Sustainably impress the planet in 2022

Our brand new eCO grades reduce CO_2 without any compromise in performance

May, 12th, 2022

Georg Michels

EVONIK
Leading Beyond Chemistry

Evonik aligned to sustainability

Sustainability as part of portfolio and strategic management processes

Excellent Rankings

Sector leading rankings

Evonik amongst leaders in all relevant ratings

Environmental Targets

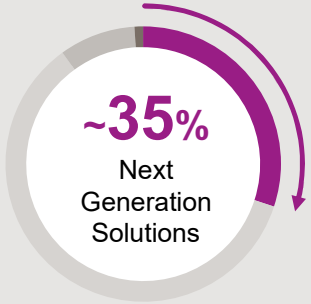
-50%

reduction of scope 1 and scope 2 emission until 2025 (vs. 2008)

Ambitious environmental targets

Evonik's sustainability strategy 2020+ with ambitious climate and water targets

Portfolio Management



Portfolio aligned to sustainability

~35% of sales with superior sustainability benefits to customers; integration of sustainability into strategic management processes and decisions

[1] See presentation back-up for rating details

EVONIK Leading Beyond Chemistry

Sustainability strategy - Key take-aways
To improve life, today and tomorrow.

Update 10th of May, 2022

Sustainability is an **integral part of our purpose** – four focus areas as guiding principle for Evonik

Sustainability is fully integrated into strategic management processes: portfolio & innovation steering, capital allocation

Handprint: increase NGS[1] sales share to **>50% by 2030**

Footprint: reduce CO_2 emissions by **25% by 2030**[2]

Complementing **ESG governance**

NEXTGEN Solutions

>50%

-25%

1. NGS: "Next Generation Solutions"
2. Commitment letter signed and handed in for SBTi, 25th April 2022, gross emissions reduction with reference year 2021, target year 2030

EVONIK Leading Beyond Chemistry

The inventor of isophorone chemistry goes green at 60 and comes up with another world first – the eCO series

With our VESTA products for high-performance solutions, you benefit from our long heritage in isophorone chemistry, operational excellence and our global setup.

Go with the original.

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On the way to a climate neutral Isophorone Chain

1962 — Production of isophorone (Herne, Germany)

1972 — Production of crosslinkers for environmentally friendly powder coatings (Marl, Germany)

1992 — Commissioning of the first American isophorone line (Mobile, USA)

2011 — Cradle to gate LCA analysis of the isophorone value chain

2014 — Commissioning of the first Chinese isophorone line (Shanghai, China)

2014 — Participation in the ALIPA's eco-profiles and environmental product declarations for aliphatic isocyanates

2015 — Herne site successfully audited as part of Together for Sustainability initiative

2022 — Launch of VESTA eCO series for reduced CO_2 emissions

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Our Vision

Crosslinkers is the best partner for a successful and sustainable future, providing pioneering technology and global reach.

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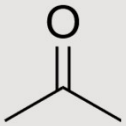
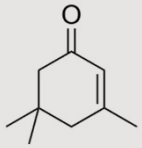
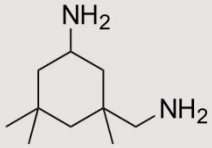
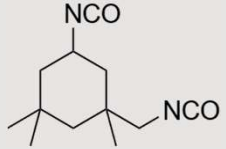
The I-Chain

