Material Use
Turbines

By knowing how Vestas’ products and materials contribute to the environmental performance of the wind plant, it is possible to make fact-based and informed decisions that will minimise overall environmental impacts. Life Cycle Assessment is used to provide the detailed knowledge regarding the material composition of the wind plant.

The figures on the following pages show the typical material breakdown of Vestas’ turbines.

For example, a V136-3.45 MW® turbine is composed of around 89% metals (e.g. steel, iron, copper and aluminium), 8% polymers and composite materials, and the remainder a mixture of electronics/electrical items, lubricants and fluids, etc.
4 MW Platform
Turbines

V150-4.2 MW™
698 tonnes

V136-4.2 MW™
566 tonnes

V117-4.2 MW™
445 tonnes

V136-3.45 MW™
601 tonnes

V126-3.45 MW™
530 tonnes

V117-3.45 MW™
436 tonnes

Steel and iron materials 90%
Glass / carbon composites 3.9%
Aluminium and alloys 1.3%
Electronics / electrics 0.5%
Copper and alloys 0.5%
Lubricant and fluids 0.3%
Polymer materials 3.6%
Not specified 0.0%

Note: 155m hub height and wind class IEC3B

Steel and iron materials 89%
Glass / carbon composites 4.3%
Aluminium and alloys 1.3%
Electronics / electrics 0.6%
Copper and alloys 0.6%
Lubricant and fluids 0.3%
Polymer materials 3.9%
Not specified 0.0%

Note: 112m hub height and wind class IEC2B

Steel and iron materials 86%
Glass / carbon composites 6.4%
Aluminium and alloys 1.3%
Electronics / electrics 0.6%
Copper and alloys 0.8%
Lubricant and fluids 0.3%
Polymer materials 4.1%
Not specified 0.0%

Note: 91.5m hub height and wind class IEC1B

Steel and iron materials 89%
Glass / carbon composites 5.1%
Aluminium and alloys 1.3%
Electronics / electrics 0.6%
Copper and alloys 0.5%
Lubricant and fluids 0.3%
Polymer materials 2.7%
Not specified 0.0%

Note: 132m hub height and wind class IEC3A

Steel and iron materials 89%
Glass / carbon composites 5.7%
Aluminium and alloys 1.3%
Electronics / electrics 0.7%
Copper and alloys 0.6%
Lubricant and fluids 0.4%
Polymer materials 2.7%
Not specified 0.0%

Note: 117m hub height and wind class IEC2A

Steel and iron materials 86%
Glass / carbon composites 7.3%
Aluminium and alloys 1.3%
Electronics / electrics 0.8%
Copper and alloys 0.7%
Lubricant and fluids 0.4%
Polymer materials 2.8%
Not specified 0.0%

Note: 91.5m hub height and wind class IEC1B

Wind. It means the world to us.”
4 MW Platform
Turbines

V112-3.45 MW*
438 tonnes

V105-3.45 MW*
357 tonnes

Steel and iron materials 87%
Aluminium and alloys 1%
Copper and alloys 0.7%
Polymer materials 2.8%
Glass / carbon composites 7.1%
Electronics / electrics 0.8%
Lubricant and fluids 0.4%
Not specified 0.0%

Steel and iron materials 84%
Aluminium and alloys 1.3%
Copper and alloys 0.9%
Polymer materials 3.3%
Glass / carbon composites 8.6%
Electronics / electrics 0.9%
Lubricant and fluids 0.5%
Not specified 0.0%

Note: 94m hub height and wind class IEC1A
Note: 72.5m hub height and wind class IEC1A

Wind. It means the world to us.”
2 MW Platform
Turbines

V120-2.2 MW™
303 tonnes
- Steel and iron materials 87%
- Aluminium and alloys 1.5%
- Copper and alloys 0.4%
- Polymer materials 4.5%
- Glass / carbon composites 5.5%
- Electronics / electrics 0.6%
- Lubricant and fluids 0.2%
- Not specified 0.3%

V116-2.1 MW™
266 tonnes
- Steel and iron materials 86%
- Aluminium and alloys 1.5%
- Copper and alloys 0.4%
- Polymer materials 4.5%
- Glass / carbon composites 5.5%
- Electronics / electrics 0.6%
- Lubricant and fluids 0.2%
- Not specified 0.3%

V110-2.0 MW*
248 tonnes
- Steel and iron materials 85%
- Aluminium and alloys 1.5%
- Copper and alloys 0.5%
-Polymer materials 5.2%
- Glass / carbon composites 6.1%
- Electronics / electrics 0.9%
- Lubricant and fluids 0.3%
- Not specified 0.4%

V100-2.0 MW*
230 tonnes
- Steel and iron materials 84%
- Aluminium and alloys 1.5%
- Copper and alloys 0.5%
- Polymer materials 3.4%
- Glass / carbon composites 8.7%
- Electronics / electrics 0.9%
- Lubricant and fluids 0.3%
- Not specified 0.2%

V90-2.0 MW™
240 tonnes
- Steel and iron materials 86%
- Aluminium and alloys 1.7%
- Copper and alloys 0.7%
- Polymer materials 3.4%
- Glass / carbon composites 6.6%
- Electronics / electrics 1%
- Lubricant and fluids 0.4%
- Not specified 0.5%

Note: 110m hub height and wind class IEC
Note: 94m hub height and wind class IEC
Note: 80m hub height and wind class IEC2B
Note: 80m hub height and wind class IEC3A

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