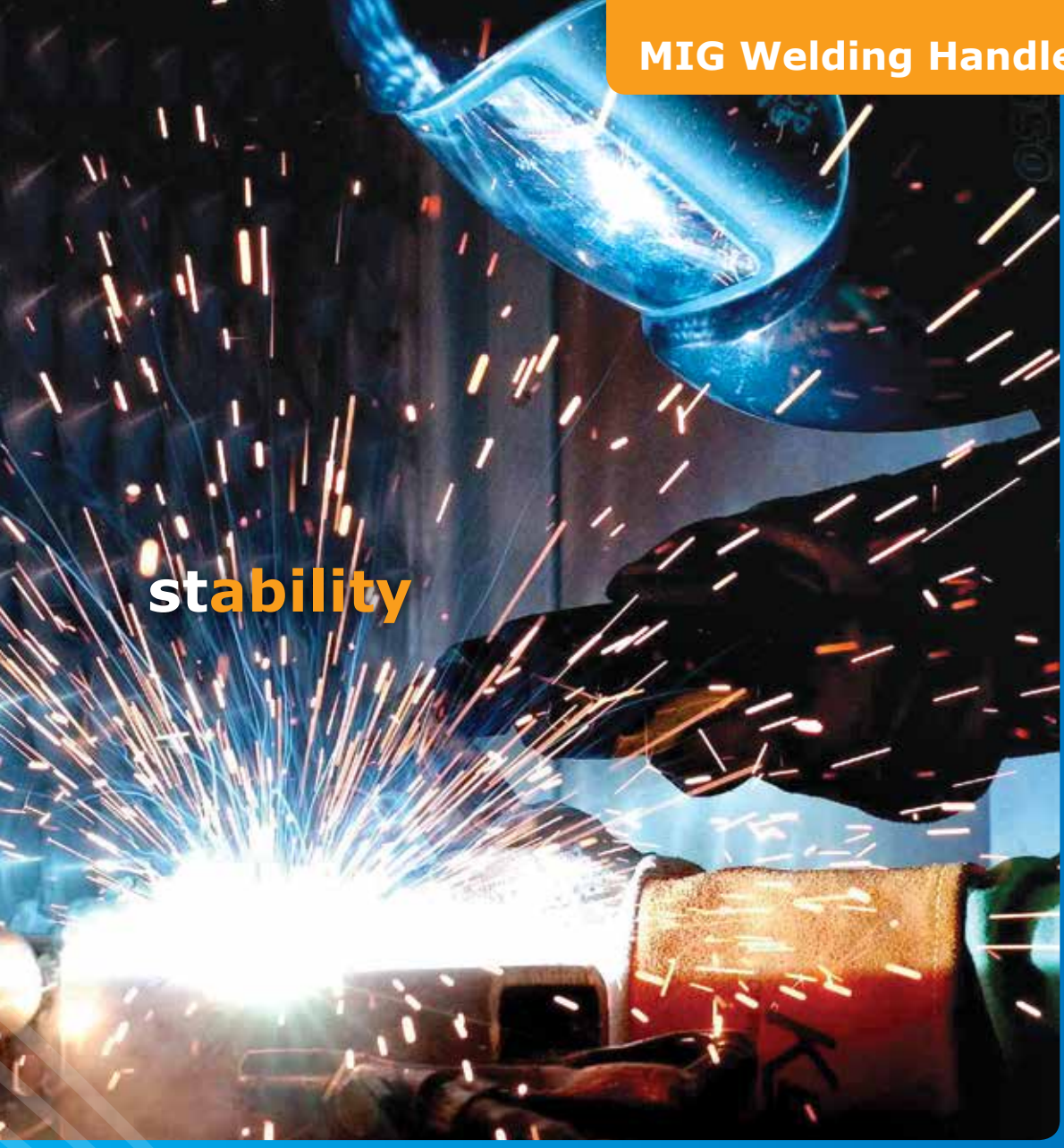
MIG Welding Handle



stability

- Dimensional stability
- High thermal stability
- High impact toughness

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CASE STUDY

MIG Welding Handle

Industrial tools must stand up to a significant amount of abuse and continue to operate safely and reliably. For this reason LFT was selected as the material of choice to manufacture a handle/grip for a MIG welding machine.

These handles must stand up to being dropped, driven over by fork lifts and other forms of serious impact. On top of this it needs to be able to operate reliably and safely at elevated temperatures.

Generally speaking, with tools and equipment that have the ability to cause serious injury or even death, WH&S concerns require that parts must have a significant margin for error in terms of performance to ensure the safest possible working environment.

40% Long Glass Fibre Nylon 66 was chosen for this application. Please see the data sheet for indicative properties.

DATA SHEET

Product name:
Polystruct LGF40 – PA66

Release date:
10 September 2011

Description:

- Nylon 66
- 40% long glass fibre
- Dimensional stability
- Creep resistant
- High impact toughness

TYPICAL PROPERTIES	UNITS	TEST METHOD	VALUES
MECHANICAL PROPERTIES			
Tensile Yield Strength	MPa	D-638	248
Tensile Modulus	MPa	D-638	15862
Tensile Elongation	%	D-638	2-3
Flexural Strength	MPa	D-790	366
Flexural Modulus	MPa	D-790	13793
Notched Izod Impact +23°C	J/m	D-256	320
Un-notched Izod Impact	J/m	D-4812	1495
PHYSICAL PROPERTIES			
Specific Gravity	g/cm^3	D-792	1.45
THERMAL PROPERTIES			
HDT at Load 1.82 MPa	ºC	D-648	254
Melting Point	ºC	D-789	255

These values for natural colour resins only. Colorants or other additives may alter some or all of these properties. The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits nor used alone as the basis of design.

PROCESSING GUIDELINES

PROCESS VARIABLES	
Injection Speed	51-76 mm/s
Injection Pressure	Medium to Maximum
Back Pressure	25-50 psi
Screw Speed	30-50 rpm
Cushion	6.4mm
DRYING	
Temperature/Time/Moisture Content	80°C / 4 hrs / 0.2%
PACKAGING	

All of Duromer's polyamide compounds are supplied in aluminium foil lined bags and drying prior to moulding is generally not required. Foil lined bulk boxes are available on request.

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