Raw Materials	Solvents & Intermediates	Diamines	Diisocyanates
			
Acetone	VESTASOL® IP	VESTAMIN® IPD	VESTANAT® IPDI
			

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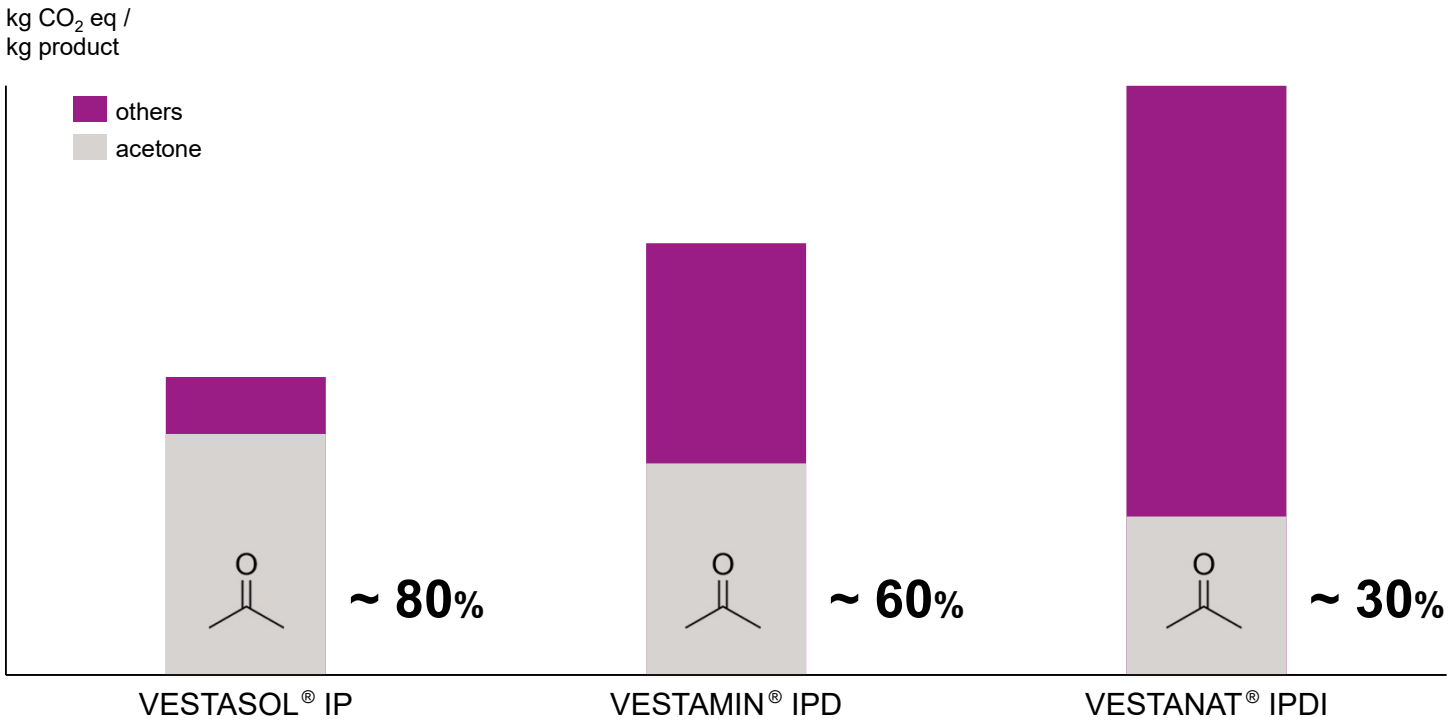
Reduce the CO_2 footprint of acetone and the I-Chain becomes more sustainable



Acetone plays a significant role in our GWP* footprint

Numbers are based on Life Cycle Analysis 2011 (LCA 2011)

Life Cycle Analysis will be updated in 2022

[1] GWP = Global Warming Potential, Measured in kg CO_2 equivalent/kg product

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What is renewable acetone?

Made without additional fossil carbon from the earth

Based on carbon from bio, bio-circular and circular materials

Bio


Corn


Canola


Sugarcane


Cotton

Bio-Circular


Tall Oil


Used Cooking Oil


Forestry residues


Straw

Circular


Plastic Waste


End-of-life Tires


Waste Textile


CO_2 (post industrial)

