Pesmel
Packing Book

Material Flow How ®
Pesmel Packing Book

This Packing Book is developed to work as a tool when selecting and specifying the needed levels of packing.

This Packing Book includes a selection of internationally approved, most common and recommended ways of packing.

Environmental sustainability is a part of the development of new packing methods. All packing materials recommended in this book are recyclable and most of them are already manufactured from recycled material.

Different combinations and other special requirements are possible, if needed.
Packing Codes

Pesmel packing code informs the level of packing as follows:

Packing Code: 63FE+options

1. Level of mechanical protection ➔ divided to different series from 10 to 80
2. Level of moisture and dirt protection ➔ selected from 3 different levels
3. Options made before moisture protection ➔ selected according to need
4. Options for special combinations like 63FE+Protection Strips ➔ selection together with Pesmel representative
Moisture Protection

Selection of the moisture protection level:

As a standard for all mechanical protection series, the moisture protection level is 1 → Stretch film. Other levels can be selected from models below.

Packing Code Example: 63FE+options

Moisture protection level (valid in all mechanical protection series):

1 Stretch film
2 VCI film + Stretch film
3 Crep paper + Stretch film
Additional options in moisture protection:

These options are selected according the needs:
- Coil is having sharp edges
- Material is extra sensitive
- Light packing for storing nearby is used
- Handling needs extra protection

Packing Code Example: 63FE+options

Option marking as follows:
- OE Outer Edge protection → Plastic under the film
- IE Inner Edge protection → Plastic under the film
- FE Outer and Inner Edge protection → Plastic under the film
Selection of the mechanical protection:
Mechanical protection is divided to different series from 10 to 80:
Packing Code Example: **63FE+options**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>HANDLING METHOD</th>
<th>HANDLING TIMES</th>
<th>TRANSPORTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Handling with hooks</td>
<td>1-3 Handling automatically</td>
<td>Internal use in mill or nearby</td>
</tr>
<tr>
<td>20</td>
<td>Handling with hooks</td>
<td>2-4 Handling automatically</td>
<td>Standard transportation vehicle with stands</td>
</tr>
<tr>
<td>30</td>
<td>Handling with hooks</td>
<td>3-6 Handlings</td>
<td>Truck / train transportation horizontally</td>
</tr>
<tr>
<td>40</td>
<td>Handling with hooks</td>
<td>3-6 Handlings</td>
<td>Truck / train transportation horizontally</td>
</tr>
<tr>
<td>50</td>
<td>Handling with hooks or Chains</td>
<td>4-8 Handlings</td>
<td>Truck / train transportation horizontally or vertically Maritime transportation Continental and Intercontinental</td>
</tr>
<tr>
<td>60</td>
<td>Handling with hooks or Chains</td>
<td>4-8 Handlings</td>
<td><strong>Truck / train transportation horizontally or vertically Maritime transportation Continental and Intercontinental</strong></td>
</tr>
<tr>
<td>70</td>
<td>Handling with hooks or Chains</td>
<td>4-8 Handlings</td>
<td>Truck / train transportation horizontally or vertically Maritime transportation Continental and Intercontinental</td>
</tr>
<tr>
<td>80</td>
<td>Handling with hooks or Chains</td>
<td>4-8 Handlings</td>
<td>Truck / train transportation horizontally or vertically Maritime transportation Continental and Intercontinental</td>
</tr>
</tbody>
</table>

Material Flow How®

PESMEL
Mechanical Protection

10 Series
0. Coil before wrapping
1. Wrapping through the eye by PE film
2. Labelling with 2 labels

Code 11

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil before wrapping</td>
<td>Stretch film</td>
<td>Labelling</td>
</tr>
</tbody>
</table>
Mechanical Protection

20 Series
0. Coil before wrapping
1. Wrapping through the eye by PE film
2. Protection strips 2 pcs → Paper, Plastic, Rubber
3. Circumferential strapping 2 pcs → Plastic, Steel
4. Labelling with 2 labels

Code 21

- Coil before wrapping
- Stretch film
- Protection strips
- Circum. strapping
- Labelling
**Mechanical Protection**

### 30 Series
0. Coil before wrapping  
1. Wrapping through the eye by PE film  
2. Inner Edge Protection 2 pcs → Steel  
3. Outer Edge Protection 2 pcs → Steel  
4. Radial Strapping 3 pcs → Plastic, Steel

