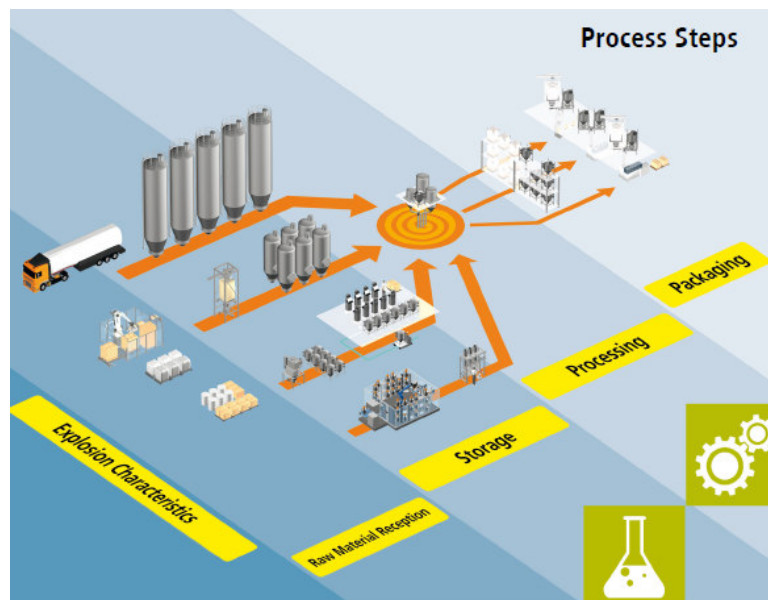


Explosion safety of bulk material plants

Module "Storage"



The use of complex systems and installations requires a suitable risk assessment for each individual explosion risk.

A modular structure has been developed for the explosion safety of bulk solids systems, which makes it easier to divide the assessment for a system with regard to the explosion risk into smaller units, so-called "modules". In addition to a clear layout, this enables a targeted and process-oriented approach. The overall concept consists of the modules "Explosion characteristics", "Raw material reception", "Storage", "Processing" and "Packaging".

Individual process steps or machines can thus be better evaluated. In the end, only the individual interfaces need to be considered to obtain the overall risk assessment concept.

In the process step "storage" presented here, flammable and dust-explosive bulk materials are stored in halls, bunkers and containers. Silos made of metals, concrete, plastics or flexible fabrics are also used. If nothing to the contrary is noted, it is assumed that the bulk material is free of flammable solvents and that the environment of the product is free of flammable gases and vapours (see module: safety characteristics).

This module consists of:

- Filling of halls, bunkers, containers or silos with bulk materials.
- Ventilation and deaeration via filters
- Storage in halls, bunkers, containers or silos
- Measuring process data (e.g. filling level, temperature)
- Discharging bulk goods