



Sustainability of Sorptive clays-based pet litter Across the Life Cycle

Extraction and Processes:

Extraction and processing of sorptive clays (bentonite, sepiolite, and attapulgite) comply with the EU sustainable mining principles, including social principles that support human rights, engagement with communities of interest, employment, and improved health and safety of employees. Economic and governance principles that enhance business integrity, transparency, and wider contribution to the economic growth and the socio-economic advancement of communities, including indigenous people associated with or affected by extraction and processing operations. Environmental principles focus on science-based environmental management practices, environmental protection and mitigation measures, applying the best available practices on extractive waste management, and minimising negative impacts on Biodiversity.

The sorptive clays mining sector is committed to continuing efforts to improve extraction processes, minimise natural resource usage, reuse mining waste, use lower-impact mining techniques, facilitate rehabilitation and enhance overall mining sustainability.

Transportation and Logistics:

Sorptive clays-based cat litter are classified as a non-hazardous product, and as such, it doesn't require special consideration for transportation and packaging. Sorptive clays-based cat litter is packed in various sizes and mostly in recyclable bags. Sorptive clays-based cat litter are also produced in Europe and mainly traded internally, a factor that minimises the transportation impact.

EU domestic sorptive clays production accounts for more than 85% of the internal demand and has an import reliance of 14.9% on other partner countries such as Turkey, Morocco, and India.

Usage and environmental and human impact:

Normal handling of sorptive clays pet litter does not pose a risk for humans or pets, though it is considered crucial in fulfilling societal needs and animal welfare. According to the different studies conducted by the European Bentonite Association (EUBA), the worst-case daily average consumer exposure to respirable crystalline silica (RCS) from the handling of pet litter is 0,000107 mg/m³ 24-hour time-weighted average (TWA). In contrast, the binding occupational exposure level is 0.033mg/m³ 24-hour TWA. The worst-case daily average exposure to respirable quartz from handling pet litter is more than 300 times lower than the estimated exposure limit of 0,033 mg/m³ for the public. Therefore, exposure to respirable crystalline silica from handling mineral-based pet litter is negligible and does not raise a health concern for the consumer.

Cats instinctively love cat litter based upon sorptive clays. They intuitively use them to satisfy their ancestral need to cover and hide their stool, as they did in nature before their domestication by man.

In addition, sorptive clay-based cat litters are relatively soft, and thus it is recommended for cats with sensitive paws, as it does not stick to cats and hurts cats' legs.

Sorptive clays are naturally occurring minerals that do not support bacterial life. They are a natural drying agent due to their high absorption capacity, helping the litter box stay hygienic and odour-free. They are environmentally friendly and inert and do not rely on hazardous chemicals, synthetic fragrances, dyes, or additives.

Due to its clumping and odour-free characteristics, sorptive clays cat litter requires less frequent handling and cat litter box cleaning, which contributes to the product's sustainability.

Sorptive clays-based cat litter are economical, and their characteristic makes them last longer than any other litter on the market, as in the case of clumping cat litter.

Recycling, Reuse, and Disposal:

Sorptive clays used in pet litter are not recovered. Pet litter commonly ends in the incinerated municipal waste stream, and ash from that stream is often reused in various industries. European countries have a high potential of reusing ashes from municipal waste streams; for instance, in the Netherlands, approximately 80% of the bottom ashes produced are recycled in civil engineering applications after certain treatment schemes, such as ferrous and nonferrous metal recovery and size reduction. The values for production and usage of bottom ash production for different European countries are presented in figure 1. Based on the literature, four groups of applications are identified where ash is used as a by-product, including construction materials (cement, concrete, ceramics, glass, and glass-ceramics); geotechnical applications (road pavement, embankments); "agriculture" (soil amendment); and, miscellaneous (sorbent, sludge conditioning).

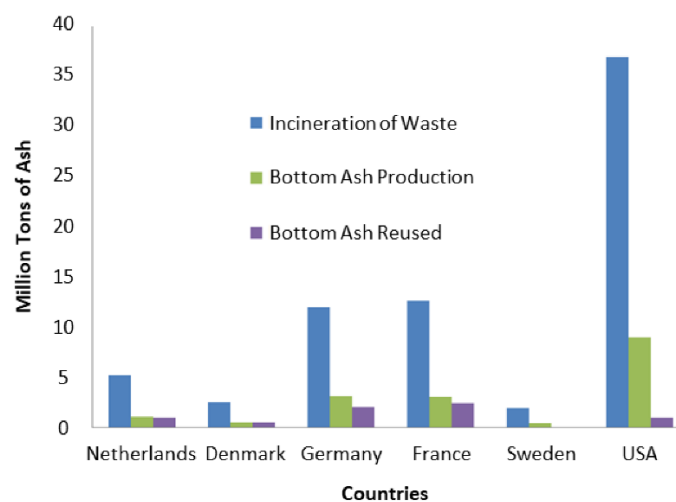


Figure 1; management practices of different countries for municipal solid waste incineration (MSWI) bottom ash (BA).



Packaging recycling: Sorptive clays cat litter is packed in paper bags and plastic bags in Europe, and in 2020, around 58% of packaging has been recycled in the EU.

In case you need any further information, please contact the EUBA Secretariat.