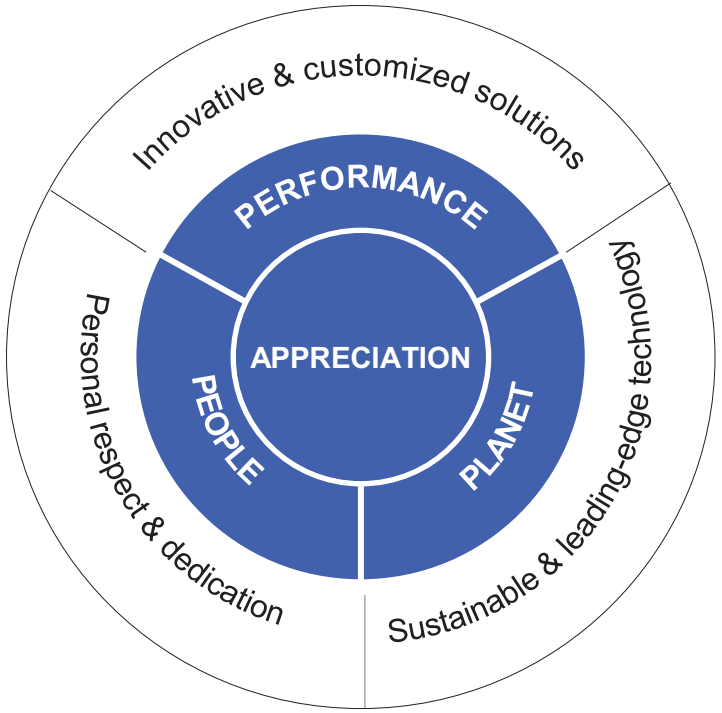
85

Production sites worldwide in 2020 [2, 3]

[1] Including discontinued operations [2] Total Group incl. discontinued operations (excl. Business Unit Masterbatches) [3] Shared production sites with Business Unit Pigments are split as separate sites

Sustainability is a long-established key pillar of Clariant's strategy

EMBEDDED IN COMPANY VALUES AND STRATEGY



1 FOCUS ON INNOVATION AND R&D

2 ADD VALUE WITH SUSTAINABILITY

3 REPOSITION PORTFOLIO

4 INTENSIFY GROWTH

5 INCREASE PROFITABILITY

PEOPLE EXCELLENCE

E.g. ECOTAIN® ecovadis CDP TOGETHER FOR SUSTAINABILITY

Committed to fighting climate change

2030 SCIENCE-BASED CLIMATE TARGETS

Setting our absolute reductions in greenhouse gas emissions between 2019 and 2030.

- 40%

Scope 1+2 greenhouse gas emissions

- 14%

Scope 3 greenhouse gas emissions from purchased goods and services

CLEAR ROADMAP FOR REDUCING EMISSIONS

ENERGY EFFICIENCY

- increasing the use of low carbon fuels and
- projects focused on increasing energy efficiency within operations via digitalization

ENERGY TRANSITION

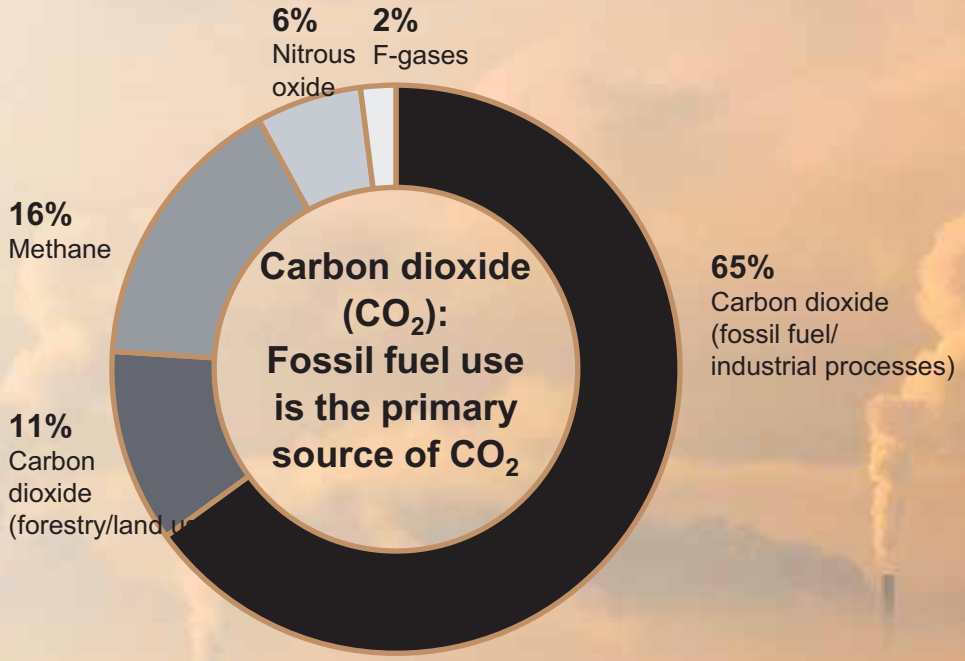
- energy efficiency and mostly by switching to green electricity and other green energy sources

LOW CARBON RAW MATERIALS

- shifting towards low carbon alternatives, renewables-based raw materials, and secondary raw materials

