The packaging solution for the petro-chemical, chemical, pharmaceutical and food industries.

Drums are the backbone of Greif’s Industrial Packaging & Services activities. The wide range of steel drums complies with the highest packaging requirements imposed by the petro-chemical, chemical, pharmaceutical and food industries. The packaging is produced with the latest production technology and tested in accordance with UN regulations to guarantee optimum protection for a broad range of dangerous and non-dangerous goods.

- Greif’s large Open Head steel drums comply with stringent UN recommendations for packing dangerous and non-dangerous goods in the packaging groups I, II and III. The standard capacity is 210 litres.
- The standard Open Head Drum has a maximum diameter of 610 mm over the closing ring.
- Alternatively, Greif can manufacture ISO Open Head Drums with a reduced head feature in specific countries. See Greif’s leaflet “ISO Drum”.
- The vertical seam is electrically welded. The bottom is seam to the drum body by means of the Greif Spiralon® triple seam which guarantees a safe performance.
- The drum is provided with a standard removable drum top and a standard lever closing ring. Various additional options for closing rings and gaskets are available. The removable lid can also be provided with the optimum safety G2 and G3/4 Tri-Sure® 4S® closures which can be sealed with Tri-Sure® Tab-Seal® Caps.
- To guarantee the highest safety in transport and handling, Open Head Drums are inspected for leakage by means of pressure testing.
- Greif’s drums can be internally coated with a phenolic, epoxy-phenolic or a special lining in accordance with the RDL® lining system. Greif offers its customers technical assistance in determining the ideal lining for their specific purpose to ensure product protection and compatibility where necessary.
- Greif offers a range of standard gauge combinations, covering the required UN performance level for practically all filling goods. Optionally, special solutions are available for specific drums for extra high performance.
- Greif drums are certified by independent test institutes in order to comply with UN recommendations and transport regulations such as RID/ADR/IMDG/ICAO.
- Globally, Greif has standardized on the international RAL colour system for external colours to ensure a consistent quality worldwide.
- Alternatively, drums can be painted in customer corporate colours. Logos and texts can be applied to all drums by means of screen-printing.
Standard Greif specifications

Steel
Commercial grade steel sheet. Specification according to ISO3573 and ISO3574 or equivalent standards (i.e. EN10130/EN10131).

Closures
Two Tri-Sure® 4S® closures, G2 and G½ are manufactured to meet ISO15750 international standards. These closures may be sealed by TabSeal® caps, neutral or to customer design. Closures are fitted with Greif’s standard high performance 4S® washers.

Construction
• Body:
  electrically welded longitudinal seam. Spiraltainer® body configuration for ISO open head drums or conventional beads for standard open head drums. Below 1.0 mm with 2x3 corrugations.
• Assembly:
  the Greif Spiralon® triple seam guarantees a safe performance.
• Standards:
  ISO15750 for open head drums or equivalent standards (i.e. EN209).

Internal lining
If plain drums are not suitable for your application, Greif can apply high quality RDL® phenolic or epoxy phenolic linings. Greif offers its customers technical assistance in determining the ideal lining for their purpose from our range of standard, globally controlled, linings. See Greif’s leaflet “RDL®, Greif’s Universal Regular Drum Lining System”.

Exterior paints & decorations
Colours according to the Greif RAL standard range (or to special customer specifications). See Greif’s leaflet “Colours and Decoration”.
• Options:
  – Multi-colour drum and one-colour silk screen decorations and labelling.
  – Fully decorated drums by means of lithography (See Greif’s leaflet “Large Decorated Steel Drums”)

<table>
<thead>
<tr>
<th>Open head drums</th>
<th>Standard specifications</th>
<th>ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>cover (mm)</td>
<td>body (mm)</td>
<td>bottom (mm)</td>
</tr>
<tr>
<td>Drums for liquids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2</td>
<td>1,2</td>
<td>1,2</td>
</tr>
<tr>
<td>1,2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

| Drums for solids |
| 1,2             | 1,2                     | 1,2       | 21,6             | 21,3             |
| 1               | 1                       | 1         | 18,1             | 17,9             |
| 1               | 0,8                     | 1         | 15,6             | 15,4             |

Note: weight based on standard leverclosing rings

RDL, Spiralon, Tri-Sure, 4S, Tab-Seal are all registered trademarks by Greif.
The most appropriate packaging solution for the petro-chemical, chemical, pharmaceutical and food industries.

