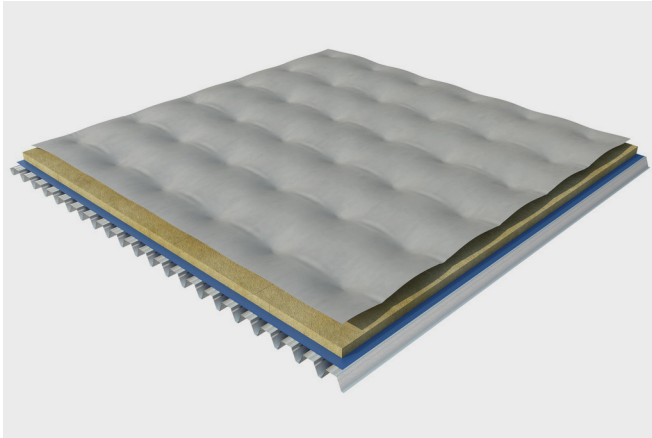


# Comparing welding vs mechanical fixation

## Field Fastening Technology



### Durability

#### Risk of leakage

- Zero membrane penetration

#### Wind-load

- Can be installed in a grid pattern which creates uniform loading across the various zones of the roof

### Material Use

#### Speed

- Quicker installation process, lower installation cost including work and material

#### Fasteners

- Typically 25% less fasteners needed at 90 psf design load

#### Membrane overlap

- 2 inch overlap is the typical minimum

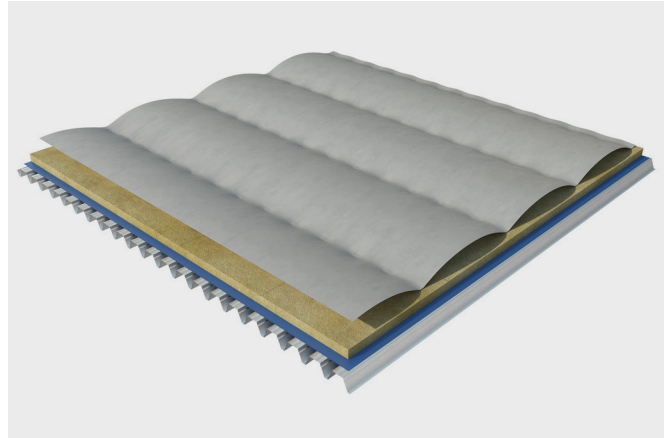
#### Membrane width

- Less membrane needed so full width sheets can be used

#### Installation

- Only one type of fastener needed
- Only insulation needs to be attached before being able to quickly make that section of the roof water-tight

## Seam Fastening



### Durability

#### Risk of leakage

- Series of fasteners along the edge of membrane, higher risk of leakage

#### Wind-load

- The wind-load is concentrated at the edges of the membrane and creates stress concentration on the steel deck which may limit design values

### Material Use

#### Speed

- Slow installation process, higher installation cost including work and materials

#### Fasteners

- Fasteners and plates along the seam

#### Membrane overlap

- Six inch overlap is the typical minimum

#### Membrane width

- Various membrane widths necessary, half sheets needed in corner and perimeter

#### Installation

- Two stage process with different fasteners for the insulation and membrane attachments
- Care must be used to get the membrane perpendicular to the steel deck