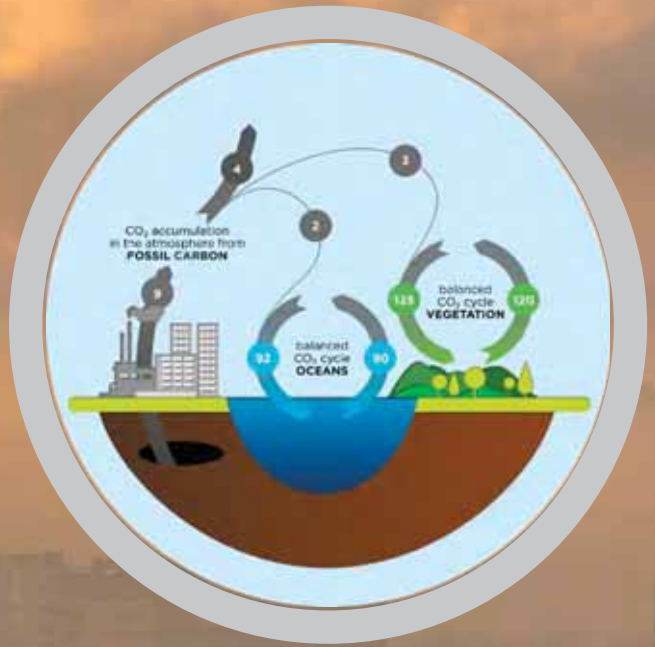
Human behavior as a source of climate disruption

GLOBAL GREENHOUSE EMISSIONS BY GAS



CARBON IS THE FUEL OF LIFE, BUT TOO MUCH CAN THREATEN THE PLANET

As CO_2 is used for photosynthesis by plants, metabolized into organic matter and consumed by Earth's organisms. Burning the unmetabolized carbon stored in fossil fuels spews more CO_2 into the air than natural processes can remove **The harm is caused by the imbalance in the carbon cycle!**



FOSSIL FUEL AS PRIMARY SOURCE OF CO2 RELEASE

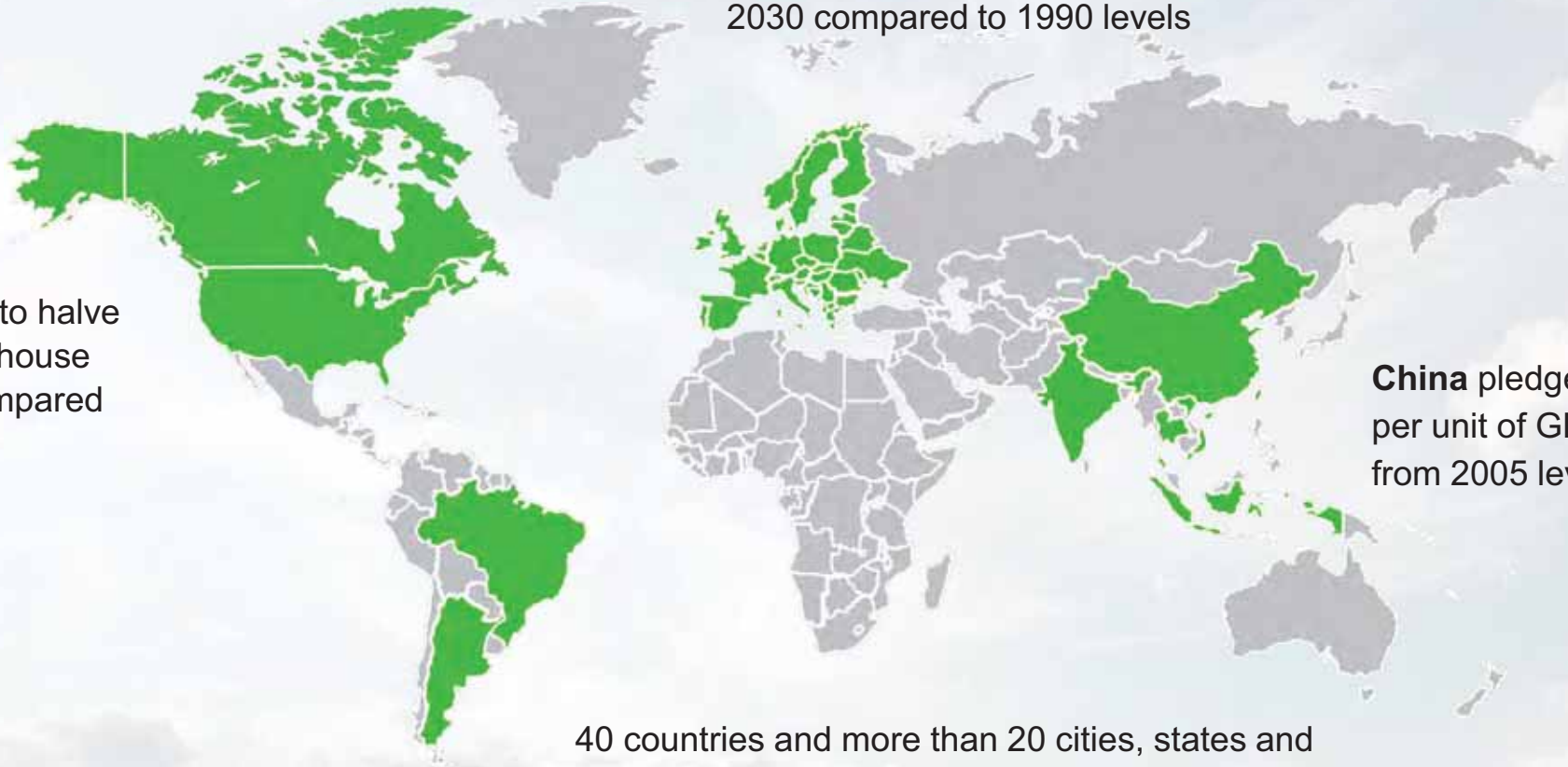
The main human drivers of climate change are increases in the atmospheric concentrations of greenhouse gases and of aerosols from burning fossil fuels, land use and other sources.* The way we live today generates much more CO_2 than can be absorbed by photosynthesis and other processes.

