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| This application is valid as |
| Enquiry | We submit a quotation. |
| Order with prior quotation | IBExU® quotation AN YY9NNN |

Our reference (e.g. order no.): Specify your reference no. here, please.

If, with reference to this application, already existing: Your person of contact at IBEXU®

| Application | Determination of safety characteristics of combustible substances | | | | |
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| **01 Package „Standard test“** | | | | | |
| 01 |  | | Char. for dispersed dust  Minimum Ignition Temperature of the dust cloud (BAM or Godbert Greenwald furnace), Maximum explosion pressure, KSt-value/Dust Explosion Class, Lower Explosion Limit | | |
| Char. for dust layers  Minimum Ignition Temperature of a dust layer (layer thickness 5 mm: Smoldering Temperature) incl. determination of the bulk density; Burning Behavior at ambient temperature and 100 °C | | |
| Chemical and physical characterization  Sieve analysis (median value), drying loss (water content), glowing rest (ash),  additional for coals / cokes: volatile components | | |
|  |  | |  | | |
| **02 Enlarged Standard test with Minimum Ignition Energy (MIE)** | | | | | |
| 02.01 |  | | Standard test and MIE  with **or**  without inductance | | |
| 02.02 |  | | Standard test and MIE with **and** without inductance | | |
|  |  | |  | | |
| **Single tests** | | | | | |
| 03 |  | | Sieve analysis (median value), drying loss (water content), glowing rest (ash) | | |
|  |  | |  | | |
| 04 |  | | For coals / cokes:  Sieve analysis (median value), water and ash content, volatile components | | |
|  |  | |  | | |
| 05 | Dust explosibility (statement: explosive Yes / No) | | | | |
| 05.01 |  | | Test with spark discharge in the Mike-3-apparatus (ignition energy: 1000 mJ) | | |
| 05.02 |  | | Test with pyrotechnical igniters in the 20-l-sphere (ignition energy: 2 kJ) | | |
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| 06 |  | | Explosion characteristics: Maximum explosion pressure, KSt-value / Dust Explosion Class | | |
|  |  | |  | | |
| 07 |  | | Explosion characteristics: Maximum explosion pressure, KSt-value / Dust Explosion Class and Lower Explosion Limit | | |
|  |  | |  | | |
| 08 | Limiting Oxygen Concentration (LOC) at inertization with N2 or CO2  (other gases on request, inert gas has to be specified in the order) | | | | |
| 08.01 |  | | LOC as additional test to item 01, 02, 06, 07, 09 inert gas: | | |
| 08.02 |  | | LOC as single test, inert gas: | | |
|  |  | |  | | |
| 09 |  | | Lower Explosion Limit | | |
|  |  | |  | | |
| 10 | Minimum Ignition Energy (MIE) | | | | |
| 10.01 |  | | MIE  with **or**  without inductance | | |
| 10.02 |  | | MIE with **and** without inductance | | |
|  |  | |  | | |
| 11 |  | | Minimum Ignition Temperature of a dust cloud  (BAM- or Godbert-Greenwald-furnace) | | |
|  |  | |  | | |
| 12 |  | | Minimum Ignition Temperature of a dust layer (layer thickness 5 mm: Smoldering Temperature) incl. determination of the bulk density | | |
|  |  | |  | | |
| 13 | Autoignition behavior / Autoignition Temperature (AIT) | | | | |
| 13.01 |  | | AIT at hot storage tests in 400 cm3-sample baskets (standard volume) | | |
| 13.02 |  | | AIT determination with 3 further sample basket volumes  (e.g. 200 cm3, 800 cm3, 1600 cm3) extrapolation of the AIT to different storage volumes or deposition geometries, respectively (recommendation: items 13.01 and 13.02) | | |
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| 14 | Burning Behavior (Class („BZ“)) | | | | |
| 14.01 |  | | Class at ambient temperature | | |
| 14.02 |  | | Class at increased temperature (e.g. 100 °C) | | |
|  |  | |  | | |
| 15 | Test of substances for the classification according to GHS-/CLP-regulations (No. 1272/2008), Dangerous Goods Ordinance//UN-Tests | | | | |
| 15.01 |  | | Readily combustible solids (Category / Class 4.1) | | |
| 15.02 |  | | Self-heating substances (Category / Class 4.2) | | |
| 15.02.01 |  | | Pyrophoric substances | | |
| 15.02.02 |  | | Self-heating substances | | |
| 15.03 |  | | Substances which emit flammable gases at contact with water (Category / Class 4.3) | | |
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| 16 |  | | Test for Oxidizing Properties (solids); (Q-index) | | |
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| 17 |  | | Specific electrical dust resistivity / safety classification | | |
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| 18 |  | | Electrostatic behavior of dusts: relative electrostatic charge and charge-carrier density at floating in a pipe | | |
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| 19 |  | | Test of impact sensitivity with a drop hammer | | |
|  |  | |  | | |
| 20 |  | | Test of friction sensitivity (friction property) | | |
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| 21 |  | | Test of deflagration in a glass tube | | |
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| 22 | | Exothermic decomposition according to “Lütolf” in an open test tube | | | |
| 22.01 | |  | | with temperature program and test regarding flammable smoldering gases | |
| 22.02 | |  | | at constant oven temperature | |
| 23 | | Special tests | | | |
| 23.01 | |  | | Flammability by special ignition sources | |
| 23.02 | |  | | Gas formation / gas analyses at (hot) storage tests | |
| 23.03 | |  | | Autoignition behavior at reduced O2-content | |
| 23.04 | |  | | Hybrid mixtures (dust- / combustible gas- / air-mixtures) | |
| 23.05 | |  | | Further tests, e.g. autoclave tests, on request | |
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| **03 Sample preparation and special analyses of solid samples** | | | | | |
| 24 | | Preparation in case of a very coarse and/or humid sample | | | |
| 24.01.01 | |  | | Screening | |
| 24.01.02 | |  | | Grinding | |
| 24.01.03 | |  | | Drying | |
| 24.02 | |  | | Grinding with liquid nitrogen (cryogenic milling) | |
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| 25 | |  | | Sieve analysis with particle size distribution and median value  (method: air-jet and/or vibration sieve analysis) | |
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| 26 | |  | | Determination of the drying loss (water content) | |
|  | |  | |  | |
| 27 | |  | | Determination of the glowing rest (ash) | |
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| 28 | |  | | Determination of the content of volatile components (coals, cokes) | |
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| 29 | |  | | Determination of the bulk density | |
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| Language of the document | | | | | |
|  | |  | | German | Standard | |
|  | |  | | Additional in | |
|  | |  | |  | |
| **Applicant** | | | | | |
|  | |  | | Company | Name, Street and Number, Zip code, City, Country, UID-No. (for EU-countries) |
| Submit the written assignment from the manufacturer, please. | | | | | |
|  | |  | | Alternative recipient of the invoice | Name, Street and Number, Zip code, City, Country, UID-No. (for EU-countries) |
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| Person of contact: | | |
| Address, First name Surname | Position / Department | Telephone | E-Mail | | |
|  | | |
| **Declaration** | | |
| With filing of this application, the applicant accepts the terms and conditions of IBExU Institut für Sicherheitstechnik GmbH. | | |
|  |  |  |
| City | Date |  | Name in printed characters | Signature |