CONCR3DE
YOUR 3D POWDERHOUSE

WASHOUT

Material Data Sheet

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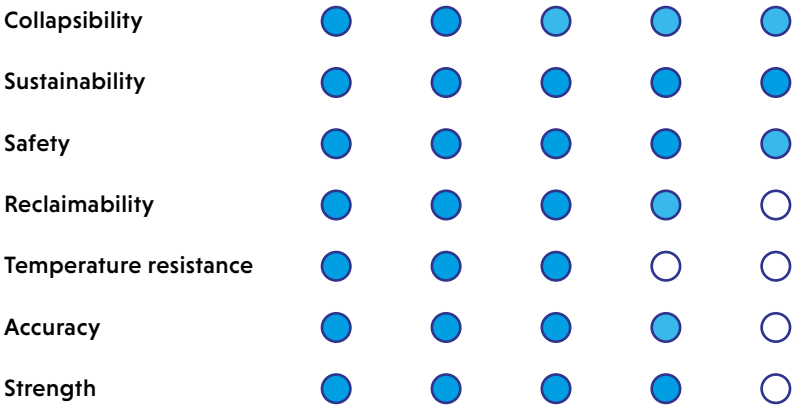
General properties

Washout is a sustainable material used for composite layups. The material finds applications in the aerospace and automotive industry. The material can be easily washed away after molding, allowing for the layup of complex geometries such as aircraft exhaust manifolds. This technology enables the creation of carbon or glass-fiber parts. The parts are compatible with an autoclave, withstanding temperatures up to 180°C. The process requires a seal to separate the sand mold from the epoxy, preventing the sand from sticking. Typical products produced with this technology are mandrels, ducts, molds, manifolds, tanks, and composite layups.

Material benefits

This material has advantages over other washout materials. The key advantage is in the sustainability compared to other binding systems, as our Bio Binder is sustainable and water soluble.



Printer compatibility

This material can be printed using our Armadillo Gray, Elephant Gray and Armadillo White 3D printers. Are you looking for even larger hardware options? Contact our team to learn more.

Material properties

The material properties and especially strength and Coefficient of Thermal Expansion (CTE) can be tweaked in the process by adjusting layer height and type of sand. The material is water-soluble using regular tap water. For more detailed or other information, please contact our material team.

Mechanical properties	Standard	Armadillo Gray/Elephant Gray
Bending strength	N/A	3 MPa

Other properties	Standard	Armadillo Gray/Elephant Gray
Density	N/A	950 kg/m³
Coefficient of Thermal Expansion (CTE)	N/A	3 to 20 ppm/°C
Heat resistance	N/A	180°C
Accuracy	N/A	200 µm* meter
Solvent for removal	N/A	Regular tap water

Notes

- Composition and mechanical properties may vary depending on the equipment used for sintering and debinding.
- Final material performances of 3D-printed objects are impacted by certain factors, including but not limited to part geometry and design, application, environment and more.
- Final 3D-printed objects are produced using certified CONCR3DE consumables. Use of alternate powders and binders compromise the mechanical properties.

CONCR3DE
Scheepsbouwweg 8 • 3089 JW Rotterdam • The Netherlands • +31 (0)85 0606 171 • info@concr3de.com • www.concr3de.com

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