*IPCC report 2021, chapter 3.1, p. 14
Source: Global Greenhouse Gas Emissions Data, US EPA

International pledges to drastically cut emissions

63 COUNTRIES HAVE »NET-ZERO« TARGETS

The **EU** pledged to a 55% domestic reduction in greenhouse gases by 2030 compared to 1990 levels



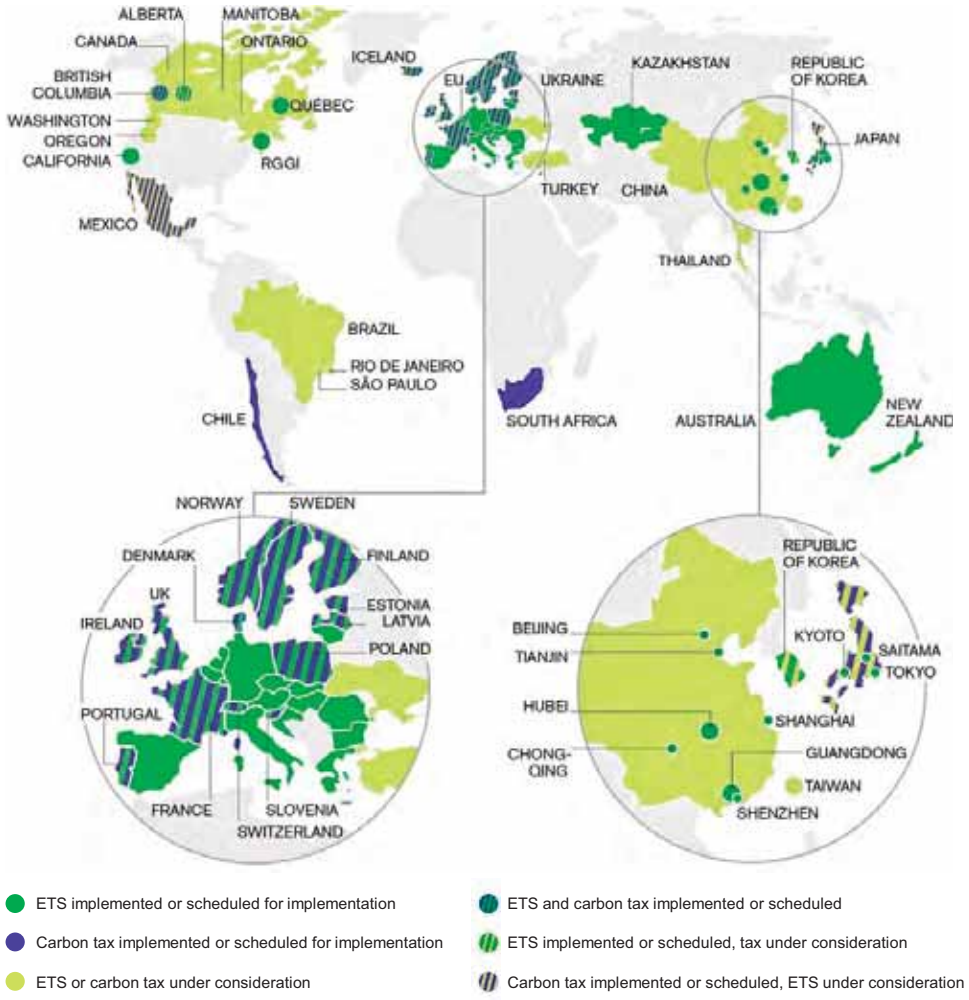
The **USA** pledged to halve its domestic greenhouse gases by 2030 compared to 2005

China pledged to cut emissions per unit of GDP by 60–65% from 2005 levels by 2030

40 countries and more than 20 cities, states and provinces already use carbon pricing mechanisms

Sources: Carbon Brief 2017, The White House 2021, European Commission, 2021

Carbon pricing is the main policy tool for incentivizing reductions



Companies' direct and indirect emissions

SCOPE 1 & 2

Making polluters pay for their carbon output has become the policy measure of choice for reducing emissions.

Carbon pricing is implemented through emissions trading schemes or taxes and aims to make countries and businesses fight carbon pollution by investing into more sustainable alternatives.

- 45 countries and over 20 cities, states and provinces already resort to carbon pricing systems
- EU pioneered carbon emissions trading as early as 2005, and the EU ETS is now the world's largest carbon market
- ETS schemes under implementation in China and Brazil
- Financial players and multinationals are advocating for a global pricing scheme

Source: World Bank Group, State and Trend Report, 2020

Europe's carbon border adjustment measure: Scope 3 carbon regulation mechanism through the backdoor?

Companies' direct and indirect emissions
SCOPE 1 & 2

EXAMPLE FOR NON-EU COMPANIES

NON-EU COMPANIES

Originating from countries with no equivalent climate standards/targets (including carbon pricing)

TAX PAYABLE = CARBON CONTENT x EU CARBON PRICE

Full impact starting from 2026

Impact on carbon footprint will be a critical factor in procurement decisions

- Starting from 2026
- EU importers and EU producers will be concerned
- Sectors at the beginning: automotive, construction, packaging and coatings, consumer appliances
- The lower fees paid by low-carbon manufacturers will give their products an edge on the EU market
- **To be ready, companies must start cutting carbon fast!**

Regardless of Scope emissions, product costs will increase significantly with higher carbon footprint.

»Substituting higher-carbon materials with lower-carbon ones will reduce the overall carbon footprint of a product, thus the cost's impact.«

How the EU Carbon Border Tax Will Redefine Value Chains | BCG

Europe's carbon border adjustment measure: Scope 3 carbon regulation mechanism through the backdoor?


