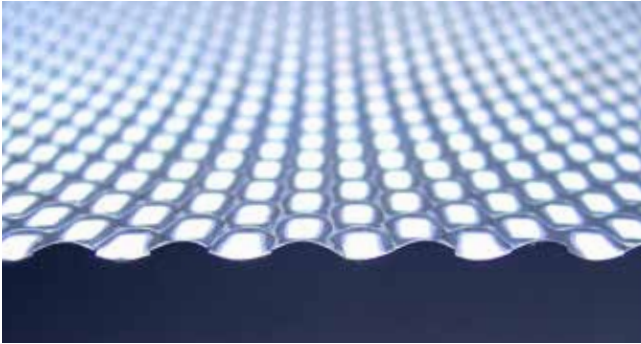


Data sheet

MOTEX[®] Molybdenum Textured Sheet



Significant Characteristics and Applications

Thin Molybdenum sheets are particularly used as shielding at high temperature applications. Here multiple radiation protection packages are used very often.

For these applications MOTEX[®] Molybdenum Textured Sheets have a lot of interesting advantages: Through embossing, the MOTEX[®] sheets obtain a defined texture height and a particularly higher stability. Depending on the orientation of the texture, the rigidity is much higher compared to the flat initial sheets. In case that the conventionally thick shielding is replaced by the lighter MOTEX[®] Sheet, the total weight of the heating insert is reduced and the energy efficiency of the heat treatment system can be improved.

Due to the embossed texture, the MOTEX[®] sheets have a larger surface as well and generate a diffuse heat reflection. Of particular interest is the combination of flat and textured sheets as multiple, very thin radiation protection packages.

For the application at very high process temperatures the type ML can be used. The doped material Molybdenum-Lanthanum (ML) has a higher recrystallization temperature and is more ductile and less fragile after the use at high temperatures.

Advantages when using MOTEX[®] Sheets in Shielding Packages

- | Uniform distance of the shielding layers
- | No spacers are necessary
- | Easy assembling
- | High mechanical stability
- | Weight and material saving
- | Minor total thickness of the shielding packages
- | Cracking deflection by structure

ASTM Standard Specification

ASTM B386 (Molybdenum and Molybdenum Alloy Plate, Sheet, Strip, Foil)

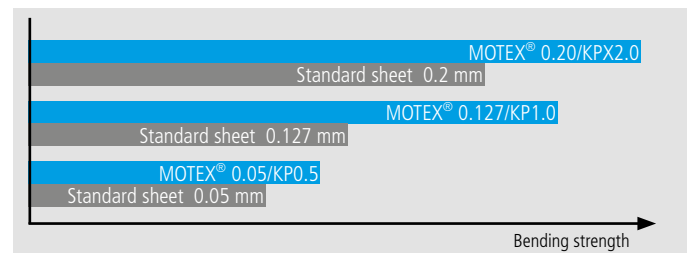
Range of Products

Strips, sheets, cuttings, pre-finished shielding and packages (laser cuttings, moulded parts) according to drawings.

Mechanical Properties

MOTEX[®] Textured Sheets have an anisotropic strength behavior, i.e. a variable rigidity in 90° respectively 45° orientation to the embossing direction. Depending on the bending direction the bending strength is significantly higher than conventional standard sheets with the same sheet thickness.

Bending Strength compared to Sheet Thickness

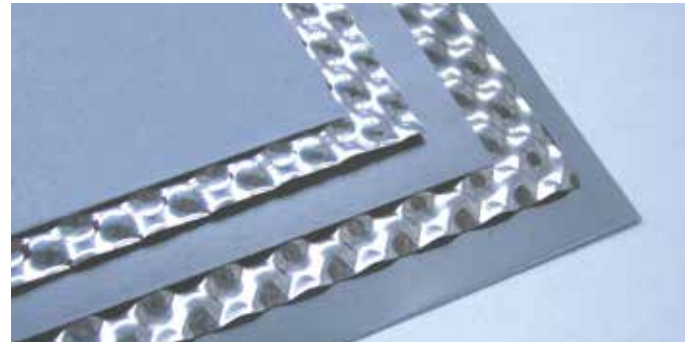


Available MOTEX[®] Types

Typical rolling width

MOTEX [®] 0.050/KP0.5	200 mm
MOTEX [®] 0.127/KP1.0	610 mm
MOTEX [®] 0.20/KPX2.0	610 mm
MOTEX [®] 0.20/KPX2.0-ML	610 mm

Sample for Five-Layer Radiation Protection Package



2x MOTEX[®] 0.127/KP1.0 (textured) und 3x 0.127 mm (flat)
Total height of the package: approx. 3-4 mm

Description

MOTEX[®] 0.127 / KP 1.0
sheet thickness (mm) | embossing type | total thickness (mm)