

Engineers conduct test of rocket engine powered by plastic waste

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Credit: Pixabay/CC0 Public Domain

A team of engineers with Pulsar Fusion has conducted a ground test of its plastic-waste-powered rocket engine at the UK's Ministry of Defence military base in Salisbury last week. The team has posted a video of the

test on YouTube.

Pulsar Fusion is a U.K.-based [company](#) established to find a way to make use of nuclear fusion as a [power source](#), both for producing electricity and pushing rockets through space. The company has set a goal of developing and deploying a nuclear fusion [rocket](#) engine by 2025—one that could send a rocket to Mars in half the time of current technology. In the meantime, the company has set its sights on developing a rocket engine powered by plastic waste products.

In speaking with the press, officials with Pulsar referred to their project as a "green" rocket. It uses a hybrid fuel made by mixing polyethylene with a nitrous oxide oxidizer. The result is fed into a [combustion chamber](#) where it is held under pressure until fired. They note that the plastic they are using is a type that is commonly used in a wide variety of products, such as cutting boards and piping, which makes it plentiful and inexpensive to use as a rocket fuel. They also reported that the initial [test](#) of the [rocket engine](#) produced more than just thrust; it also created shock diamonds, which are commonly produced with other types of high-temperature rocket firings. The team is scheduled to conduct another test soon, this time as a demonstration for an unknown client. They also confirmed that the initial test went as planned and that they were pleased with the test firing, calling it a "significant" moment in rocket history.

Notably, other companies have tried using plastic waste as a rocket fuel, Virgin Galactic being the most well-known. In 2014, the idea was tested by the company and abandoned after a test did not go as hoped. Pulsar Fusion has made announcements periodically regarding its plans for such an engine; they expect rockets using it to carry satellites and eventually people into space.

More information: pulsarfusion.com/

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