



# Alcoa<sup>®</sup> Wheels

Wheels you can trust

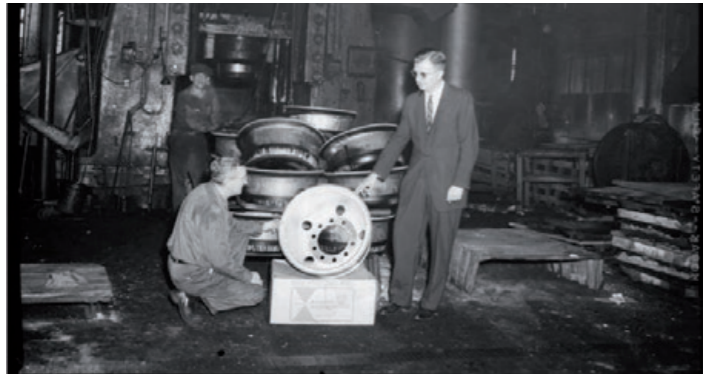
Alcoa<sup>®</sup> Wheels<sup>1</sup> is a product brand of Howmet Aerospace.

# Alcoa® wheels

## The best solution for your business

### Leading manufacturer of aluminium wheels

We advanced the transportation industry with the first forged aluminium wheel in 1948 and have been reinventing it ever since. Find more information on our website: [alcoawheelseurope.com](http://alcoawheelseurope.com)



We offer a wide range of forged aluminium wheel dimensions, from 17.5" and 19.5" to an extensive variety of 22.5" wheels. Alcoa® wheels are available through our official distributor network for Alcoa® wheels or via vehicle manufacturer.

The distributor for Alcoa® wheels can be found through the search application on the website [www.alcoawheelseurope.com](http://www.alcoawheelseurope.com)

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# Alcoa® wheels

## Your benefits, our commitment

Alcoa® wheels are forged from one solid block of aluminium. With an 8,000 tons press, the block is forged into a wheel shape. Once forged, the wheels are heat-treated to maximize their overall mechanical strength. The Alcoa® wheels forging process aligns the grain flow of aluminium with the shape of the wheel, even in the critical area where disc and rim meet. This process results in wheels with unrivalled forged strength that withstand the most severe tests to ensure highest standards and quality. We are so confident in the durability and quality of our wheels, we give a 5-year limited warranty.

Alcoa® wheels are a must. The ultimate choice for your vehicle. Compared to steel, Alcoa® wheels offer numerous benefits.

## Weight saving

### Up to 51% lighter than steel wheels

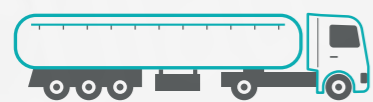
By switching from steel to aluminium Alcoa® wheels you can easily save up to 51% in weight, depending on the wheel size, allowing you to:

- increase the vehicle's payload
- reduce your operating costs
- boost your profitability



# Calculate your individual weight saving with the Alcoa® wheels Calculighter!

The individual weight saving can vary based on the specification of the vehicle(s) or wheel(s).



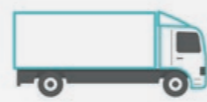
Up to  
**-213 kg**

Weight savings with  
Alcoa® wheels\*



Up to  
**-150,2 kg**

Weight savings with  
Alcoa® wheels\*



Up to  
**-55,8 kg**

Weight savings with  
Alcoa® wheels\*



Up to  
**-98 kg**

Weight savings with  
Alcoa® wheels\*



Up to  
**-78,9 kg**

Weight savings with  
Alcoa® wheels\*



Up to  
**-110,8 kg**

Weight savings with  
Alcoa® wheels\*

\*Compared to exemplarily steel wheel weights with same dimensions and load rates.