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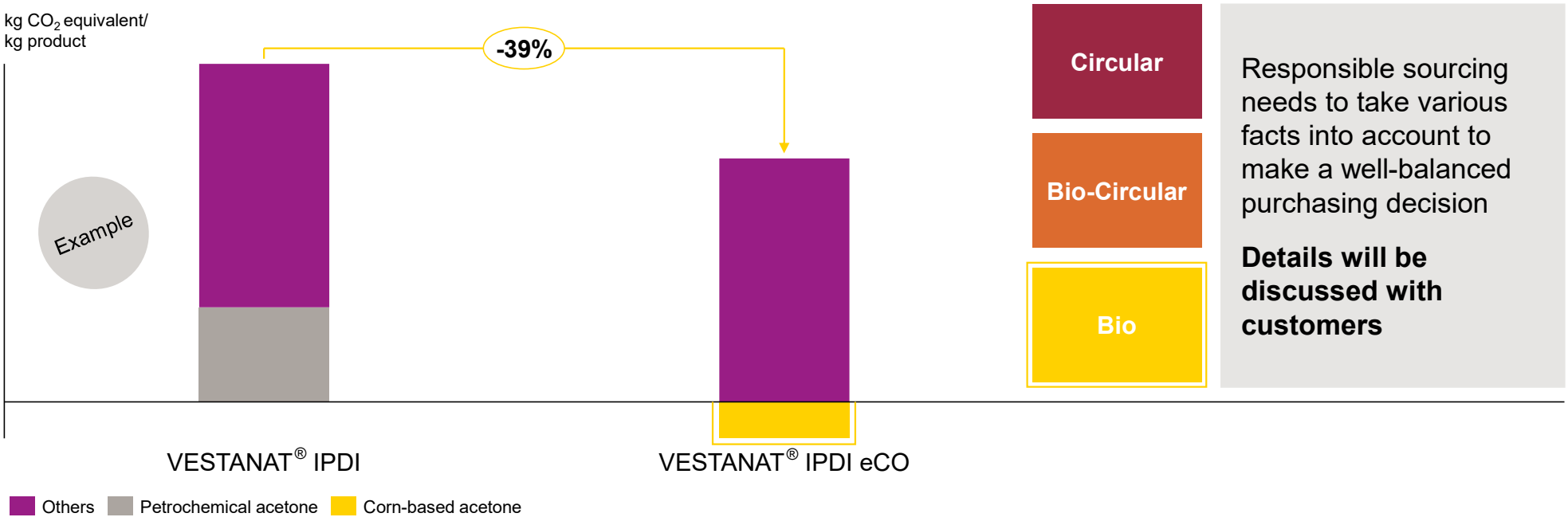
Renewable acetone can reduce the GWP of our products significantly

Global Warming Potential varies depending on the feedstock used



Circular

Bio-Circular

Bio

Responsible sourcing needs to take various facts into account to make a well-balanced purchasing decision

Details will be discussed with customers

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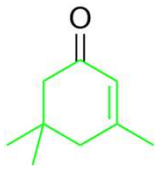
Vesta eCO – Reduced CO_2 footprint and no compromise in performance



vestasol® IP eCO

Specialty solvents for coatings and agrochemicals as well as an intermediate for the synthesis of e.g. disinfectants, polycarbonates and UV absorbers

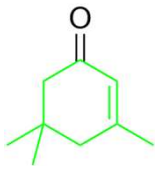
100% renewable carbon mass balance

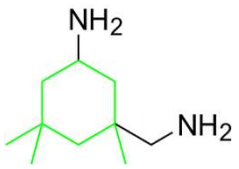
Benefits

- Improves levelling and gloss
- Excellent solvent power
- Improvement of interlayer adhesion
- High boiling

EVONIK Leading Beyond Chemistry

Vesta eCO – Reduced CO_2 footprint and no compromise in performance

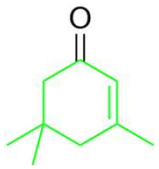




	vestasol® IP eCO	vestamin® IPD eCO
	Specialty solvents for coatings and agrochemicals as well as an intermediate for the synthesis of e.g. disinfectants, polycarbonates and UV absorbers	**Curing agents for epoxy resin systems, chain extender for PUR systems and raw material for polyamides**
	100% renewable carbon mass balance	**90%** renewable carbon mass balance
Benefits	▪ Improves levelling and gloss ▪ Excellent solvent power ▪ Improvement of interlayer adhesion ▪ High boiling	▪ Mechanical and chemical resistance ▪ Surface quality ▪ Low shrinkage and viscosity ▪ Enhanced toughness

