



Explosivity Test Data† for Formetrix L-40 Powder Alloy

Parameter	Test Results
Appearance	Fine, gray powder
Particle Size – As received	100% <75µm**
Moisture Content – As received	0.1%
Dust Explosion Risk	
Explosion Severity (20 Liter Sphere):	
Minimum Ignition Temperature – Dust Cloud (°C)	>800
Minimum Ignition Temperature – 12.7mm Layer (°C)	>400
Maximum explosion pressure (bar)	0.0
Maximum Rate of Pressure Rise (bar/s)	0
K _{st} value (bar.m/s)	0
Minimum Ignition Energy – Dust Cloud (mJ)	*
Minimum Explosible Concentration (g/m ³)	*

The results of testing are highly dependent on the composition and physical nature of the sample. In dust explosion testing, the particle size distribution (PSD)**, moisture content, particle shape, and preparation method can all markedly affect results. For this reason, any change in manufacturing/handling procedures or composition should be accompanied by a review of the relevant data.

The standard test procedure was based on three (3) test series in accordance with ASTM E1226 if sufficient fines are obtainable. Additional trials are expected to be within 10% according to the reproducibility section of ASTM E1226, Section 14. Precision and Bias. Depending on your expected use of this data, you may need further advice.

This guidance is based purely upon the data collected from the current study and therefore may

not encompass all factors which are necessary in order to fully support your chosen Basis of Safety for processing the material. The test work should be supplemented with a detailed hazard and risk assessment (incorporating a hazardous area classification study), definition, and implementation of a Basis of Safety and control measures, and continuing auditing to ensure that places where the material is processed remain safe.

† The information contained in this page was taken from a test conducted by a 3rd party. A full copy of the test report can be made available upon request. Please contact our Sales Dept. at 774.719.2358 or e-mail info@formetrixmetals.com

* The MIE and MEC were not needed for this sample. During the Explosive Severity (Kst) testing, no ignitions were observed.

**Actual PSD of Powder tested was 53/+15µm

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