

Mono

Monoplate MWS Monoplate MXP Monoplate MSP

Monoplate products from the Monodite range of synthetic single crystal diamond cutting tool materials.

Element Six now offers Monoplates from 2 mm to 10 mm in usable edge length (four-point direction) extending the choice of cutting material for all types of single crystal diamond tooling including specialist tools and wear parts. These crystals provide unrivalled edge quality and high thermal conductivity compared to PCD.

MONOPLATE MWS

A new standard product available with a usable length of 2 mm - 5.5 mm (four-point direction). The product is defined by an inscribed circle diameter of ~80% of the nominal length (full details inside).

MONOPLATE MXP

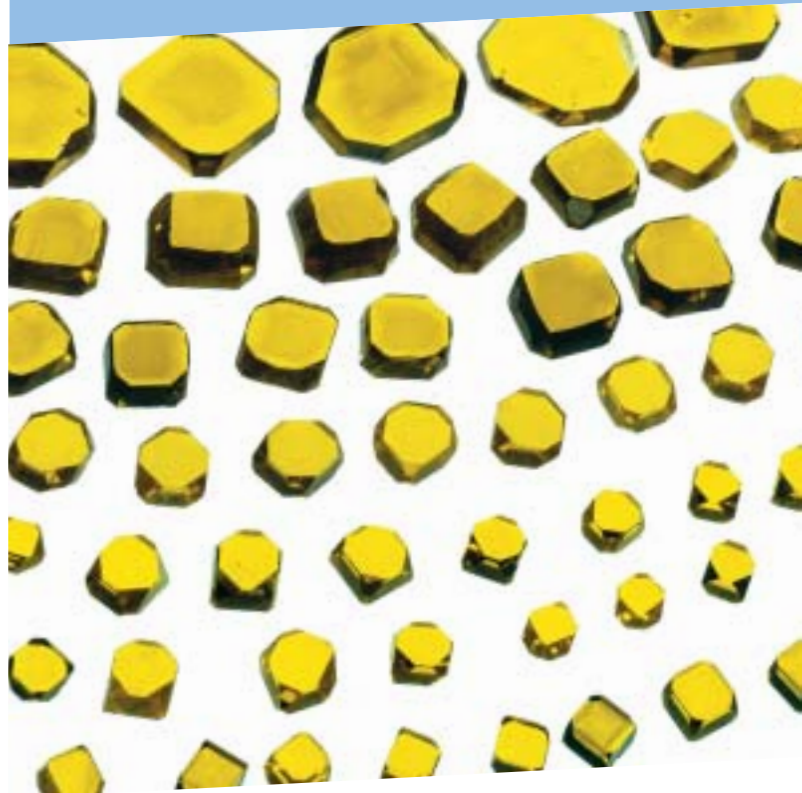
A new premium product with a size range of 3 mm - 5 mm in usable edge length (four-point direction). This product is defined by an inscribed square of ~75% of the nominal length (full details inside).

MONOPLATE MSP

This product is available from 6 mm - 10 mm in usable edge length (four-point direction) and is supplied from a catalogue of Monoscans (see back cover for further details).

Advantages

- Increased choice of product sizes increases toolmaking options.
- The availability of Monodite products in Monoplate format optimises diamond usage.
- Easy-to-use toolmaking material.
- A cutting service is available for all Monoplate products.
- Superior edge quality to PCD.
- High thermal conductivity.



Element Six also offers a cutting service for these products. This service may be used to order Monoplates in standard cut shapes (see product information).

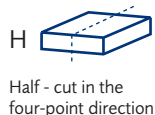
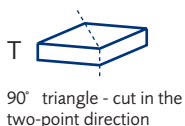
Monoplate MWS



Advantages

- Synthetic single crystal diamond plates supplied in a range of specified dimensions from 2 mm to 5.5 mm in usable edge length.
- Each product has a guaranteed inscribed circle diameter of 80% minimum of the nominal plate length (see diagram below).
- Product shapes to satisfy all general toolmaker requirements.

CUT PRODUCT OPTIONS



PRODUCT CODE EXAMPLE

MONODITE
STANDARD PLATE

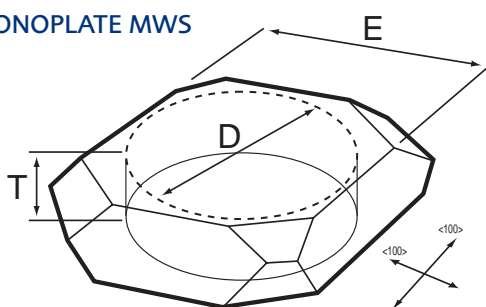
NOMINAL THICKNESS
= 1.5 mm

MWS H45 15

CUT PRODUCT
DESIGNATION

NOMINAL LENGTH
= 4.5 mm

MONOPLATE MWS



E = nominal plate length **T** = nominal thickness
D = diameter of inscribed circle (at least 80% of E)