Drums are the backbone of Greif’s Industrial Packaging & Services activities. The wide range of steel drums complies with the highest packaging requirements imposed by the petro-chemical, chemical, pharmaceutical and food industries. The packaging is produced in accordance with the latest production technology and tested in accordance with UN recommendations to guarantee optimum protection for a broad range of dangerous and non-dangerous goods.

- Greif’s large Tight Head steel drums comply with stringent UN recommendations for packing (non-dangerous and) dangerous goods in the packaging groups I, II and III. The standard capacity is 216.5 litres.

- Greif’s steel drums are provided with a Spiraltainer® body configuration, that combines a superior vacuum resistance with a more efficient loading in standard 20 and 40 ft freight containers. In addition, traditional drums with expanded beads are still available worldwide.

- The vertical seam is electrically welded. The bottom and the top are seamed to the drum body by means of the Greif Spiralon® triple seam which guarantees a safe performance.

- To guarantee the highest safety in transport and handling, every steel drum for liquids is inspected for leakage, most of them with our specially developed sophisticated helium leak testing system.

- Greif’s drums can be internally coated with a phenolic, epoxy-phenolic or a special lining in accordance with the RDL® lining system. Greif offers its customers technical assistance in determining the ideal lining for their specific purpose to ensure product protection and compatibility where necessary.

- Greif offers a range of standard gauge combinations, covering the required UN performance level for practically all filling goods. Optionally, special solutions are available for specific drums for extra high performance.

- Greif drums are certified by independent test institutes in order to comply with UN recommendations and transport regulations such as RID/ADR/IMDG/ICAO.

- Globally, Greif has standardized on the international RAL colour system for external colours to ensure a consistent quality worldwide.

- Alternatively, drums can be painted in customer corporate colours. Logos and texts can be applied to all drums by means of screen-printing.
Standard Greif specifications

Steel
Commercial grade steel sheet. Specification according to ISO3573 and ISO3574 or equivalent standards (i.e. EN10130/EN10131).

Closures
Two Tri-Sure® 4S® closures, G2 and G½, are manufactured to meet ISO15750 international standards. These closures may be sealed by Tab-Seal® caps, neutral or to customer design. Closures are fitted with Greif’s standard high performance 4S® washers.

Construction
• Body:
electrically welded, longitudinal seam. Spiraltainer body configuration. Below 1.0 mm with 2x3 corrugations to provide optimal vacuum resistance.
• Assembly:
the Greif Spiralon® triple seam guarantees a safe performance.
• Standards:
ISO15750 for 216.5 litre tight head drums or equivalent standards (i.e. EN210).

Internal lining
If plain drums are not suitable for your application, Greif can apply high quality RDL phenolic or epoxy phenolic linings. Greif offers its customers technical assistance in determining the ideal lining for their purpose from our range of standard, globally controlled, linings. See Greif’s leaflet “RDL®, Greif’s Universal Regular Drum Lining System”.

Exterior paints & decorations
Colours according to the Greif RAL standard range (or to special customer specifications). See Greif’s leaflet “Colours and Decoration”.
• Options:
– Multi-colour drum and one-colour silk screen decorations and labelling.
– Fully decorated drums by means of lithography (See Greif’s leaflet “Large Decorated Steel Drums”)

<table>
<thead>
<tr>
<th>Gauge Combinations (mm)</th>
<th>UN Mark Standard</th>
<th>UN Mark Special</th>
<th>Standard Av. Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 1,5 Body 1,2 Bottom 1,5</td>
<td>X2.0/400</td>
<td>22,5</td>
<td></td>
</tr>
<tr>
<td>Top 1,2 Body 1,2 Bottom 1,2</td>
<td>X1.2/250 X1.8/300</td>
<td>20,9</td>
<td></td>
</tr>
<tr>
<td>Top 1,2 Body 1,0 Bottom 1,2</td>
<td>X1.2/250 X1.8/300</td>
<td>18,4</td>
<td></td>
</tr>
<tr>
<td>Top 1,0 Body 1,0 Bottom 1,0</td>
<td>X1.2/250</td>
<td>17,4</td>
<td></td>
</tr>
<tr>
<td>Top 1,0 Body 0,8 Bottom 1,2</td>
<td>X1.2/250</td>
<td>14,9</td>
<td></td>
</tr>
<tr>
<td>Top 0,8 Body 0,7 Bottom 0,8</td>
<td>Y1.4/150</td>
<td>12,6</td>
<td></td>
</tr>
</tbody>
</table>

Spiraltainer, RDL, Tri-Sure, 4S, Tab-Seal, Spiralon, are all registered trademarks by Greif.

Due to local regulations in the USA: 1.2 0.9 1.2 in use as an extra standard