### Code 31
5. Circumferential strapping 2 pcs → Plastic, Steel  
6. Labelling with 2 labels

<p>| | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
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<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><img src="image1" alt="Coil before wrapping" /></td>
<td><img src="image2" alt="Stretch film" /></td>
<td><img src="image3" alt="Inner Edge Protection" /></td>
<td><img src="image4" alt="Outer Edge Protection" /></td>
<td><img src="image5" alt="Radial Strapping" /></td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image6" alt="Circum. Strapping" /></td>
<td><img src="image7" alt="Labelling" /></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Material Flow How* ©
## Mechanical Protection

### 40 Series

0. Coil before wrapping  
1. Wrapping through the eye by PE film  
2. Protection strips 2 pcs → Paper, Plastic, Rubber  
3. Inner Edge Protection 2 pcs → Steel  
4. Outer Edge Protection 2 pcs → Steel

### Code 41

5. Radial Strapping 3 pcs → Plastic, Steel  
6. Circumferential strapping 2pcs → Plastic, Steel  
7. Labelling with 2 labels

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Coil before wrapping</td>
<td>Stretch film</td>
<td>Protection strips</td>
<td>Inner Edge Protection</td>
<td>Outer Edge Protection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial Strapping</td>
<td>Circum. Strapping</td>
<td>Labelling</td>
</tr>
</tbody>
</table>
Mechanical Protection

50 Series
0. Coil before wrapping
1. Wrapping through the eye by crep paper and PE film
2. Outer Body Wrapping → Steel
3. Inner Body Wrapping → Steel
4. Headers 2 pcs → Steel

Code 53
5. Inner Edge Protection 2 pcs → Steel
6. Outer Edge Protection 2 pcs → Steel
7. Radial Strapping 3pcs → Plastic, Steel
8. Circumferential strapping 2 pcs → Plastic, Steel
9. Labelling with 2 labels
# Mechanical Protection

## 60 Series

0. Coil before wrapping  
1. Wrapping through the eye by crep paper and PE film  
2. Outer Body Wrapping → Plastic  
3. Inner Body Wrapping → Plastic  
4. Headers 2 pcs → Plastic

## Code 63

5. Inner Edge Protection 2 pcs → Steel  
6. Outer Edge Protection 2 pcs → Steel  
7. Radial Strapping 3pcs → Plastic, Steel  
8. Circumferential strapping 2 pcs → Plastic, Steel  
9. Labelling with 2 labels

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<thead>
<tr>
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</thead>
<tbody>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coil before wrapping</td>
<td>Stretch film</td>
<td>Outer Body wrapping</td>
<td>Inner Body wrapping</td>
<td>Headers</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner Edge Protection</td>
<td>Outer Edge Protection</td>
<td>Radial Strapping</td>
<td>Circumferential Strapping</td>
<td>Labelling</td>
</tr>
</tbody>
</table>
## Mechanical Protection

### 70 Series

0. Coil before wrapping  
1. Wrapping through the eye by crep paper and PE film  
2. Outer Body Wrapping ➔ Plastic  
3. 2nd Outer Body Wrapping ➔ Steel  
4. Inner Body Wrapping ➔ Plastic

### Code 73

5. Headers 2 pcs ➔ Plastic  
6. Inner Edge Protection 2 pcs ➔ Steel  
7. Outer Edge Protection 2 pcs ➔ Steel  
8. Radial Strapping 3pcs ➔ Plastic, Steel  
9. Circumferential strapping 2pcs ➔ Plastic, Steel  
10. Labelling with 2 labels

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Coil before wrapping</td>
<td>Stretch film</td>
<td>Outer Body wrapping</td>
<td>2nd Outer Body wrapping</td>
<td>Inner Body wrapping</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9/10</td>
</tr>
<tr>
<td>Headers</td>
<td>Inner Edge Protection</td>
<td>Outer Edge Protection</td>
<td>Radial Strapping</td>
<td>Circum. Strapping/Labeling</td>
</tr>
</tbody>
</table>

*Material Flow How ®*
### Mechanical Protection

#### 80 Series
0. Coil before wrapping  
1. Wrapping through the eye by crep paper and PE film  
2. Outer Body Wrapping → Plastic  
3. 2nd Outer Body Wrapping → Steel  
4. Inner Body Wrapping → Plastic

#### Code 83
5. 2nd Inner Body Wrapping → Steel  
6. Headers 2 pcs → Plastic  
7. 2nd headers 2 pcs → Steel  
8. Inner Edge Protection 2 pcs → Steel  
9. Outer Edge Protection 2 pcs → Steel

