

## ES Aktuell 1200

This special grade **ES AKTUELL 1200** tool steel from EschmannStahl is the ideal material for large-format moulds. The special composition of the steel gives it a significantly higher and more uniform hardness into the core than other materials previously used in this sector.

**ES AKTUELL 1200** is suitable for a wide range of applications and increases tool service life. A further advantage is that when used for tools, quicker production cycles can be achieved.



*Ideal for large moulds of all types* ✓

*Ideal for many areas of application* ✓

*Optimum hardness into the core* ✓

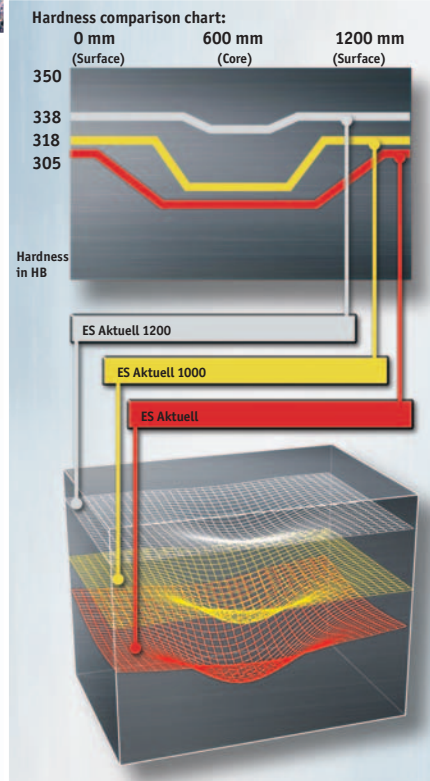
*Higher tool service life* ✓

*Higher thermal conductivity* ✓

*Better repair weldability* ✓

*Excellent grain and polishability* ✓

*Increased productivity* ✓



Uniform hardness into the core

# ES AKTUELL 1200

Status 12/2007

Special grade ES Aktuell 1200 tool steel has significantly improved qualities to enable increasingly higher quality products to be manufactured even more economically.

## Thermal conductivity:

$\frac{W}{(m \times K)}$	20 °C	350 °C	700 °C
	38.0	40.1	40.8

## Coefficient of thermal expansion:

$\frac{10^{-6} \times m}{(m \times K)}$	100 °C	200 °C	300 °C	400 °C	500 °C	600 °C
	10.9	12.6	13.0	13.5	13.8	14.2

## Mechanical properties:

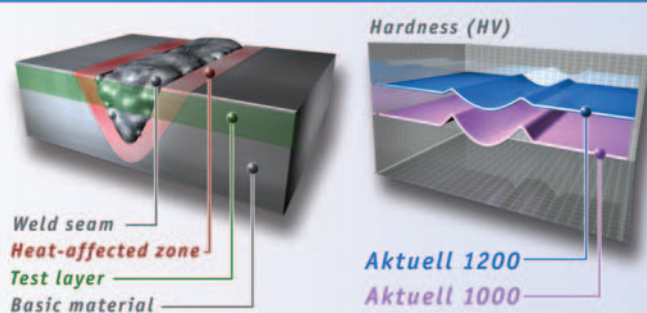
**As-delivered strength:** 1050-1200 N/mm<sup>2</sup>

**As-delivered hardness:** 310-355 HB

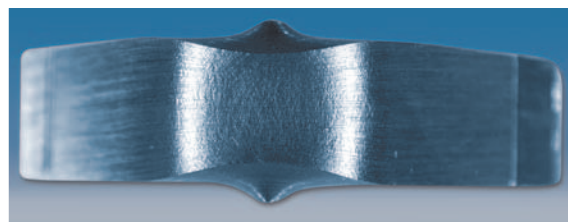
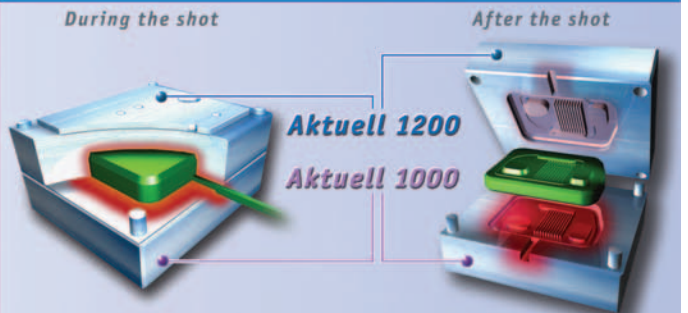
**Typical analysis:** C 0.25 Mn 1.30 Cr 1.30 Ni 1.00 Mo 0.50 + trace elements

The composition of this special grade of EschmannStahl tool steel provides significantly more overall reliability. Improved toughness results in a greatly reduced risk of cracking. The material offers improved weldability. Better thermal conductivity allows higher cycle times.

### Reduced weld effects in the basic material



### Better thermal conductivity Comparison Aktuell 1200 - Aktuell 1000



#### ES AKTUELL 1200 in a toughness test:

In spite of its higher as-delivered hardness, the special grade ES AKTUELL 1200 tool steel has better toughness performance than the standard material ES AKTUELL 1000.



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