

Wheel Rim Specifications and Justification Sheet

Specifications:

Diameter	15"
Width	8"
Backspace	6"
Offset	0"
Bolt Pattern	5 x 4.75"
Lug Size	7/16"
Material	Aluminum Alloy 6061
Surface Finish	125µin
Max Load	1500lbs at 32psi

Justification and Design Rationale:

This wheel rim is designed specifically for a 1968 Chevrolet Corvette as it contains all the specifications needed to mount itself onto this specific type of car. It's been engineered for high performance automotive applications, along with visual impact, and structural integrity. This design specifically targets passenger vehicles and can even be used on sports cars, as these are examples of when aesthetics and mechanical performance are important aspects that must coexist in a design. The spoke pattern on the wheel rim is inspired by a flower geometry which was chosen for its visual appeal but also for its radial symmetry, which enhances load distribution and contributes to structural balance and allows for the wheel rim to become more durable. The material used in manufacturing this wheel rim is an aluminum alloy, specifically 6061 as it has a strength to weight ratio that will be able to keep up with the constant force put on it by the car. This material is also able to be used in CNC machining which allows the wheel to be manufactured easily and reduces a large portion of manufacturing time as well.