EUROPEAN

EUROPEAN COMMISSION

Brussels, 14.7.2021
SWD(2021) 643 final

PART 1/2

REGULATION OF T

establis

{SWD(2021) 643

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT REPORT

Accompanying the document

Proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism

{COM(2021) 564 final} - {SWD(2021) 644 final} - {SWD(2021) 647 final} - {SWD(2021) 564 final}

EXAM

NON-EU

Full impact starting from 2026

Impact on carbon footprint will be a critical factor in procurement decisions

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page 18:

In the longer term, when the material scope of the CBAM would be extended, as more information will be easily available on the carbon content of products and as carbon pricing policies of different countries may become more easily comparable, an extension of the carbon emission scope to cover the full carbon footprint of imported products may be considered.

overall carbon footprint of a product, thus the cost's impact.«

How the EU Carbon Border Tax Will Redefine Value Chains | BCG

Already more than 30% of global coatings market officially announced GHG emission reduction targets

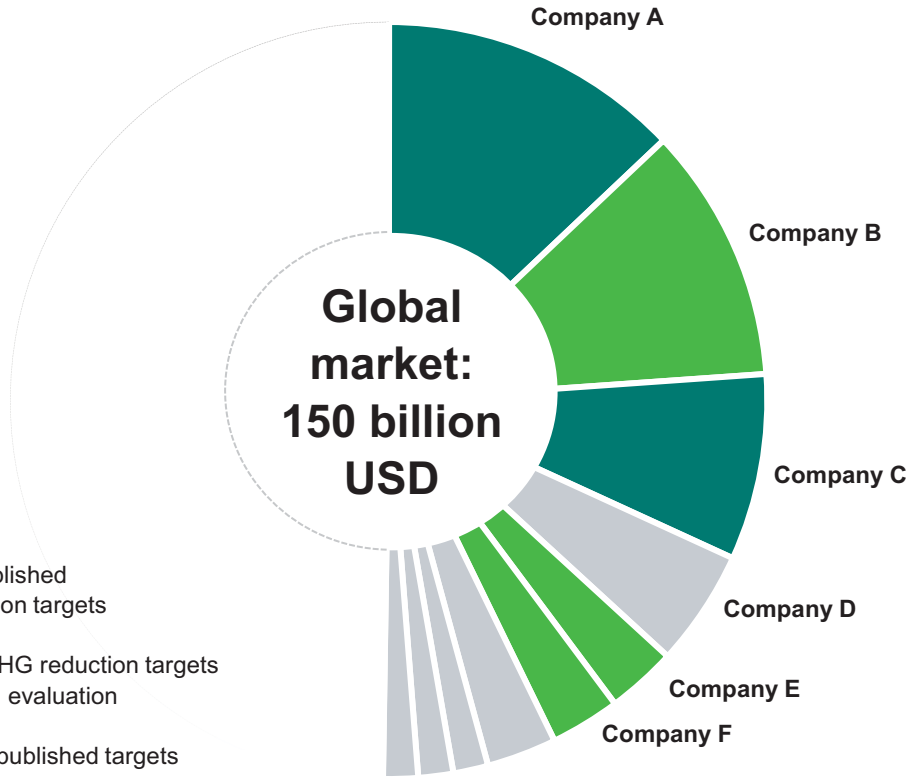
STATEMENTS FROM KEY PLAYERS IN THE GLOBAL PAINTS & COATINGS INDUSTRY

» … 2025 target to reduce GHG emissions by 15% …«

» … reduce carbon emissions by 50% until 2030. Being carbon neutral by 2050 …«

» … GHG reduction of 30% until 2030 …«

GLOBAL PAINTS & COATINGS INDUSTRY



Raw materials create over 40% of a coatings company's total GHGs: Main lever for cutting carbon!

SCOPE 3 CATEGORIES

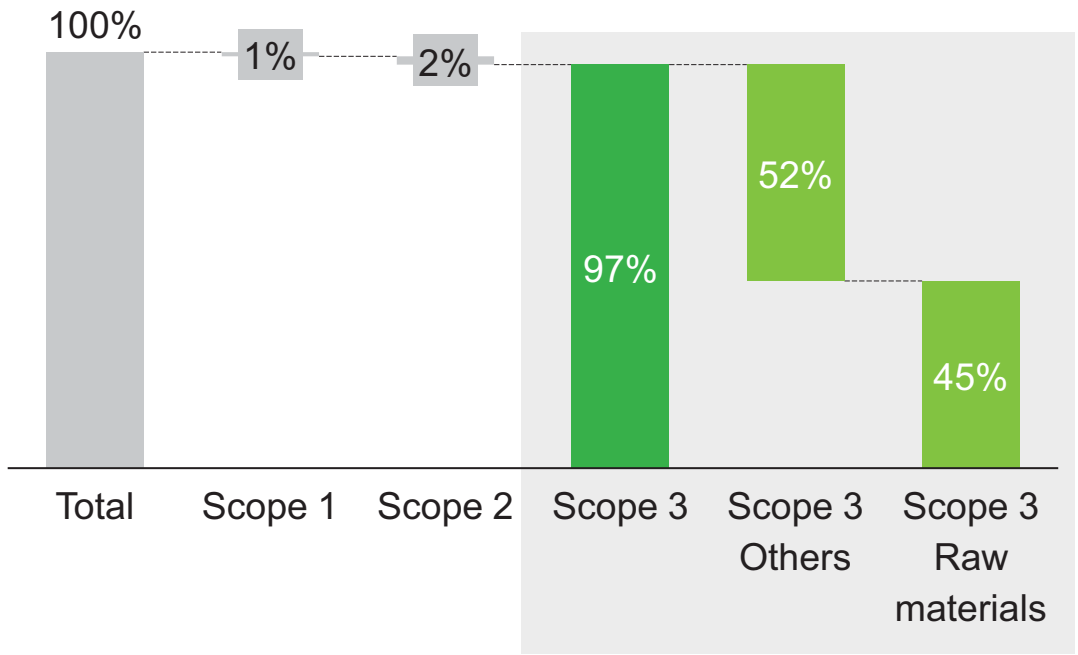
- Scope 3 consists of upstream and downstream emissions
- In total there are 23 sub-categories
- One of the sub-categories are purchased goods and services which includes raw materials

The conclusion is simple: Shrinking feedstock footprints is not just crucial for reaching scope 3 targets – but for reducing carbon overall!

