

HERKAL HK34®

A pioneering material



Mechanical properties Minimal and typical

| Thickness 4 to 10 mm | Min. Rm (MPa) | Min. Rp0.2 (MPa) | A% |
|-------------------------|------------------|---------------------|----|
| HK34 | 340 | 250 | 10 |

| Thickness 4 to 10 mm | Typical Rm (MPa) | Typical Rp0.2 (MPa) | A% | Typical HB hardness |
|-------------------------|---------------------|------------------------|----|------------------------|
| HK34 | 360 | 270 | 17 | 110 |

Dimensional possibilities

Sheet Herkal HK34® is normally ordered in the following sizes:

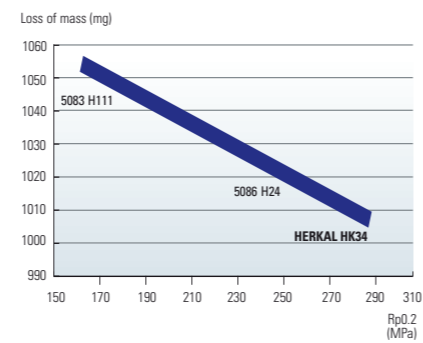
- Thickness 5.5 to 10 mm
- Width < 2,400 mm
- Length < 12,500 mm

Please contact us for other dimensions.
Measurement tolerances as per E.N.

Abrasion resistance test

The Taber® abrasion test using a grade H18 grinding wheel under a load of 1,000 g for 2,000 revolutions reveals the differences in behaviour of different types of aluminium sheet when subjected to wear. The fibrous structure and high limit of elasticity of Herkal HK34® result in lower loss of mass.

Taber® Test
Loss of mass against
limit of elasticity

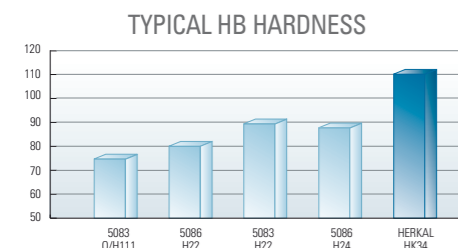
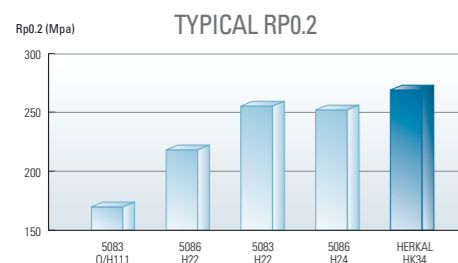


Bending

Herkal HK34® is used flat for tipper floors. It can also be bent to suit the design of tippers that have a semi-circular cross-section. Bending guaranteed for angles > 90° with bending radius > 4 times the thickness of the sheet.

General physical properties

| | |
|---|------------|
| Density g/cm ³ | 2,66 |
| Melting range °C | 580-640 |
| Linear expansion coefficient (0 to 100 °C) - °C ⁻¹ x 10 ⁻⁶ | 23,9 |
| Modulus of elasticity (Mpa) | 71000 |
| Excellent capability of welding | MIG or TIG |



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ALCAN AEROSPACE, TRANSPORTATION AND INDUSTRY

HERKAL HK34®

A pioneering material

From the very soft to the very hard products

Herkal HK34®, the aluminium alloy developed by Alcan, has excellent mechanical characteristics that are perfect for specific applications as in the case of aluminium in industrial vehicles.

Herkal HK34® is designed for use for the floors and sides of tippers and is ideal for bulk transportation of a wide variety of products.

It meets the needs of both grain producers and carriers of recycled goods. In the field of public works, tippers made of Herkal HK34® carry sand, earth, gravel and rubble with the exception of large-size rocks.

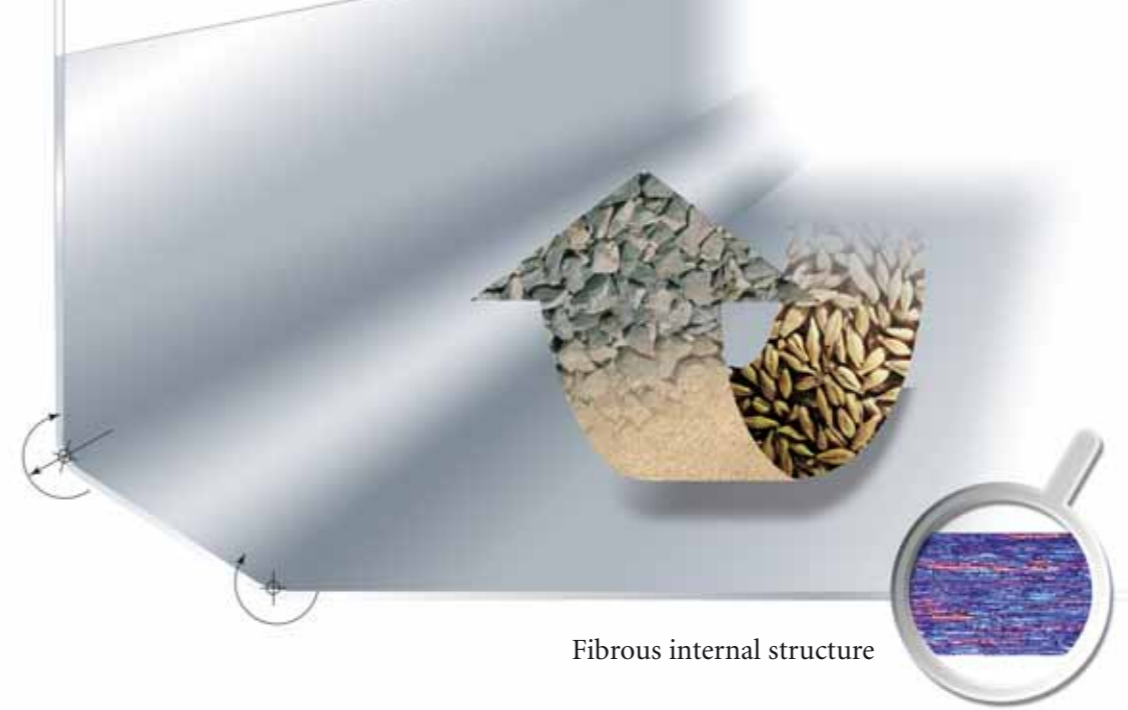
Herkal HK34® is the perfect alloy for tippers, particularly large tippers where the following characteristics are essential:

- maximum payload,
- short turnaround time,
- durability.

Unassailable longevity

Herkal HK34® which is an aluminium alloy of the 5000 series has a high magnesium and low silicon content. This has resulted in achieving both a high hardness and retaining its formability properties. All these characteristics combined with a fibrous internal structure give Herkal HK34® great resistance to abrasion.

The thickness of the material can be customised according to the intended use. For example, thicknesses of 6 to 10 mm are commonly used for making aluminium tipper floors.



Fibrous internal structure



ALCAN REINFORCE HARDNESS AT THE HEART OF THE MATERIAL

Additional capacity: lightness

Aluminium has a density only a third that of steel, giving significant decrease in weight.

The payload can therefore be increased by several hundred kilos for tippers on lorries and by more than 2 tonnes for larger articulated vehicles.

Attractive appearance and design

In addition to all these technical advantages the long-lasting metallic finish of Herkal HK34® combines an attractive appearance with resistance to corrosion.

Unlike steel, there is no need to paint, although it can be painted for the purpose of livery.

Its resistance and ease of use enable various models of tippers to be designed: standard rectangular cross-section tippers or tippers with semi-circular cross-section and a low centre of gravity.

