CARBON MINDS DATA

Reduce emissions and report with confidence using reliable and actionable data tailored to your needs

Why are supply chain emissions critical to corporate sustainability?

Example: Chemical industry average[1]

The supply chain is responsible for the majority of life cycle emissions, accounting for 83% in an average chemical company.

[1,2] CDP (2024); CDP Technical Note: Relevance of Scope 3 Categories by Sector.

17%
Direct emissions

83%
Supply chain emissions

- Over half of these emissions are caused by the raw materials supplied to production facilities
- Raw material procurement is the largest contributor to corporate carbon footprints

What are the biggest challenges in measuring and reducing supply chain emissions?

The complexity of chemical supply chains makes their emissions difficult to track. However, this data is crucial for understanding and reducing emission drivers, such as the impact of raw material purchases, which often involve thousands of materials per company.

Challenges

DATA AVAILABILITY

Scope 3.1 includes emissions from the production of thousands of products and suppliers, for many of which emissions data is not readily available.

COMPARABILITY OF SUPPLIER DATA

Primary Product Carbon Footprint (PCF) data from suppliers often lack harmonization in methodological assumptions, making meaningful comparisons and "greener" supplier choices difficult.

DATA GRANULARITY

Most other PCF data sources provide only country-average data, failing to capture variations in climate impacts across suppliers, as well as specific reduction opportunities.

SUPPLIER ENGAGEMENT

Identifying emissions reduction opportunities with suppliers can be a complex process that requires reliable information on effective reduction levers.

OUR SOLUTION:

Carbon Minds life cycle data suite

With our certified methodology and reliable lifecycle data, we help you address these challenges in measuring and reducing supply chain emissions and achieving your sustainability goals.

DATA

cm.chemicals

- PCF and LCA data for chemicals and plastics
- 100,000+ datasets covering 1300 chemicals in up to 200 production regions
- Country averages for production, consumption & technologies, as well as contribution analyses

Supplier Footprint Analytics

- Supplier-specific PCF and LCA data
- Covers nearly all suppliers for 72 commodities in all production regions
- Benchmarking and contribution analysis

SERVICE

- Implementation: Automated matching services for large product portfolios
- Closing data gaps though detailed modelling & proxy suggestion engine
- Consulting & training: Net zero pathways, PCFs, LCAs and capacity building

Our customer rely on Carbon Minds data for:

- CARBON FOOTPRINTS
- LIFE CYCLE ASSESSMENT
- SCOPE 3 ASSESSMENTS
- SUSTAINABLE PROCUREMENT
- SUSTAINABILITY STRATEGY

BUILT ON TRUST

Certified data to empower your decisions

TÜV-certified compliance with the following standards and guidelines:

- ISO 14040
- ISO 14044
- ISO 14067
- TOGETHER FOR SUSTAINABILITY
- UEIL & ATIEL

TÜVRheinland CERTIFIED
Certified Calculation Method
Regular Surveillance
www.tuv.com ID 0000081021

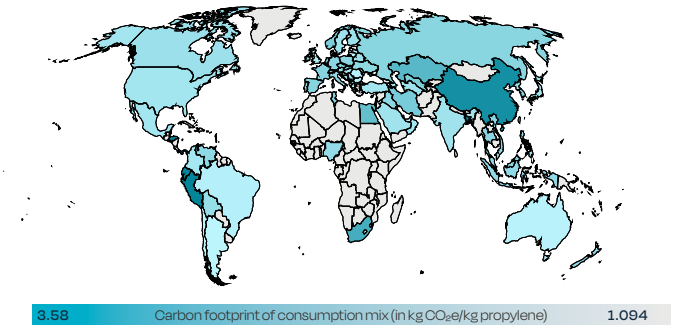
CASE STUDY

Understanding Carbon Footprints in propylene production: Differences across markets, technologies, and suppliers

Consumption mix datasets

→ Show the carbon footprint of a product's average consumption in a country, calculated as the weighted average of the climate impact of all local plants and imports. The carbon footprint of propylene, based on consumption mixes, ranges from 1.094 to 3.58 kg CO_2 per kg.

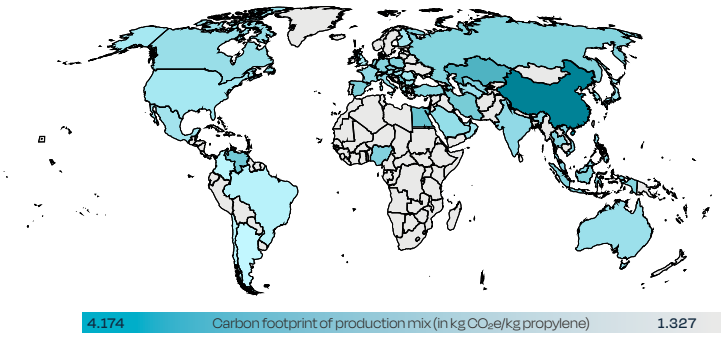
Carbon Footprint of the propylene consumption mix.



Production mix datasets

→ Show the mass-weighted average emissions of all plants in a country or region producing the same product. By focusing only on local production, it reflects emissions driven by regional production efficiency and technology. The carbon footprint of propylene, using production mixes, varies from 1.327 to 4.174 kg CO_2 per kg across regions.

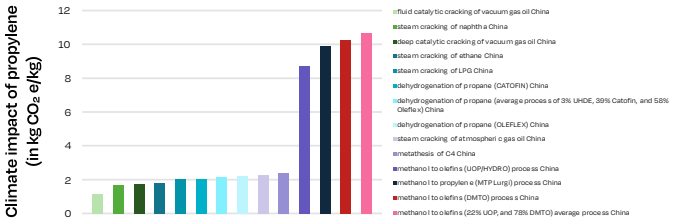
Carbon Footprint of the propylene production mix.



Technology-specific datasets

→ Represent the mass-weighted average of all plant-specific datasets for a chemical produced using the same technology in a specific country or region. In China, for example, the carbon footprint of propylene production, based on technology-specific datasets, varies by a factor of 10 — even within the same country — highlighting significant differences in efficiency and energy sources across production technologies.

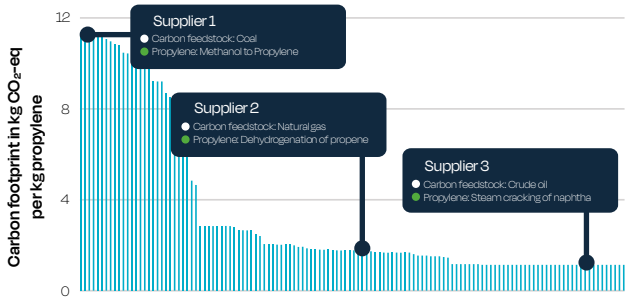
Detailed breakdown of the production-related emissions associated with different technologies used to produce propylene in China.



Supplier-specific datasets

→ Show the differences in carbon footprints of a chemical for different suppliers in a country. They reflect differences in production technologies, raw materials, and energy use. For example, in China, the carbon footprint of propylene can vary by a factor of 11, highlighting the critical role of these datasets in managing supply chain emissions accurately.

Supplier impacts in China.



By leveraging different levels of granularity, companies can gain deeper insights into their supply chains and identify reduction opportunities.

Want to start making *data-driven* decisions?

Reach out to us

carbonminds