PAINTS & COATINGS INDUSTRY CASE STUDY OF A »LEADING COATINGS PLAYER«

Indirect emissions along the value chain
SCOPE 3

GHG EMISSIONS BY CATEGORY [%]

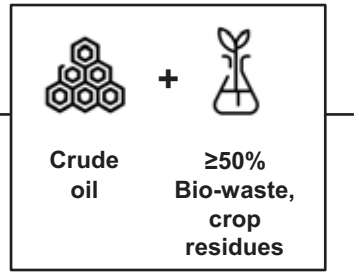


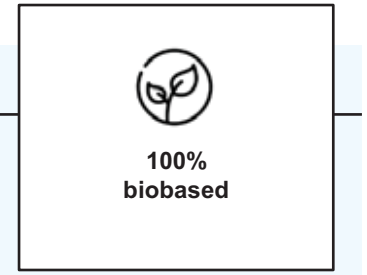
Paints & Coatings

THE CHALLENGE IS THAT FOSSIL-BASED CARBON IS FOUND IN ALMOST ALL CONSUMER PRODUCTS, AS AN EXAMPLE BASIC WHITE PAINT FOR DIY PAINTERS AND PROFESSIONALS

White paint for interior walls

What options do we have to decarbonize paint & coatings formulations?





	MASS BALANCED	SEGREGATED
Materials	• No physical or chemical differences between certified and non-certified products • Addition of biowaste for the bio-based mass balance certification	• No mixing of different types of renewable/recycled/fossil materials • Certified product must be natural
Supply chain	• Mixing of certified and non-certified products • Administrative monitoring of the volumes	• Fully renewable, segregated supply chain issuing from bio-based feedstocks
Benefits	• Good option for gradually increasing share of bio-based and/or circular feedstocks in order to make credible claims • Contribution to circular economy • Immediate applicability / drop-in solution	• 100% renewable and bio-based material • Independent supply chain from crude oil • Strong claims directly referring to physical properties, such as »product made from bio-based feedstocks«
Carbon footprint	+	++
Clariant offer	• Yes, TERRA range	• Yes, VITA range of products

*Source: https://www.iscc-system.org

Removing fossil carbon from the value chain: VITA range

Our 100% bio-based, fully segregated VITA range sets a new standard in green surfactants and helps mitigate climate change.

100% BASED ON GREEN CARBON
made from plants via bio-ethanol

FULLY SEGREGATED MATERIAL FLOWS
ensuring natural origin of ethoxylates

SAME PERFORMANCE AS FOSSIL-BASED ANALOGUES
due to equivalent chemical structure

DESIGNED FOR NATURAL FORMULATIONS
with a high Renewable Carbon Index (RCI)

LOWER CO_2e FOOTPRINT
vs. fossil alternatives

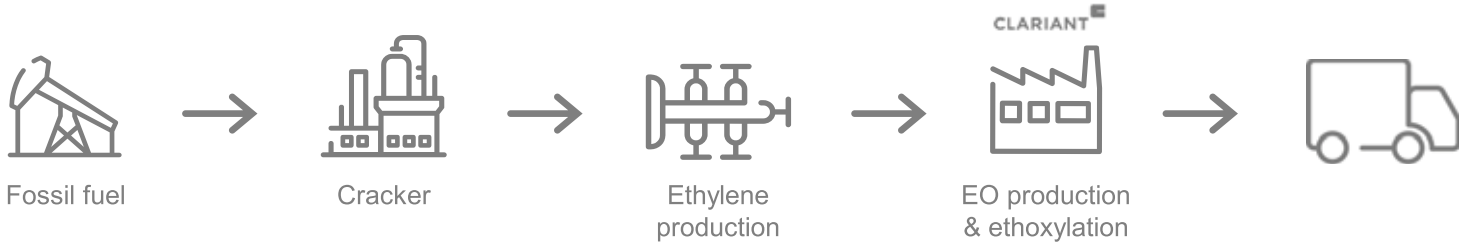
REMOVAL OF EMISSIONS
equivalent to above 3.000 barrels of crude oil from the value chain*

* per kton of surfactant purchased; biogenic carbon uptake included

VITAlly reliable: produced via a fully segregated, bio-based value chain

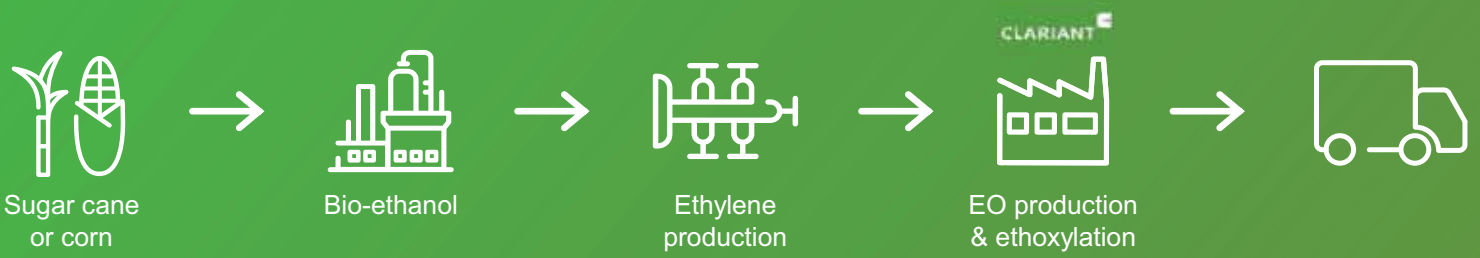
FROM SOURCE TO FINAL INGREDIENT, THE FLOW OF OUR MATERIALS IS KEPT COMPLETELY SEPARATE FROM FOSSIL FLOWS

FOSSIL VALUE CHAIN: from oil well to pipeline



100% FOSSIL CARBON

SEGREGATED VALUE CHAIN: from sugar cane or corn to the VITA range of bio-based surfactants & PEGs