EVONIK Leading Beyond Chemistry

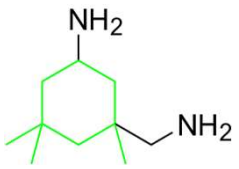
Vesta eCO – Reduced CO_2 footprint and no compromise in performance



vestasol® IP eCO

Specialty solvents for coatings and agrochemicals as well as an intermediate for the synthesis of e.g. disinfectants, polycarbonates and UV absorbers

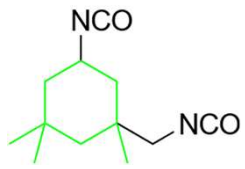
100% renewable carbon mass balance



vestamin® IPD eCO

Curing agents for epoxy resin systems, chain extender for PUR systems and raw material for polyamides

90% renewable carbon mass balance



vestanat® IPDI eCO

Diisocyanate monomers for light stable PUR resins and elastomers

75% renewable carbon mass balance

Benefits

vestasol® IP eCO	vestamin® IPD eCO	vestanat® IPDI eCO
▪ Improves levelling and gloss ▪ Excellent solvent power ▪ Improvement of interlayer adhesion ▪ High boiling	▪ Mechanical and chemical resistance ▪ Surface quality ▪ Low shrinkage and viscosity ▪ Enhanced toughness	▪ Excellent compatibility ▪ Low viscosity prepolymers ▪ Light stability

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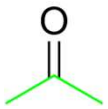
Our way to climate neutral l-chain

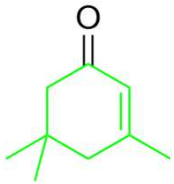
Starts here …

with solvents, amines and isocyanates made from raw materials which originate from renewable feedstocks

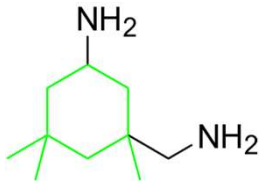
Renewable acetone



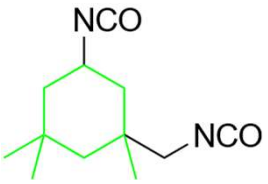
vestasol® IP eCO



vestamin® IPD eCO



vestanat® IPDI eCO



EVONIK Leading Beyond Chemistry

VESTA eCO is based on 100% renewable acetone

With our eCO grades you can significantly reduce the CO_2 footprint of your systems

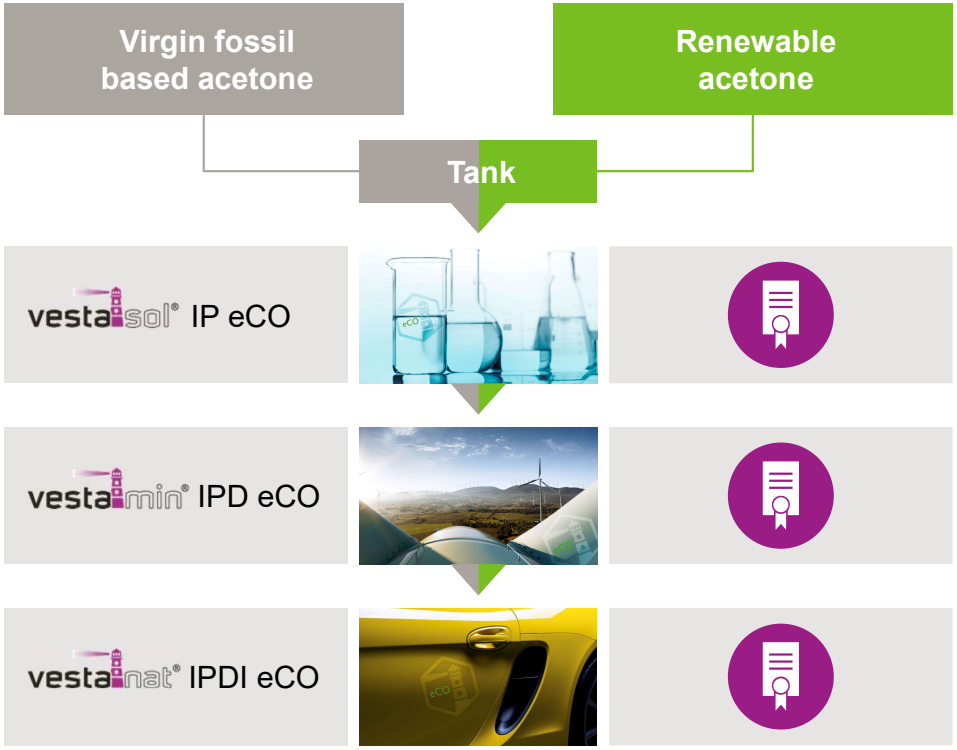
vestasol® IP eCO	**100%** renewable carbon mass balance
vestamin® IPD eCO	**90%** renewable carbon mass balance
vestanat® IPDI eCO	**75%** renewable carbon mass balance