# Unrivalled forged strength

## More than 3 times stronger than steel wheels

Alcoa® Wheels performed more than 3 times stronger in a deformation test conducted by Széchenyi István University, Department of Vehicle Manufacturing and Technology, 2023 compared to the steel wheel of a market-leading brand with the same dimensions and load rate.\*

Find all information about the testing here:

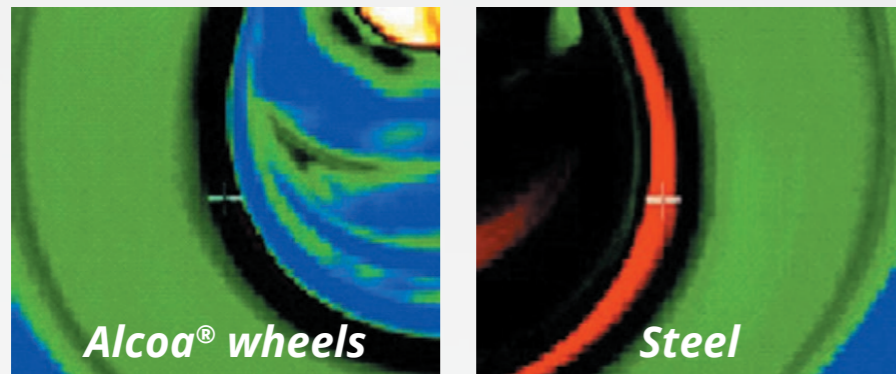


\* Strength Test - Széchenyi István University, Department of Vehicle Manufacturing and Technology, Hungary, 2023



# Thermal performance

Aluminium is more conductive than steel and the material of choice for heat sinks in laptops and radiator fins for cars and trucks as it helps to dissipate heat. Better heat dissipation can influence tyre life, brake performance and brake pad life positively.



Thermal images of Alcoa® wheels compared to exemplarily steel wheels in identical operation conditions show how Alcoa® aluminium wheels have been running up to 22 °C cooler\*.

*\*internal testing*

# Contribution to reduced Global Warming Potential (GWP)

## GWP reduction



Up to  
**-3,6 tons\***  
CO<sub>2</sub>-eq

Replacing 6 steel wheels with Alcoa® wheels on a 2-axle diesel engine city bus over the 12-year lifetime of the bus and 720.000 km.



Up to  
**-4,9 tons\***  
CO<sub>2</sub>-eq

Replacing 10 steel wheels with Alcoa® wheels on a 3-axle diesel engine articulated city bus over the 12-year lifetime of the bus and 720.000 km.



Up to  
**-4 tons\*\***  
CO<sub>2</sub>-eq

Replacing 12 steel wheels with Alcoa® wheels on a 2-axle truck and 3-axle trailer over the lifetime of a truck (2x5 years) and trailer (10 years) and 1.300.000 km.

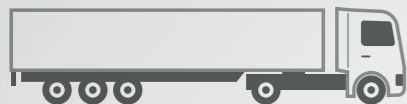
\*Source: Thinkstep AG (2017): Comparative Life Cycle Assessment of Alcoa® wheels and steel wheels for city buses

\*\*Source: Thinkstep AG (2018): Comparative Life Cycle Assessment of Alcoa® wheels vs. steel wheels for long-haul trucks

Save up to  
**1.29% fuel**  
with Alcoa® wheels\*,  
compared to steel wheels\*\*

### Summary:

Constant Speed test runs (CST) with a heavy-duty semi-trailer combination, based on Annex VIII of Commission Regulation (EU) 2017/2400 and additional fuel consumption test results.



### Test Vehicle:

Long-Haul truck/trailer combination  
with aerodynamic components

- Truck Steer: 22.5" x 9.00" Alcoa® Ultra ONE® wheels
- Truck Drive: 22.5" x 9.00" dual Al torque wheels Kistler RoadDyn P1HT
- Trailer: 22.5" x 11.75" ET120 Alcoa® Ultra ONE® wheels

*Alcoa® aluminium wheels were tested against two models of steel wheels used on the same test truck/trailer combination. Find Alcoa® aluminium wheel specifications in report section 4.2.2\* and steel wheel specifications in report section 4.2.1\*\**

Download the full test report here: [www.alcoawheelseurope.com/fuel-saving](http://www.alcoawheelseurope.com/fuel-saving)



# Alcoa<sup>®</sup> wheels' finishes

**Dura-Bright<sup>®</sup> EVO**

**LvL ONE<sup>®</sup>**

**Brushed**



Great looks, easy maintenance

Entry level polished finish

Entry level brushed finish

# Alcoa® wheels' finishes

## Dura-Bright® EVO

Great looks, easy maintenance

Alcoa® wheels are available with Dura-Bright® EVO surface treatment that keeps wheels looking bright and shiny for years without polishing. Maintenance is extremely easy by just using water and soap thanks to the proprietary technology.



