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EBI EVENT

Procedure for the REACH Registration of Charcoal and Biochar EC-No. 240-383-3

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AGENDA

Questions?!

COALSTER and scope of the registration

Registration cost overview

REACH requirements

Standard procedure for a registration

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COALSTER GmbH and scope of the Charcoal registration

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Contact Information for the Registration of Charcoal:

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COALSTER is an associated company of asseso AG

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COALSTER GmbH is the Leading Registrant for substances:

- Charcoal / EC No: 240-383-3, CAS No: 16291-96-6 (since September 2009)
- Charcoal from coconut shells / EC No.: 271-974-4, CAS No.: 68647-86-9 (since June 2012).

Currently, the existing charcoal dossier is being expanded to cover all comparable biochar/charcoals under this dossier!

- Objective: registration of all comparable/similar pyrolysis coals under the common registration of EG 240-383-3 in 2023.
- Status: ECHA agrees with the requested extension of the substance description and the dossier. The preparation is currently in progress.

Substance Identity Description:

- The substance Charcoal is a UVCB of organic origin.
- Following the EINECS definition of EC No. 240-383-3, charcoal is an amorphous form of carbon produced by partially burning or oxidizing wood or other organic matter. Actual data obtained by X-ray diffraction indicate that carbon may also occur in the form of crystal structures.
- Under regulatory aspects, charcoal, more generally addressed as biochar, is a UVCB substance defined by various starting materials and manufacturing processes. It is a porous, carbonaceous material that is produced by pyrolysis of biomass.
- Often plants, which are rich in lignocellulose such as trees, are the source of the biomass. In the pyrolysis process, which is called carbonization, the biomass is broken down at temperatures in the range from 350°C to 1000 °C in a low-oxygen process.

Composition of the substance:

- The content of the element carbon in dried biochar varies between **30 %** and **95 %** (w/w), with the sum of C, H, N, O (carbon, hydrogen, nitrogen, oxygen) typically amounting to more than 96 % (w/w) for biochar produced from wood, based on combustion analysis and X-ray fluorescence (XRF).
- The ash content of biochar burned at 550 °C to 815 °C is in the range from 1.5 % to 64 % (w/w) of dried substance.
- Impurities of biochar are various organic and inorganic compounds which may include minerals with a specific crystal structure. In rare instances, biochar produced from wheat straw, switchgrass or cacao shells may contain crystalline silica (quartz, tridymite, cristobalite) at maximum concentrations up to ca. 10 % (w/w).
- In other respects, biochar may not contain compounds or elements at concentrations that lead to classification.

Under consideration for a further update of the substance description:

- Further data on comparable coals are currently being collected, evaluated and - as far as possible - included in the substance description. Suitable biochar from, for example, production and sewage sludge will soon be included. However, there is still a lack of more in-depth, meaningful information about this.
- Requirements for this:
  - organic origin of the feedstock
  - similar/comparable applied pyrolysis technology
  - Further Information on physical and chemical data in order to check substance sameness
  - Detailed check of potential pollutions (PAH and BTEX, etc…)
- Substances such as torrefied biomass, coal from hydrothermal carbonisation (HTC), pyrolysis and gasification coke, which is classified as hazardous, are currently not covered by the joint registration.
- Biochar with an increased content of hazardous elements leading to classification under CLP would require separate registration.

REACH requirements

REACH Registration for substances:

- Legal requirement → REACH Regulation (EC) 1907/2006
- **REACH** stands for **R**egistration, **E**valuation, **A**uthorisation and Restriction of **C**hemicals.
- REACH entered into force on 1 June 2007 and applies, in principle, to all chemical substances.

Substance Registration is required if:

- A company manufacture or import substances in quantities > 1 ton per year
- The company is located in the European Economic Area (EEA)
- No exemption exists

Substance Registration is not required for:

- Waste, as defined in the EU's waste legislation. It is exempt from REACH, but a product recovered from waste is not.
- substances used in food or feedstuff, medicinal products… scientific research and development…
- Substances listed in Annex IV of REACH
- Substances occurring in nature (e.g. minerals, ores and ore concentrates that are not chemically modified)
- Substances re-imported into the EEA

How to register a substance:

- The Registration is based on the principle of "one substance (description), one registration“.

- Manufacturers and importers of the same substance must submit their registration jointly.
  - Joint submission object in REACH-IT is prepared by the lead registrant.
  - Co-registrations by companies according to tonnage and appropriate EC-Number.
  - The total costs of the registration must be shared proportionally (fair, transparent and non-discriminatory)

- The Registration must be completed via ECHA website
  - Creation of a data set (Dossier) by using IUCLID6 software.
  - Data Submission in REACH-IT Account

IMPORTANT: a REACH registration is not a voluntary product certification, but a legal obligation !!!

Basic procedure for a registration (5 steps)

Step 1 - REACH-IT

Creation of a REACH-IT Account-> https://idp.echa.europa.eu/ui/create-account

- For a REACH registration each company needs access to the REACH-IT system.
- By creating a REACH-IT account, each company is assigned a unique identification number (UUID).
- All notifications, submissions and changes regarding REACH registrations are made via this platform.

Necessary Information:

- Complete company data incl. contact person.
- Documentary evidence of company size, if SME status applies.

Please note: Keep your data up to date in your REACH-IT Account.

