

➔ OFFER REQUEST FOR SAFETY STUDIES, PHYS-CHEM DATA

*Purpose of study:

Name of sample:

Chemical name (e.g. IUPAC):

Molecular weight:

Batch / Lab Number:

Empirical number:

– CAS No.:

Purity/ Active Content:

Structure / Composition:

Safety information:

H-phrases, P-phrases:

*Hazard pictogram of the test substance

substance not yet completely tested:



*Classified as toxic, Category 1 or 2, STOT SE 1 or 2, CMR 1A or 1B

yes no

*testing under inert atmosphere necessary?

yes no

Additional remarks for safe handling:

Storage conditions:

room temperature (10 - 30 °C)

fridge (2 - 8 °C)

freezer (-15 - -25 °C)

protected against light

protected against humidity

others:

Report language:

English German

*mandatory fields

Required studies

Safety data for gases and liquids

- Flash point
- Auto ignition temperature (DIN 51794)
- Explosion limits in air
- Explosion characteristics: p_{max} und KG
- Limiting oxygen concentration
- Lower explosion point
- Sustained combustibility test (UN L.2)
- Heat- / Thermal conductivity

Thermal stability

- Differential scanning calorimetry (DSC) up to 400 °C
- Differential scanning calorimetry (DSC) up to 500 °C (Screening explosive characteristics)
- adiabatic heat storage test (TMR/ADT₂₄, SADT, ...)
- Deflagration (open / closed system)

Dusts

- Basic test package for the evaluation of dusts:
 - Combustion behavior
 - Self-ignition according to Grewer,
 - DSC closed crucible,
 - Ignition point,
 - Dust explosivity (modified Hartmann tube),

Characterization of dispersed dust (e.g. VDI 2263, ISO/IEC 80079-20-2, ...)

- Particle size distribution
- Dust explosivity (modified Hartmann tube, VDI 2263-1)
- Minimum ignition energy (VDI 2263-1, DIN 13281)
- Dust explosivity (20 l sphere, VDI 2263-1)
- Dust explosivity characteristics p_{max} and KST
- Lower explosion limit (DIN 14034-3)
- Limiting oxygen concentration (DIN 14034-4)
- Dust ignition temperature (Godbert-Greenwald-oven)

Comments / additional testing requirements:

Do you have questions - shall we call you? Your telephone number:

Additional services can be found in our brochure and on our web site Siemens.com/processsafety.

Please send your request to: team-ec.industry@siemens.com

Explosives (UN, European Regulation)

- Sensitivity to impact (BAM-Fallhammer)
- Sensitivity to friction (BAM-friction apparatus)
- Thermal sensitivity (Koenen-Test)

Transport / GHS-CLP Classification

- Class 1 / 2.1 GHS-CLP, explosives
- Class 3 / 2.6 GHS-CLP, flammable liquids
- Class 4 (4.1-4.3) / 2.7-2.12 GHS-CLP,
- Class 5.1 / 2.13 & 2.14 GHS-CLP, oxidizing properties

Chemical reactions

- Isothermal calorimetry:
 - Enthalpy, accumulation, gas production (RC1)
- adiabatic calorimetry
 - run away reactions, decomposition reactions,
 - Worst case scenarios (e.g. Vent Sizing Package)

Characterization of dust layers / self-ignition behavior

- Flammability / combustion behavior (Brennzahl) (VDI 2263-1)
- Burning rate UN N.1
- exothermal decomposition (DSC, open crucible under 20 barg air)
- Self-ignition according to Grewer (VDI 2263-1)
- Self-ignition, isoperibolic or adiabatic hot storage test in wire cage
- Glow / smolder temperature
- electrical conductivity
- Thermal diffusivity (DIN 51412)