### Conventional coating



← Clear Powder Coat  
← Conversion Coat  
← Aluminium

### Dura-Bright® proprietary surface treatment



← Clear zone  
← Transition Zone  
← Aluminium

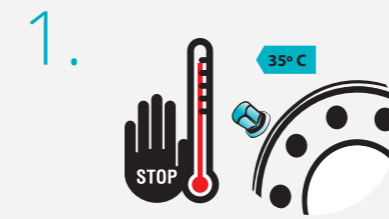
Dura-Bright® is not a coating, but a surface treatment that penetrates the aluminium and becomes an integral part of the wheel. It will not chip, crack, peel or corrode, like conventional coatings do.

The Dura-Bright® surface treatment is available for practically all Alcoa® wheels. For more information please consult the Alcoa® wheels specification sheet, available for download on our website [www.alcoawheelseurope.com](http://www.alcoawheelseurope.com).



# Cleaning Dura-Bright® wheels

There is no Alcoa® wheel easier to maintain than a Dura-Bright® wheel.



Allow wheels to cool below 35° C  
Remove nut covers.



Rinse the wheel with water to prevent  
scratching and erosion.



Mix water with a mild detergent  
or use undiluted  
Dura-Bright® Wheel Wash.



Clean the wheel with a soft brush.



Rinse with water.



Before After

## Cleaning products for Alcoa® Dura-Bright® wheels

### Dura-Bright® Wheel Wash

- Helps to prevent the build-up of brake dust and oxidation
- No risk of damaging wheels with harsh chemicals
- No need to dilute
- Suitable for all Dura-Bright® generations
- Economic in use

### ALbrush2

- A premium quality brush with a rubber edge to protect wheels from getting damaged during cleaning



For additional information about cleaning and maintenance see section 'Care and Maintenance' within the Service Manual for Alcoa® wheels.



Available from authorized Alcoa® wheels distributors.



# LvL ONE®

The Alcoa® LvL ONE® is an entry level polished finish with a smoother and glossier surface than the brushed finish.

LvL ONE® wheels require the usual procedure when it comes to maintenance. If a shiny surface is desired, polishing is needed.



# Brushed

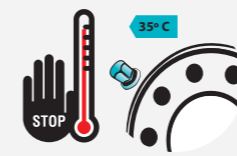
Brushed is an entry level satin finish.



## Cleaning LvL ONE® and Brushed wheels

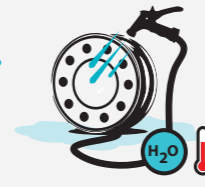


1.



Allow wheels to cool below 35° C  
Remove nut covers.

2.



Rinse the wheel with water to prevent scratching and erosion; preferably with a high pressure cleaner.

3.



Pour a quantity of ALclean into a bucket and dilute with 1, 2 or 3 parts of water.\*

\*



Recommended quantities:  
1. for difficult spots  
2. for medium pollution  
3. for regular use  
4. for frequent use

4.



Gently brush ALclean onto the wheel.

5.



Rinse with clean water.  
Repeat these steps if needed.

6.



Dry the wheel.

## LvL ONE® wheels

7.



Continue by applying a small amount of ALpolish.

8.



Spread it evenly over the wheel using a moist cloth and polish the wheel.

## Cleaning Products for Alcoa® LvL ONE® wheels

### ALclean

- Removes oxidation, disk brake dust, salt spray and road grime
- Use for Brushed, Mirror Polished and LvL ONE® finishes

### ALbrush2

- A premium quality brush with a rubber edge to protect wheels from getting damaged during cleaning

### ALpolish

- Restore and maintain the shine of Mirror Polished, LvL ONE® Alcoa® wheels
- Use after ALclean



For additional information about cleaning and maintenance see section 'Care and Maintenance' within the Service Manual for Alcoa® wheels.



Available from authorized Alcoa® wheels distributors.





# Technology

## Ultra ONE®

The wheel reinvented - Our lightest and strongest

They are made of the proprietary MagnaForce® alloy technology.

