WACKER

CREATING TOMORROW'S SOLUTIONS

FACTSHEET SUSTAINABILITY I MASS BALANCE APPROACH I JULY 2020

WACKER'S POSITION ON "MASS BALANCE APPROACH"

Trend to renewable raw materials

The trend towards renewable raw materials is not necessarily always sustainable, as it can be in direct conflict with the production of food, land-use, and biodiversity priorities. Therefore, we do not approve the use of renewable raw materials unconditionally. Nevertheless, we have developed technologies for the replacement of our products by renewable raw materials

- to reduce the dependence on fossil resources
- to improve the carbon footprint of our products
- to accommodate the needs of our customers

Fossil Reduced Manufacturing as Main Goal

67 percent* of WACKER's products are based on inorganic raw materials (primary source of silicon metal is quartz sand); 26 percent* are based on organic raw materials (Ethylene and Methanol as well as their downstream products Acetic Acid and Vinyl Acetate). The share of renewable ingredients of our BIOSOLUTIONS products is even close to 50 percent*. With the utilization of a mass balance approach for renewable raw materials we support fossil reduced manufacturing within our fully integrated production ("Verbund").

Sustainable Sourcing is Key

For our mass balance approach to renewable raw materials, we apply the following international sustainability criteria:

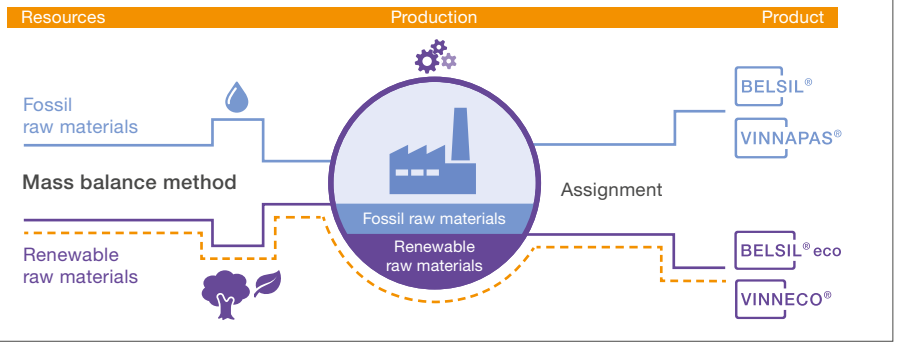
- Reduction of greenhouse gas emissions from raw materials by at least 50 percent
- Environmentally and socially responsible biomass production exclusively from waste or by streams (certified cut grass, by products from the wood industry, regional sources)
- Protection of areas with a high degree of biodiversity
- Protection of land with high carbon stocks, e.g. rain forest

Palm oil, palm kernel oil and their derivatives are among our renewable raw materials for which we want to ensure sustainable and certified sourcing. Therefore, WACKER is working on joining the initiative for sustainable palm-oil sourcing known as the "Roundtable on Sustainable Palm Oil (RSPO)." The certified material will be also used in the mass balance approach.

Advantages for the Mass Balance Approach

① With the mass balance approach we could start immediately with production without investing into new production facilities.
② The resulting mass balance products save fossil resources and are associated with quantifiably lower greenhouse gas emissions.
③ The method can be applied for many different products such as BELSIL® eco and VINNECO®.
④ The resulting mass balance products are identical in terms of formulation and quality.
⑤ Mass balance approach meets the criteria of TÜV Süd standard CMS 71 or REDCert² for the traceability of renewable raw materials and is certified by a third party.
⑥ The mass balance approach as drop in solution enables the transition to an increased share of certified renewable raw materials.

Illustration of the Mass Balance Method Used at WACKER



Support Tools and Links

- DIRECTIVE 2009/28/EC of April 23, 2009 (Article 17, #2)
- Amendment DIRECTIVE (EU) 2015/1513 of September 9, 2015 (# 5. a)
- TÜV Süd Standard CMS 71 "Mass balance for traceability of renewable raw materials" (abbreviated Renewable Resources)

*based on sales

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