MONOPLATE MWS

Product nomenclature	Nominal length [mm]	Minimum inscribed circle diameter [mm]	Minimum thickness [mm]
MWS L2008	2.0	1.6	0.8
MWS L2010	2.0	1.6	1.0
MWS L2508	2.5	2.0	0.8
MWS L2510	2.5	2.0	1.0
MWS L3010	3.0	2.4	1.0
MWS L3012	3.0	2.4	1.2
MWS L3015	3.0	2.4	1.5
MWS L3510	3.5	2.8	1.0
MWS L3512	3.5	2.8	1.2
MWS L3515	3.5	2.8	1.5
MWS L4012	4.0	3.2	1.2
MWS L4015	4.0	3.2	1.5
MWS L4512	4.5	3.6	1.2
MWS L4515	4.5	3.6	1.5
MWS L5012	5.0	4.0	1.2
MWS L5015	5.0	4.0	1.5
MWS L5515	5.5	4.4	1.5

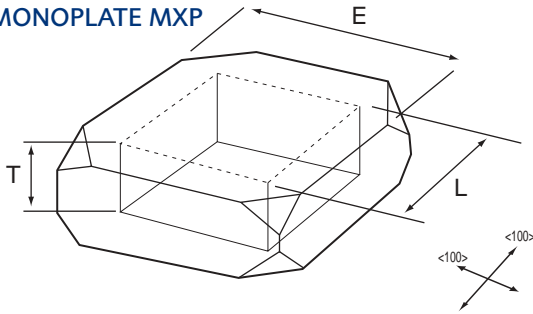
PRODUCT CODE EXAMPLE

MONODITE PREMIUM PLATE
MXP L35 12
 NOMINAL THICKNESS = 1.2 mm
 NOMINAL LENGTH = 3.5 mm

PRODUCT CODE EXAMPLE

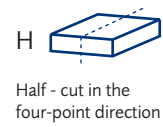
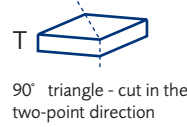
MONODITE PREMIUM PLATE
MXP T 30 12
 NOMINAL THICKNESS = 1.2 mm
 NOMINAL LENGTH = 3.0 mm
 CUT PRODUCT DESIGNATION

MONOPLATE MXP



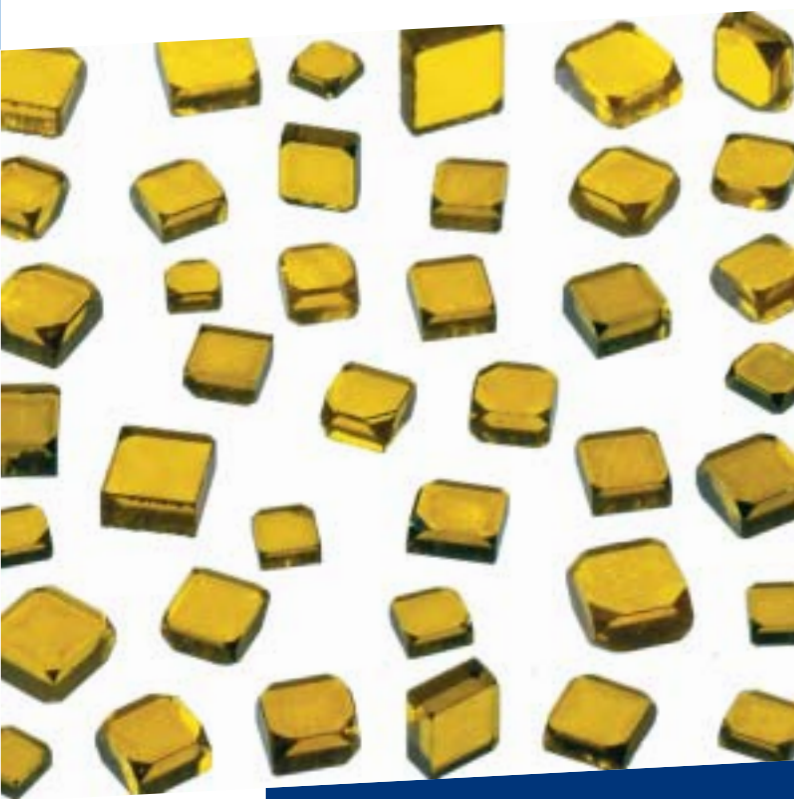
E = nominal plate length **T** = nominal thickness
L = edge length of inscribed square (at least 75% of E)

CUT PRODUCT OPTIONS



MONOPLATE MXP

Product nomenclature	Nominal length [mm]	Minimum edge length of inscribed square [mm]	Minimum thickness [mm]
MXP L3010	3.0	2.2	1.0
MXP L3012	3.0	2.2	1.2
MXP L3015	3.0	2.2	1.5
MXP L3510	3.5	2.6	1.0
MXP L3512	3.5	2.6	1.2
MXP L3515	3.5	2.6	1.5
MXP L4012	4.0	3.0	1.2
MXP L4015	4.0	3.0	1.5
MXP L4512	4.5	3.3	1.2
MXP L4515	4.5	3.3	1.5
MXP L5012	5.0	3.7	1.2
MXP L5015	5.0	3.7	1.5

