



A.B.N. 37 004 377 155

[www.amcol.com](http://www.amcol.com)

50 Crowle Street, North Geelong, VIC 3215  
PO Box 380, North Geelong, VIC 3215  
Tel: +61 3 5278 2555 / Fax: +61 3 5278 5833

94 Balham Rd, Archerfield, QLD 4108  
PO Box 87, Archerfield, QLD 4108  
Tel: +61 7 3277 9563

PRODUCT CODE: 12  
ISSUE DATE: June 2013

## **Technical Data Sheet**

Page 1 of 2

### **HI – BOND**

A selected blend of Australian Bentonite

#### **FUNCTIONAL USE:**

Provides green compression strengths so that accurate, dense stable moulds can be produced consistently from silica sand.

High hot compression strength ensures mould stability and casting accuracy during and after pouring. High durability characteristics

General purpose filler and extender for use when mild thixotropic properties,

#### **PURITY:**

Hydrous aluminium silicate comprised principally of the clay mineral montmorillonite, Montmorillonite content 94% minimum.

#### **CHEMICAL COMPOSITION:**

Typical Analysis (moisture free)

<b>Oxide</b>	<b>wt. % norm</b>	<b>Oxide</b>	<b>wt. % norm</b>
SiO <sub>2</sub>	63.02%	MgO	2.67%
Al <sub>2</sub> O <sub>3</sub>	21.08%	Na <sub>2</sub> O	2.57%
Fe <sub>2</sub> O <sub>3</sub>	3.25%	CaO	0.65%
FeO	0.35%	H <sub>2</sub> O	5.64%
Trace Elements 0.72%			

PRODUCT CODE: 12  
ISSUE DATE: June 2013

## **Technical Data Sheet**

Page 2 of 2

### **HI – BOND**

A selected blend of Australian Bentonite

#### **CHEMICAL FORMULA**

A tri-layer expanding mineral structure of approximately  
(Al, Fe<sub>1.67</sub>, Mg<sub>0.33</sub>) Si<sub>4</sub>O<sub>10</sub> (OH)<sub>2</sub> Na<sup>+</sup>Ca<sup>++</sup><sub>0.33</sub>

#### **Typical Physical Properties**

Bulk Density (tonnes / m <sup>3</sup> )	Approx 0.9
Moisture	Max 13%
pH (6.25% solids)	5 to 8
CEC (meq / 100g)	> 80
Dry Particle size	Max 55% passing 0.076mm
Free Swell	14

#### **SAND PROPERTIES:**

##### **FOUNDRY BOND TEST – 40% CONSTANT COMPACTABILITY METHOD**

Silica sand	93 parts by weight
Volclay 200	7 parts by weight
A.F.S. Green Compression	> 19 psi
A.F.S. Dry Compression	> 62 psi

#### **PACKAGING:**

Multi-wall paper bags, Bulker bags & Bulk Tankers