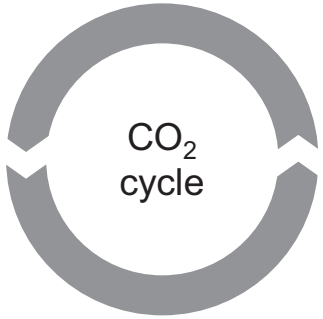
GUARANTEE THAT 100% OF PURCHASED PRODUCTS COME FROM RENEWABLE SOURCES

VITA surfactants and PEGs have a reduced carbon footprint

FOSSIL-BASED ETHYLENE OXIDE

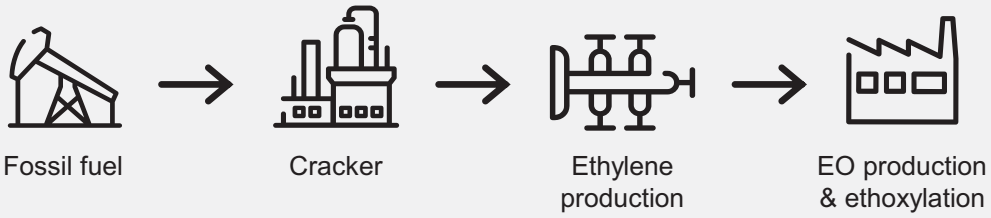
+1.5 CO_2e*

Cradle-to-gate emissions including BC uptake



+1.5 CO_2e*

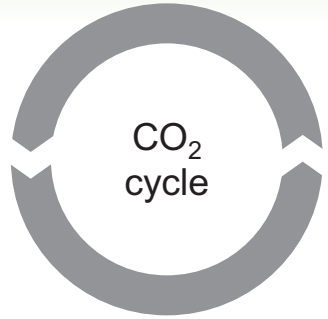
EO cradle-to-gate emissions



BIO-BASED ETHYLENE OXIDE

-0.6 CO_2e*

Cradle-to-gate emissions including BC uptake

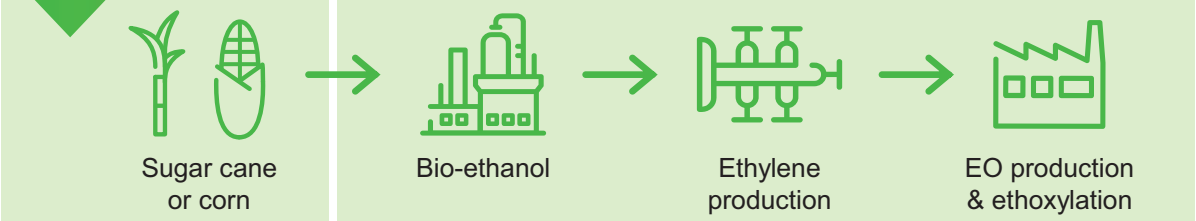


-2.0 CO_2e*

Biogenic carbon (BC) uptake

+1.4 CO_2e*

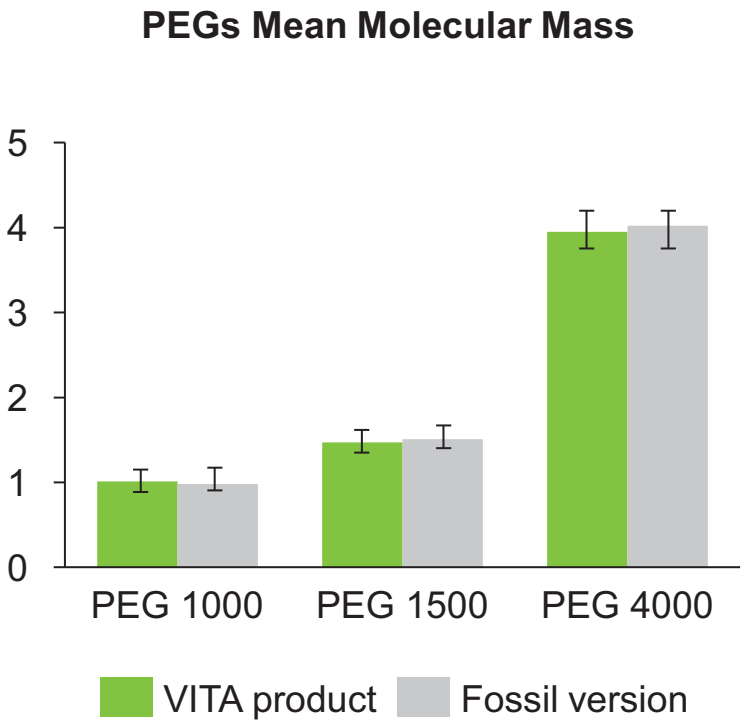
EO cradle-to-gate emissions



The new portfolio is **carbon-saving** thanks to the biogenic carbon uptake while growing sugar cane and corn

*kg CO_2 equivalent per kg of ethylene oxide

VITAlly the same: chemistry and performance remain equivalent



Product	Chemistry	RCI*	Free EO content	Dioxane
Genapol LA 070	Lauryl alcohol ethoxylate	46%	<1ppm	<10ppm
Genapol LA 070 Vita	Lauryl alcohol ethoxylate	100%	<1ppm	<10ppm
Genapol O 050	Oleyl cetyl alcohol ethoxylate	64%	<1ppm	<10ppm
Genapol O 050 Vita	Oleylcetyl alcohol ethoxylate	100%	<1ppm	<10ppm

Mean molecular mass in g/mol x 1000
RCI: Renewable Carbon Index – Share of carbon atoms in molecule originating from biobased sources

VITAlly complete: Broad portfolio of EODs and PEGs

EO-PO BLOCK COPOLYMER

Genapol PF 10 SG Terra
Genapol PF 20 SG Terra
Genapol PF 40 SG Terra

FATTY ACID ETHOXYLATE

Genagen C 100 SG Vita
Genagen O 030 SG Vita
Genagen O 060 SG Vita
Genagen O 120 SG Vita
Genagen S 065 SG Vita

