

## 141 Specification for reusable 1/1 plastic pallet

STATUS: APPLICABLE STANDARD

- **Weight**
  - The pallet weight should be max 18 kilos
  
- **Max load**
  - Dynamic load, the pallet must handle a load of 1,000 kg placed in a standard storage rack or automatic warehouse. Deflection should not exceed 4 cm maximum
  
- **Dimensions at maximum load (SIS standard SS 84 20 07)**
  - Max outer dimensions (LBH) 1203 x 803 x 151 mm
  - Min outer dimensions (LBH) 1200 x 800 x 144 mm
  - Tunnel opening 800-side, min 90 mm, middle block max 150 mm and distance between outer blocks min 595 mm
  - Tunnel opening 1200-side, max 103 mm and min 100 mm high, middle block max 150 mm and distance between outer blocks min 900
  
- **Material**
  - The material must withstand handling at +40 °C to -35 °C
  - The material must withstand a load of 5,000 kilograms at -50°C to -50°C on flat surfaces
  - The material should have attributes so that the pallet can withstand stretch, deformation within the stated temperatures throughout the life span. This means that the pallet should return to its original form after loading
  - Fire classification must be specified
  - Colour pigments used in the pallet must be free from heavy metals. Free of heavy metals means that the sum of heavy metals (Lead, Cadmium, Mercury and Chromium) does not exceed 75 ppm
  - The pallet must be 100% recyclable
  - The pallet must be antistatic
  
- **Characteristics**
  - Compression 5,000 kg, 5 pallets with 1,000 kilos stacked on each other
  - The pallet must withstand exposure to the Nordic climate for minimum life during normal storage outdoors, such as sun, rain, snow, etc.
  - Friction on the top of the pallet, underneath and under the tracks shall be such that the pallet works with normal handling of products with different material types such as plastic box, corrugated board, wooden pallets, half and quarter pallets, etc.
  - The friction must also withstand normal truck handling the pallet with half pallet and 1/1 pallet on top, and transport of pallet stacks of 16-17 plastic pallets
  - The friction must remain the lifetime of the pallet
  - The norm for friction is EUR wooden pallet
  - The underside skids should not be convex, and the pallet's skids must be max 3mm concave
  - The pallet should have a good solution to minimize condensation on the top of the pallet
  - Ability to allow liquid to drain away from the top of the pallet
  
- **Marking and traceability**
  - The pallet must be labelled with manufacturer, material, production time, max load and recovery symbol as well as who owns the pallet
  - The pallet shall be further marked with a logo or other marking so that the marking is visible from 2 sides
  - The pallet must have 2 RFID chips agreed by the parties. The location should be such that they can be read with fixed or mobile readers from both sides and from above and below
  - The RFID chips should work in the pallet's lifespan
  
- **Handling the pallet**

- The pallet should be used for manual handling from short and long sides, forklift handling and automatic storage handling
  - The pallet must be adapted for storage in standard pallet racks with 2 transverse posts
  - The pallet shall be adapted for transport on runways (both runways with belts and rollers) and chain conveyors
  - The pallet will work in standard pallet turners, pallet stackers and pallet magazines
- **Design**
    - The pallet design should have the same dimension on the top deck and the skids
    - The top of the skids should be designed for long side handling by forklift
    - Blocks for forklift fork openings should be designed so that forklift can easily enter the openings to prevent damage to the pallet
    - The pallet must have built-in handles for manual handling from the long side and should have a good design
    - The pallet must be designed so that no pockets can collect dirt, water, etc. to minimize the risk of bacterial collection
    - The pallet must be designed for cleaning with pressure wash and immersed in water
    - The pallet will be tested by external institutions such as Mattilsynet (Norwegian Food Safety Authority) or Veritas for the total environmental impact of the pallet material
    - The load deck / top deck must be flat to prevent damage to products as well as to make manual handling easy
    - The pallet must be light grey / grey or another neutral colour