

## HSE Annex Scale-up Accelerator Network

Compatibility or safety issue	NO-GO	Explanation
<b>Carcinogenic, mutagenic or reprotoxic</b>	NO-GO	If any raw materials are carcinogenic, mutagenic, or reprotoxic, scale-up will not be possible
<b>Toxicity of solvents</b>	NO-GO if not well-characterised	Check LD50, check SDS, check volatility/vapor
<b>Compatibility of ATEX?</b>	NO-GO if not well-characterised	Check Permissible Exposure Limit (PEL) and Recommended Exposure Limit (REL); check Flash point and explosive limit; can these be reached during your process?
<b>Material compatibility?</b>	NO GO if not compatible with stainless steel (corrosion) or Teflon seals	High chlorine concentrations lead to corrosion of stainless steel. Some chemicals are not compatible with EPDM or Teflon seals
<b>Solid reactions, dry reactions?</b>	NO-GO if stirring is not possible	solid fermentation state not in scope as well
<b>Biomass/waste feedstock?</b>	NO-GO if animal-derived waste products or not enough characterised	From a regulatory and safety point of view, it is difficult to work with animal-derived feedstocks
<b>Prohibited substance?</b>	NO-GO	Checklist of prohibited substances for European law, e.g., THC
<b>Sporulating form</b>	NO-GO if spores are thermo-resistant at 121 deg C, like bacillus spores	fungal spores are ok, or bacterial ones when easily inactivated at 121 deg C