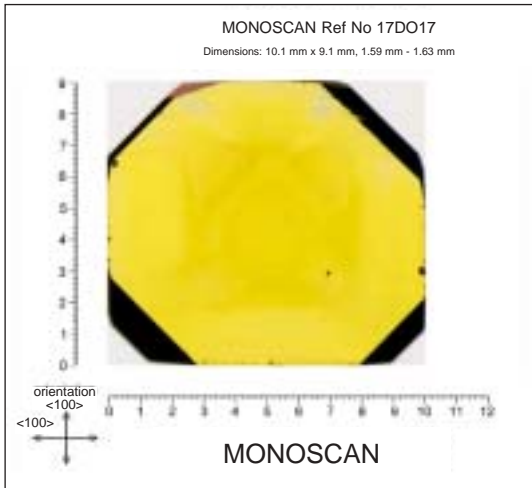
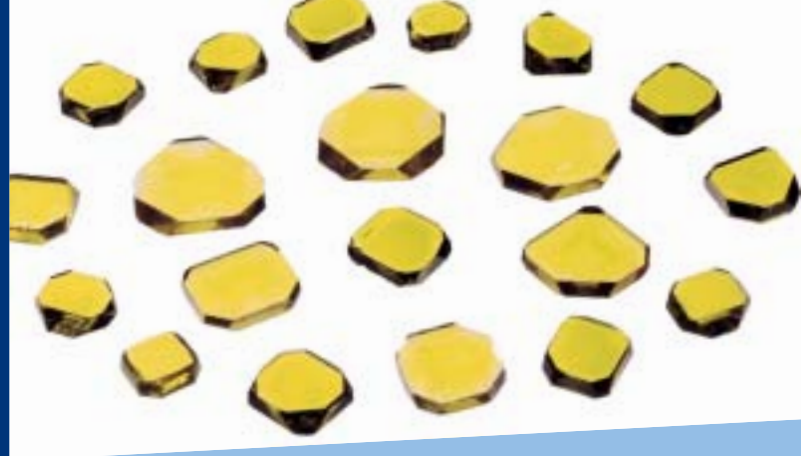


Advantages

- Premium synthetic single crystal diamond plates supplied in a range of specified dimensions from 3 mm to 5 mm in usable edge length.
- Each product has a guaranteed inscribed square edge length of 75% minimum of the nominal plate length (see diagram above).
- Product shapes ideal for woodworking tools.

Monoplate MXP

Monoplate MSP



An example Monoscan from the Monoplate catalogue

MONOSCAN

To enable the diamond toolmaker to select a suitable Monoplate MSP product, a catalogue showing each plate as an image (Monoscan) has been developed and is accessible via the internet at www.mono-online.net. These Monoscan images show:

- Plate dimensions and shape
- Clarity
- The crystallographic orientation of the plate's edges
- A unique MSP reference number for ordering purposes.

All MSP products shown in the Monoscan catalogue are in stock.

AVAILABILITY

Available by selection from the Monoscan catalogue according to their unique reference number, Monoplate MSP products are classified by length (four-point direction) and thickness.

Each individual Monoplate is uniquely classified and described by its Monoscan which includes its reference number. The table illustrates the size class intervals into which specific plates are categorised. For example, the Monoplate illustrated above, which has a length (four-point direction) of 10.1 mm, is best described as MSP L100 (as its maximum dimension is 10.0 mm rounded down to the nearest half mm).

Advantages

- Large synthetic single crystal diamond plates supplied in a range of specified dimensions from 6 mm to 10 mm in usable length.
- Produced with standard thicknesses of 1.2 mm and 1.5 mm.
- Supplied with minimal deviation from the precise crystallographic four-point plane.
- Products ordered from Monoscan catalogue - what you see in the catalogue is what you get.

To order this Monoplate, it would therefore be specified as: MSP L100 - 17DO17
or: MSP L100 - 17DO17 - **D1**
if the Cutting Service is required.

Cutting Service orders should be accompanied by a copy of the appropriate Monoscan showing the position of up to two straight cuts.

MONOPLATE MSP	
Product nomenclature	Length [mm] (four point direction)
MSP L60	6.0 - 6.4
MSP L65	6.5 - 6.9
MSP L70	7.0 - 7.4
MSP L75	7.5 - 7.9
MSP L80	8.0 - 8.4
MSP L85	8.5 - 8.9
MSP L90	9.0 - 9.4
MSP L95	9.5 - 9.9
MSP L100	10.0 - 10.4

Larger sizes with a length of 10.5 mm or greater are occasionally available - see current Monoscan catalogue.