

ISO 20023:2018 (E)

Solid biofuels — Safety of solid biofuel pellets — Safe handling and storage of wood pellets in residential and other small-scale applications

Contents

| | |
|--------|--|
| | Foreword |
| | Introduction |
| 1 | Scope |
| 2 | Normative references |
| 3 | Terms and definitions |
| 3.1 | General terms |
| 3.2 | Terms related to transportation and delivery |
| 3.3 | Terms related to storage |
| 4 | General |
| 4.1 | Product requirements |
| 4.2 | Hazards associated with amounts of pellets ≤ 100 t |
| 4.3 | General requirements for storage and handling of pellets |
| 5 | Requirements for safe transport and delivery of pellets |
| 5.1 | General |
| 5.2 | Requirements for bulk delivery by blower trucks |
| 5.2.1 | Transport vehicles and their operation |
| 5.2.2 | Filling end-user storage systems |
| 5.3 | Pellets delivered in bulk tipped into troughs or bunkers |
| 5.4 | Pellets delivered in big bags |
| 5.5 | Pellets delivered in small bags on pallets |
| 6 | Requirements for bulk storage systems |
| 6.1 | General requirements |
| 6.1.1 | Location of pellet store |
| 6.1.2 | Quality control of installation |
| 6.1.3 | Construction requirements |
| 6.1.4 | Measures to reduce the accumulation of fines |
| 6.1.5 | Protection against moisture and water |
| 6.1.6 | Prevention of dust movement |
| 6.1.7 | Noise protection |
| 6.1.8 | Installation |
| 6.1.9 | Fire protection |
| 6.1.10 | Explosion prevention |
| 6.1.11 | Protection and measures against burn-back and back gassing |
| 6.1.12 | Extraction systems |
| 6.1.13 | Fill connectors and piping |
| 6.1.14 | Electrical outlet for suction fan |
| 6.1.15 | Ventilation |
| 6.1.16 | Safety instructions |
| 6.1.17 | Access to storage |
| 6.2 | Individual custom-made pellet stores |
| 6.2.1 | Construction requirements |
| 6.2.2 | Fill connectors |
| 6.2.3 | Impact protection mat |
| 6.2.4 | Sloping floor |
| 6.2.5 | Access hatch/door to pellet store |
| 6.3 | Pre-fabricated storage systems |

- 6.3.1 General
 - 6.3.2 Requirements regarding the site, indoor systems
 - 6.3.3 Requirements regarding the siting of outdoor installations
 - 6.3.4 Ground connection (earth)
 - 6.3.5 Filling instructions
 - 6.3.6 Fabric store
 - 6.3.7 Underground store
- 7 Health protection aspects
- 7.1 Entering a pellet store
 - 7.1.1 General
 - 7.1.2 Requirements for small pellet stores up to 15 t
 - 7.1.3 Requirements for pellet stores >15 t and/or underground stores
 - 7.2 Stationary CO monitors
 - 7.3 Equipment used in stores
- Annex A (informative) Hazards associated with pellets
- A.1 Volatile compounds
 - A.1.1 General
 - A.1.2 Effect/toxicity of CO
 - A.1.3 Oxygen depletion and carbon dioxide
 - A.1.4 Emissions of volatile compounds
 - A.2 Fines and dust
 - A.3 Uncontrolled ignition and smouldering
 - A.4 Decomposition and swelling
 - A.5 Example of a safety instructions label for pellet stores which should include symbols and descriptions
- Annex B (informative) Model calculation for different cases of store ventilation
- Annex C (informative) Examples for store designs
- C.1 Size of storage
 - C.2 Layout examples
- Annex D (normative) Minimum requirements of a hand-over document
- Annex E (informative) Example of a checklist for filling of store

Page count: 49