EVONIK Leading Beyond Chemistry

How do we do it

The Mass Balance Approach

- Renewable acetone and fossil-based acetone are mixed and used jointly
- Strictly segregated in bookkeeping
- You can only sell as much renewable material as you have sourced renewable acetone (conversion factors)
- Audited and certified by an independent body, namely ISCC and REDCert



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Mass Balance allows for instant CO_2 reduction in existing plants. Giving green drop-in solutions to our customers at the best possible price.

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ISCC Certificate
Internationally recognized sustainability and carbon certification

Certified
March 2022

ISCC PLUS is a standard well recognized by all stakeholders for recycled and bio-based materials.

Implementing social and ecological sustainability criteria

Verifies predefined and transparent mass balance accounting

Monitoring deforestation-free supply chains

Avoiding conversion of biodiverse grasslands

Calculating and reducing GHG emissions

Establishing traceability in global supply chains

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Evonik Crosslinker has been certified in March 2022

DIN CERTCO
Gesellschaft für Konformitätsbewertung mbH

ISCC PLUS Certificate

Certificate Number: ISCC-PLUS-Cert-DE143-33300044

DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Alboinstr. 56, 12103 Berlin, Germany

certifies that

Evonik Operations GmbH Speciality Additives Businessline Crosslinkers - Werk Herne
Herzogstraße 28, 44651 Herne, GERMANY

complies with the requirements of the certification system

ISCC PLUS
(International Sustainability and Carbon Certification)

Place of the audit
(if different from the legal address of the system user as stated above; only applicable for traders and traders with storage):
Address of the audit / n.a.

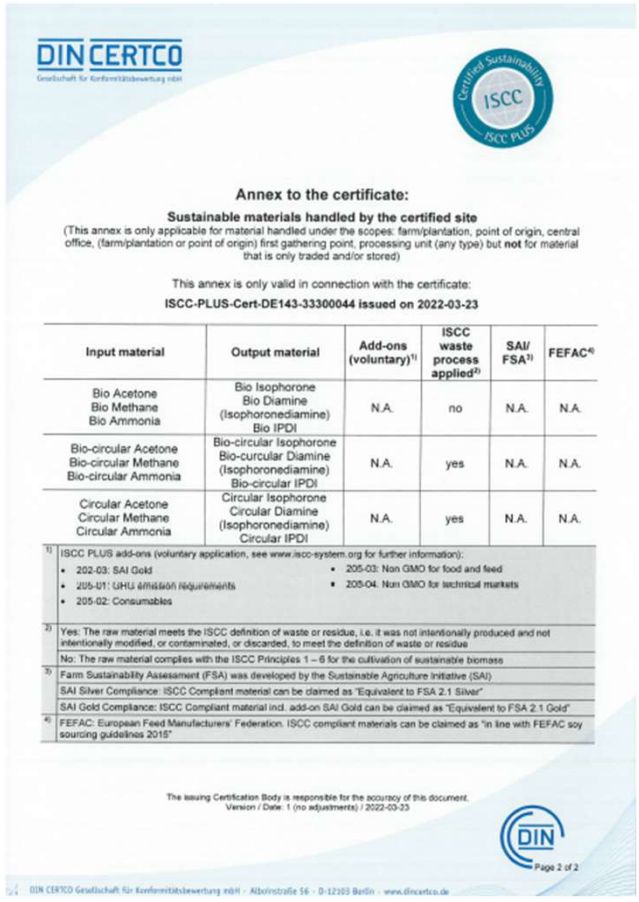
This certificate is valid from 2022-03-23 to 2023-03-22.