Step 1 - REACH-IT

SME Documentation / Evidence

- **SME** stands for **s**mall and **m**edium-sized **e**nterprises.
  - ECHA charges fees for each substance registration.
- The amount of the registration fee depends on the registered volume and on the company size.
- To be entitled to the reduction for SMEs, proof of the company size must be deposited in REACH-IT.

Necessary Information:

- A certified annual financial statement or equivalent,
- information on the structure of the company with regard to affiliated and individual companies,
- Presentation/Organizational chart Company structure,
- proof of the number of employees.

Charcoal registration cost overview

ECHA fees, depending on the size of the company:

Tonnage	1-10 t/year	10-100 t/year	100-1000t/year	>1000t/year
Standard	1.304,00 €	3.506,00 €	9.376,00 €	25.274,00 €
Medium	848,00 €	2.279,00 €	6.094,00 €	16.428,00 €
Small	457,00 €	1.227,00 €	3.282,00 €	8.846,00 €
Micro	65,00 €	175,00 €	469,00 €	1.264,00 €

Source: https://eur-lex.europa.eu/eli/reg/2008/340/2021-06-21

Step 2 - Substance identification

Show Substance Sameness / Laboratory Analysis

- For each registration, analytical data on the substance are required.
- Substance identification is a general requirement of REACH Annex VI, Section 2 as well as confirmation of substance identity to ensure co-use of the deposited data in the lead registrant's registration.

Information required to check the substance identification profile (SIP) of the Joint Submission EC 240-383-3

- Determination of the carbon content (+ sum of CHNO)
- Analysis results for moisture, volatiles and ash content
- Elemental analysis of metals (XRF)
- Structural analysis of charcoal (XRD)
- Further analysis on PAH, PCB, BTEX.

Step 3 – Inquiry procedure

Creation of an inquiry dossier

- Before each registration, an official inquiry must be submitted in the form of an Inquiry (data set).
- In the inquiry, the substance identity is described with the help of the analytical data and the manufacturing processes used.
- The inquiry is manually checked by ECHA.
- After a positive decision by ECHA, each company is assigned an Inquiry number.

Note: If the charcoal is not made from wood, but from other organic materials, we currently still recommend the use of the expert statement on biochar for REACH purposes, as long as the update of the dossier is not yet completed.

Step 4 – LoA

Purchasing Letter of Access

- When the substance identity is confirmed according to the inquiry, the Letter of Access Agreement is prepared for the company.
- Once the signed LoA Agreement is sent back to COALSTER, the registration can be done.
- Co-registrants receive from the Leading registrant:
  - TOKEN for the Joint Submission (access to the JS in REACH-IT)
  - Chemical Safety Report
  - Guidance on Safe Use
  - IUCLID6 template with covered uses and the boundary composition

Step 5 - Registration

Substance Registration

- After completion of the member dossier using IUCLID6 software, the data set is submitted to the respective REACH-IT account of the company.
- This is followed by a check by ECHA.
- Once approved by ECHA, an invoice is automatically generated, which has to be paid directly to ECHA within a given period.
- The costs for this are determined from the registered quantity range and the company size.
- After the receipt of money is recorded at ECHA, the registration number is generated for the company.
- The notification is done via REACH-IT.

Charcoal registration cost overview

Charcoal registration cost overview

Total general project costs from 2007-2024:

The amount results from the administrative and external service costs:

- Project Initiation
- Strategy
- Testing costs
- Administrative costs
- Estimated Future costs

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Cost Breakdown regarding the Registration of Charcoal EC 240-383-3

Project Initiation (until 05.2009) *Project Initiation, Evaluation of data*	156.480,00€
Strategy costs (05.2009 - 10.2010) *Strategy development, Consulting and involving of experts, Study Monitoring*	408.129,15€
Testing Costs *See Annex I "R603_8997/TCBS/0002", including pre-tests, dossier preparation, CSR.*	328.060,26€
Administrative Costs (since 11.2010) *SIEF Management, Project Management, Laboratory communication and organization*	1.955.637,78€
Estimated Future Costs (2024 - 2025) *SIEF and Project Management, Dossier update, Laboratory communication and organization*	500.000,00€
Total general costs Sum of current general costs end 2023.	3.348.237,20€

Charcoal registration cost overview

forecast calculation based on additonal 60 Biochar registrants:

Tonnage	Cost Letter of Access (LoA):
1-10 t/year	1.000,00 € - 1.500,00 €
10-100 t/year	2.000,00 € - 4.000,00 €
100-1000 t/year	6.000,00 € - 8.000,00 €
>1000 t/year	30.000,00 € - 35.000,00 €

- The price of the LoA depends on the number of registrants and the distribution in the different tonnage bands.
- The more companies are registered the lower are the costs within the tonnage range.

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Charcoal registration cost overview

Optional services by COALSTER:

Laboratory analysis of the charcoal	1.500,00 € - 2.000,00 €	Optional
Service for the realization of a REACH Registration*	2.500,00 €	Optional

***The realization of the registration includes the full service:**

- Creation of a REACH-IT account (incl. SME declaration)
- Compilation of required analytics to verify the substance identity profile
- Laboratory management
- Preparation & submission of the inquiry dossier
- Preparation & submission of the registration dossier
- Monitoring of the registration process
- Forwarding of the registration number and the final documentation

Questions !?

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Thank you very much

for your time

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