FATTY ALCOHOL ETHOXYLATE

Genapol LA 010 SG Vita
Genapol LA 020 SG Vita
Genapol LA 030 SG Vita
Genapol LA 040 SG Vita
Genapol LA 050 SG Vita
Genapol LA 060 SG Vita
Genapol LA 070 SG Vita
Genapol LA 085 SG Vita
Genapol LA 090 SG Vita
Genapol LA 100 SG Vita
Genapol LA 120 SG Vita
Genapol LA 160 SG Vita
Genapol LA 230 SG Vita
Genapol LA 300 SG Vita
Genapol T 070 SG Vita
Genapol T 200 SG Vita
Genapol T 250 SG Vita

POLYGLYKOLS

Polyglykol 200 SG Vita
Polyglykol 300 SG Vita
Polyglykol 400 SG Vita
Polyglykol 600 SG Vita
Polyglykol 1000 SG Vita
Polyglykol 1500 SG Vita
Polyglykol 3350 SG Vita
Polyglykol 4000 SG Vita
Polyglykol 6000 SG Vita
Polyglykol 10000 SG Vita
Polyglykol A 350 SG Vita
Polyglykol M 500 SG Terra
Polyglykol M 750 SG Terra
Polyglykol M 2000 SG Terra
Polyglykol ML 2400 SG Terra

VEGETABLE OIL ETHOXYLATES

Emulsogen EL 300 SG Vita
Emulsogen EL 360 SG Vita
Emulsogen EL 400 SG Vita
Emulsogen EL 550 SG Vita
Emulsogen HCO 020 SG Vita
Emulsogen HCO 040 SG Vita
Emulsogen HCO 060 SG Vita

FATTY AMINE ETHOXYLATE

Genamin C 100 SG
Genamin C 150 SG
Genamin T 060 SG
Genamin T 150 SG
Genamin T 160 SG

SPECIALTY ETHOXYLATES

Genapol G 070 SG Vita
Hostacerin L 20 SG Vita
Hostacerin O 20 SG Vita

More to come

Drive change and help us eliminate fossil carbon from the value chain by formulating greener products for industrial use

Vincent Fritzemeier
Business Development Manager
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VITA

EcoTain® label – Clariant's flagship label for sustainability excellence

- EcoTain® is our flagship label for sustainability excellence products and solutions. It highlights solutions offering outstanding sustainability advantages and add value to customers and the society as a whole.
- Each product and solution carrying the EcoTain® label has undergone a systematic, in-depth screening process using 36 criteria spanning all three sustainability dimensions: social, environmental and economic.
- Its ambitious benchmark distinguishes products that
- significantly exceed market standards in general,
- have best-in-class performance in one or several criteria, and
- make overall sustainability contributions.
- EcoTain® products support actively the sustainability efforts of our customers, without compromising on performance.

ECOTAIN®

EcoTain® label – Clariant's flagship label for sustainability excellence

ECOTAIN®

>190

Products throughout our business units

194 for continuing operations

Together for Sustainability - collaborating for sustainable supply chains

Sustainable supply chains

Since 2014 Clariant has been a member of Together for Sustainability, a cross industry initiative aiming to:

build the industry's standard for sustainable supply chains

drive resilience, efficiency, and sustainability of global supply chains

accelerate deployment and foster strong partnerships and commitment of its participants

»Together for Sustainability«

Our commitment to sustainable supply chains

Leading chemical companies form together for sustainability

Status: March 2021

Ultimate proof points of Clariant's sustainability performance

Member of
Dow Jones
Sustainability Indices
Powered by the S&P Global CSA

Sustainability Yearbook
Member 2021
S&P Global

SUSTAINALYTICS

FTSE4Good

MSCI

CDP
DRIVING SUSTAINABLE ECONOMIES

SCIENCE
BASED
TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

EURONEXT
vigeo eiris
INDICES

ETHIBEL
SUSTAINABILITY
INDEX
EXCELLENCE Europe

ecovadis

Certified Management System
SQS
ISO 9001 / 14001 / OHSAS 18001
Clariant International Ltd

CERTIFIED
IQNet
MANAGEMENT SYSTEM

SIX Swiss Exchange

Clariant's sustainability leadership has been acknowledged with several awards

B-

B- Score
Climate Change
Water Security

78/100

9th consecutive listing

3,7/5

75/100

Platinum
99th percentile

CLARIANT: lead through sustainability and innovation

SEVEN SUSTAINABILITY CHALLENGES

Fighting **climate change** and creating value for customers with low carbon, high performing solutions

Increasing **circularity** with products that enable reduce, re-use and re-cycling

Eliminating **waste and pollution** from our operations and value chains

Creating a **sustainable bio economy** that protects nature and maintains high social standards

Striving to

create products that are **safe** and **sustainable by design**

Creating **social value** for our employees, in our business networks, and in society as a whole

Partnering and advocating for a sustainable future

CLARIANT

The VITA range of surfactants & PEGs

PRODUCT CATALOGUE

VITA

what is precious to you?