This alloy is stronger than the currently existing industry standard, allowing to create lighter wheels without compromising on strength.

Alcoa® Ultra ONE® wheels are available in Brushed, LVL ONE®, Dura-Bright® EVO, Dura-Flange® and Dura-Bright®/Dura-Flange® finishes.



# Special applications

## Dura-Flange®

Additional protection for an even longer service life.

Alcoa® Dura-Flange® wheels have a proprietary treatment on both rim flanges that provides a protective layer to reduce rim flange wear, and can contribute to an increased lifetime compared to other aluminium wheels under the same conditions. Dura-Flange® wheels are the most appropriate for transport where loads are heavy and prone to moving such as liquids, causing the tyre bead to erode the wheel flange faster.



## Dura-Bright® / Dura-Flange®

Two revolutionary treatments combined into one

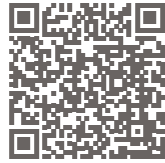
Alcoa® Dura-Bright®/Dura-Flange® wheels are the result of 2 treatments combined, leading to a shiny looking easy to maintain wheel with a protective layer on the rim flanges to further increase the wheels' service life.



# Links



Where to buy



Limited warranty



Cleaning information



YouTube



Instagram



Facebook



LinkedIn



# Brochures



Service manual



General brochure



Accessory & maintenance products



Cleaning instructions



Specification sheet



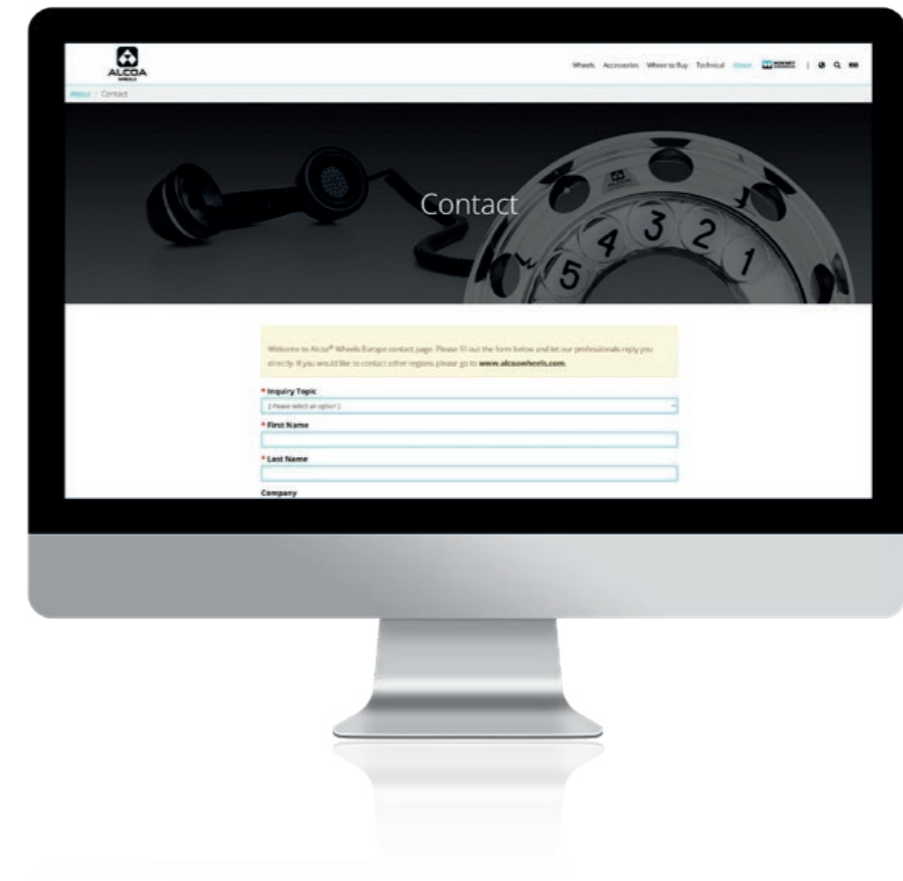
# Contact

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**HOWMET  
AEROSPACE**

## HOWMET WHEEL SYSTEMS

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