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil before wrapping</td>
<td>Stretch film</td>
<td>Outer Body wrapping</td>
<td>2nd Outer Body wrapping</td>
<td>Inner Body wrapping</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Inner Body Wrapping</td>
<td>Headers</td>
<td>2nd Headers</td>
<td>Inner Edge Protection</td>
<td>Outer Edge Protection</td>
</tr>
</tbody>
</table>
Mechanical Protection

80 Series

10. Radial Strapping 3 pcs → Plastic, Steel
11. Circumferential strapping 2 pcs → Plastic, Steel
12. Labelling with 2 labels

Code 83

Radial Strapping
Circumferential Strapping
Labeling
Mechanical Protection

Palletizing

Palletizing is a good option when considering mechanical protection for products. Especially if product is sensitive or delivery chain includes lot's of handling, palletizing can be considered as one of the packing options.

Pallet offers good mechanical protection without packing the product heavily, although also the heavy packing codes can be improved by palletizing products.

Palletizing also makes it possible to handle products with normal forklifts, which is a clear benefit especially for distribution.

Palletizing can be done horizontally or vertically. By adding cardboards or lids, it is possible to improve the pack even more.
Mechanical Protection

Horizontal Palletizing

Horizontal Palletizing with CardBoard

Vertical Palletizing

Vertical Palletizing with CardBoard

Vertical Palletizing with CardBoard and Lid

Vertical Palletizing with Lid
# Packing Materials

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Thickness/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THROUGH THE EYE WRAPPING</strong></td>
<td>Stretch Film PE</td>
<td>Thickness 40-80 µm</td>
</tr>
<tr>
<td></td>
<td>VCI Film</td>
<td>Thickness 40-120 µm</td>
</tr>
<tr>
<td></td>
<td>Crep Paper</td>
<td>Grammage 60-120 g/m²</td>
</tr>
<tr>
<td><strong>INTEGRATED EDGE PROTECTION</strong></td>
<td>Corrugated Plastic</td>
<td>Thickness 2.5mm</td>
</tr>
<tr>
<td></td>
<td>Solid Plastic</td>
<td>Thickness 2.5mm</td>
</tr>
<tr>
<td><strong>BODY WRAPPING MACHINE INNER/OUTER</strong></td>
<td>Corrugated Plastic</td>
<td>Thickness 2.5 - 4mm</td>
</tr>
<tr>
<td></td>
<td>Solid Plastic</td>
<td>Thickness 2-4mm</td>
</tr>
<tr>
<td></td>
<td>Cardboard Paper</td>
<td>Thickness 1-2mm</td>
</tr>
<tr>
<td></td>
<td>Galvanized Steel</td>
<td>Thickness 0.5 – 0.8mm</td>
</tr>
<tr>
<td><strong>PROTECTION STRIP FEEDER</strong></td>
<td>Cardboard Paper</td>
<td>Thickness 1 – 2 mm</td>
</tr>
<tr>
<td></td>
<td>Plastic</td>
<td>Thickness 2 – 4 mm</td>
</tr>
<tr>
<td></td>
<td>Rubber</td>
<td>Thickness 1 – 2 mm</td>
</tr>
<tr>
<td><strong>HEADERS</strong></td>
<td>Corrugated Plastic</td>
<td>Thickness 2.5 - 4mm</td>
</tr>
<tr>
<td></td>
<td>Solid Plastic</td>
<td>Thickness 2-4mm</td>
</tr>
<tr>
<td></td>
<td>Hardboard</td>
<td>Thickness 2-4mm</td>
</tr>
<tr>
<td></td>
<td>Galvanized Steel</td>
<td>Thickness 1mm</td>
</tr>
<tr>
<td><strong>INNER EDGE PROTECTION STEEL</strong></td>
<td>Galvanized Steel</td>
<td>Thickness 0.8-1,2mm</td>
</tr>
<tr>
<td><strong>OUTER EDGE PROTECTION STEEL</strong></td>
<td>Galvanized Steel</td>
<td>Thickness 0.6-1,0mm</td>
</tr>
<tr>
<td><strong>STRAPPING</strong></td>
<td>Plastic</td>
<td>19, 25, 32mm</td>
</tr>
<tr>
<td></td>
<td>Steel</td>
<td>19, 25, 32mm</td>
</tr>
<tr>
<td><strong>LABELLING</strong></td>
<td>Self adhesive</td>
<td>Size TBD (A5, A4, A3)</td>
</tr>
</tbody>
</table>
Examples

11OE
Stretch film wrapped coil with integrated outer edge protection

31
Stretch film wrapped coil with steel edge protectors

61
Stretch film wrapped coil with heavy mechanical protection