The site of the system user is certified as:
Processing Unit (Speciality chemical plant, Co-Processing)

The scope of the certificate includes the following chain of custody options:
(not applicable for paper traders)
Mass balance

Berlin, 2022-03-23
Place and date of issue

Robert Zorn, M.Sc.
Managing Director



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Gesellschaft für Konformitätsbewertung mbH

Annex to the certificate:

Sustainable materials handled by the certified site
(This annex is only applicable for material handled under the scopes: farm/plantation, point of origin, central office, (farm/plantation or point of origin) first gathering point, processing unit (any type) but **not** for material that is only traded and/or stored)

This annex is only valid in connection with the certificate:
ISCC-PLUS-Cert-DE143-33300044 issued on 2022-03-23

Input material	Output material	Add-ons (voluntary)[1]	ISCC waste process applied[2]	SAI/ FSA[3]	FEFAC[4]
Bio Acetone Bio Methane Bio Ammonia	Bio Isophorone Bio Diamine (Isophoronediamine) Bio IPDI	N.A.	no	N.A.	N.A.
Bio-circular Acetone Bio-circular Methane Bio-circular Ammonia	Bio-circular Isophorone Bio-curcular Diamine (Isophoronediamine) Bio-circular IPDI	N.A.	yes	N.A.	N.A.
Circular Acetone Circular Methane Circular Ammonia	Circular Isophorone Circular Diamine (Isophoronediamine) Circular IPDI	N.A.	yes	N.A.	N.A.

[1] ISCC PLUS add-ons (voluntary application, see www.isco-system.org for further information):
- 202-03: SAI Gold
- 205-01: GHG emission requirements
- 205-02: Consumables
- 205-03: Non GMO for food and feed
- 205-04: Non GMO for technical markets

[2] Yes: The raw material meets the ISCC definition of waste or residue, i.e. it was not intentionally produced and not intentionally modified, or contaminated, or discarded, to meet the definition of waste or residue
No: The raw material complies with the ISCC Principles 1 – 6 for the cultivation of sustainable biomass

[3] Farm Sustainability Assessment (FSA) was developed by the Sustainable Agriculture Initiative (SAI)
SAI Silver Compliance: ISCC Compliant material can be claimed as "Equivalent to FSA 2.1 Silver"
SAI Gold Compliance: ISCC Compliant material incl. add-on SAI Gold can be claimed as "Equivalent to FSA 2.1 Gold"

[4] FEFAC: European Feed Manufacturers' Federation. ISCC compliant materials can be claimed as "in line with FEFAC soy sourcing guidelines 2015"

The issuing Certification Body is responsible for the accuracy of this document.
Version / Date: 1 (no adjustments) / 2022-03-23

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Leading Beyond Chemistry

With our eco grades you can significantly reduce the CO_2 footprint of your systems

VESTA eCO is based on 100% renewable acetone MB[1]

- Customer can choose the source of renewable acetone
- Certified by an independent body
- Mass Balance certification allows for cost efficiency
- Drop-in solution – well known product properties
- Reduction of CO_2 (eCO = eliminating CO)

[1] MB – Mass balance

EVONIK Leading Beyond Chemistry

How to get in contact with us

Get in contact with todays presenter

Georg Michels
Director Marketing PL VESTANAT & Derivatives | Crosslinkers
Evonik Operations GmbH

georg.michels@evonik.com
Phone: +49 2365 – 49 -6027

Get in contact with our local experts

https://evonik.com/crosslinkers-contact

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