The VITA range of 100% bio-based and segregated products (1/3)

INCI / Chemistry	Product group	Trade name	RCI** fossil version [%]	RCI** green version [%]	Estimated Scope 3 reduction***
Laureth-1	Lauryl Alcohol Ethoxylates	Genapol® LA 010 SG Vita	86	100	-0.4
Laureth-2	Lauryl Alcohol Ethoxylates	Genapol® LA 020 SG Vita	75	100	-0.7
Laureth-3	Lauryl Alcohol Ethoxylates	Genapol® LA 030 SG Vita	67	100	-0.9
Laureth-4	Lauryl Alcohol Ethoxylates	Genapol® LA 040 SG Vita	60	100	-1.0
Laureth-5	Lauryl Alcohol Ethoxylates	Genapol® LA 050 SG Vita	55	100	-1.1
Laureth-6	Lauryl Alcohol Ethoxylates	Genapol® LA 060 SG Vita	50	100	-1.2
Laureth-7	Lauryl Alcohol Ethoxylates	Genapol® LA 070 SG Vita	46	100	-1.3
Laureth-9	Lauryl Alcohol Ethoxylates	Genapol® LA 090 SG Vita	40	100	-1.3
Laureth-10	Lauryl Alcohol Ethoxylates	Genapol® LA 100 SG Vita	38	100	-1.5
Laureth-12	Lauryl Alcohol Ethoxylates	Genapol® LA 120 SG Vita	33	100	-1.5
Laureth-16	Lauryl Alcohol Ethoxylates	Genapol® LA 160 SG Vita	27	100	-1.6
Laureth-23	Lauryl Alcohol Ethoxylates	Genapol® LA 230 SG Vita	21	100	-1.8
Laureth-30	Lauryl Alcohol Ethoxylates	Genapol® LA 300 SG Vita	17	100	-1.8
Glycereth-7	Glycerin Ethoxylate	Genapol® G 070 SG Vita*	18	100	-1.6

* REACH Registration on-going, all other products are REACH compliant
** Renewable Carbon Index (RCI)
*** Reduction in Carbon footprint with biogenic carbon uptake compared to existing fossil version (kg CO_2 equivalent/kg of product)

VITA

The VITA range of 100% bio-based and segregated products (2/3)

INCI / Chemistry	Product group	Trade name	RCI** fossil version [%]	RCI** green version [%]	Estimated Scope 3 reduction***
Ceteareth-7	Cetostearyl Alcohol Ethoxylates	Genapol® T 070 SG Vita	56	100	-1.6
Ceteareth-20	Cetostearyl Alcohol Ethoxylates	Genapol® T 200 SG Vita	31	100	-1.6
Ceteareth-25	Cetostearyl Alcohol Ethoxylates	Genapol® T 250 SG Vita	26	100	-1.7
Oleth-5	Oleyl Cetyl Alcohol Ethoxylates	Genapol® O 050 SG Vita	64	100	-1.6
Oleth-25	Oleyl Cetyl Alcohol Ethoxylates	Genapol® O 250 SG Vita	26	100	-1.6
PEG-30 Castor Oil	Castor Oil Ethoxylates	Emulsogen® EL 300 SG Vita	49	100	-1.3
PEG-36 Castor Oil	Castor Oil Ethoxylates	Emulsogen® EL 360 SG Vita	44	100	-1.3
PEG-40 Castor Oil	Castor Oil Ethoxylates	Emulsogen® EL 400 SG Vita	42	100	-1.3
PEG-55 Castor Oil	Castor Oil Ethoxylates	Emulsogen® EL 550 SG Vita	34	100	-1.6
PEG-20	Hydrogenated Castor Oil Ethoxylates	Emulsogen® HCO 020 SG Vita	59	100	-1.1
PEG-40	Hydrogenated Castor Oil Ethoxylates	Emulsogen® HCO 040 SG Vita	42	100	-1.4
PEG-60	Hydrogenated Castor Oil Ethoxylates	Emulsogen® HCO 060 SG Vita	32	100	-1.6
PEG-3 Rice Bran Ester	Oleic Acid Ethoxylates	Genagen® O 030 SG Vita	75	100	-1.4
PEG-6 Rice Bran Ester	Oleic Acid Ethoxylates	Genagen® O 060 SG Vita	60	100	-1.4
PEG-12 Rice Bran Ester	Oleic Acid Ethoxylates	Genagen® O 120 SG Vita	43	100	-1.4

* REACH Registration on-going, all other products are REACH compliant
** Renewable Carbon Index (RCI)
*** Reduction in Carbon footprint with biogenic carbon uptake compared to existing fossil version (kg CO_2 equivalent/kg of product)

VITA

The VITA range of 100% bio-based and segregated products (3/3)

INCI / Chemistry	Product group	Trade name	RCI** fossil version [%]	RCI** green version [%]	Estimated Scope 3 reduction***
PEG-6.5 Stearate	Stearic Acid Ethoxylate	Genagen® S 065 SG Vita	58	100	-1.4
PEG-10 Cocoate	Coconut Fatty Acid Ethoxylate	Genagen® C 100 SG Vita	38	100	-1.5
Polysorbate 20	Sorbitan Laurate Ethoxylate	Hostacerin® L 020 SG Vita*	31	100	-1.4
Polysorbate 80	Sorbitan Oleate Ethoxylate	Hostacerin® O 020 SG Vita*	38	100	-1.4
PEG-4	Polyglycols	Polyglykol 200 SG Vita	0	100	-1.0
PEG-6	Polyglycols	Polyglykol 300 SG Vita	0	100	-1.3
PEG-8	Polyglycols	Polyglykol 400 SG Vita	0	100	-1.6
PEG-12	Polyglycols	Polyglykol 600 SG Vita	0	100	-1.7
PEG-20	Polyglycols	Polyglykol 1000 SG Vita	0	100	-2.0
PEG-32	Polyglycols	Polyglykol 1500 SG Vita	0	100	-2.0
PEG-75	Polyglycols	Polyglykol 3350 SG Vita	0	100	-2.1
PEG-90	Polyglycols	Polyglykol 4000 SG Vita	0	100	-2.1
PEG-150	Polyglycols	Polyglykol 6000 SG Vita	0	100	-2.1
PEG-220	Polyglycols	Polyglykol 10000 SG Vita	0	100	-2.1

* REACH Registration on-going, all other products are REACH compliant
** Renewable Carbon Index (RCI)
*** Reduction in Carbon footprint with biogenic carbon uptake compared to existing fossil version (kg CO_2 equivalent/kg of product)

VITA