

### FEATURES

### MILES, QUEENSLAND

Unimin's Trugel 100 is a civil engineering grade Bentonite mined and processed near Miles in Queensland. Trugel 100 contains a high proportion of the active mineral species montmorillonite, which has a unique structure and chemistry.

Trugel 100 is selectively mined and processed with strict adherence to the American Petroleum Institute (API) Spec Q1 in order to maintain consistent high quality characteristics. Unimin Australia Limited is an authorized manufacturer of API standard drilling fluid materials.

Trugel 100 is processed to meet or exceed the requirements of API Spec 13A Section 11 OCMA grade Bentonite. Trugel 100 is tested and controlled to rigorous standards which ensure consistent chemical and physical properties resulting in predictable and repeatable performance. Unimin Australia actively manages a Quality Management System certified to ISO9001:2008.

Unimin's range of Trugel Bentonite is used in a wide range of civil and geotechnical applications. Trugel 100 typically finds use in drilling fluids, ground stabilization, dam sealing and waste containment. The following typical properties may help you to determine the suitability of the product to best suit your application.

Miles Trugel 100 (07/09)

### CHEMICAL & ANALYTICAL DATA

Mean Values. These Do Not Represent A Specification

Mean Percent by Weight (UAL 8.5)

Silicon Dioxide	(SiO <sub>2</sub> )	63.8
Aluminum Oxide	(Al <sub>2</sub> O <sub>3</sub> )	13.6
Titanium Dioxide	(TiO <sub>2</sub> )	0.3
Iron Oxide	(Fe <sub>2</sub> O <sub>3</sub> )	2.8
Calcium Oxide	(CaO)	0.2
Sodium Oxide	(Na <sub>2</sub> O)	2.3
Magnesium Oxide	(MgO)	2.0
Potassium Oxide	(K <sub>2</sub> O)	0.2
Loss on Ignition	(1000°C)	14.8
Dry Screen (% Passing 75 microns)		78
Wet Screen (% Retained 75 microns)		2
Bulk Density	(t/m <sup>3</sup> )	1.0
Cation Exchange Capacity	(meq/100g)	80
Moisture Content	(%)	10
Swelling Volume	(ml/2g)	32

### PHYSICAL PROPERTIES

Mean Values. These Do Not Represent A Specification

Typical Suspension Properties

		40	50	60
@ Kg/m <sup>3</sup>				
Apparent Viscosity	(cP)	12	17	23
Plastic Viscosity	(cP)	7	9	12
Yield Point	(lb/100ft <sup>2</sup> )	5	8	11
Gel – 10 sec	(lb/100ft <sup>2</sup> )	2	4	6
Gel – 10 min	(lb/100ft <sup>2</sup> )	4	8	12
Marsh Funnel	(sec/l)	37	43	60
API Filtrate	(mls)	21	18	15
pH		9.5	9.5	9.5

### ORDERING INFORMATION

Shipping Point: Miles, Queensland  
 Availability: 25 kg Multi-Wall Paper Bags / Bulk Bags / Bulk Tanker

**DISCLAIMER:** Ranges and values of trial sample testing or on a Technical Information Sheet are typical or expected ranges and are not guaranteed ranges. You must satisfy yourself that the product is suitable for the purpose for which you intend to use it. Unimin makes no representations as to suitability, fitness or merchantability.

**HAZARD WARNING:** Prolonged inhalation can cause delayed lung injury including silicosis, a progressive, disabling and sometimes fatal lung disease. In accordance with the National Occupational Health and Safety Commission's "Approved Criteria for Classifying Hazardous Substances", Free Crystalline Silica (Quartz) has been classified as a Hazardous Substance. This product contains Free Crystalline Silica (Quartz). The International Agency for Research on Cancer has determined that Free Crystalline Silica inhaled from occupational sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure. The risk of lung disease is increased if smoking is combined with silica respiration.

Avoid creating dust when handling, using or storing the product. Use only with adequate ventilation to keep exposure low. Do not use as a dry abrasive blasting agent. Undertake health and safety risk assessments on safe methods of handling and use appropriate to your workplace.

To prevent inhalation of airborne dust, wear respiratory protection in accordance with Australian Standard AS1715 and AS1716. To prevent potential irritation to eyes, wear eye protection in accordance with Australian Standard AS1337.

Please refer to the relevant Unimin Australia Limited Material Safety Data Sheet (MSDS) for health hazard information before opening or using this product and take care when disposing of the empty bag/container (as it may contain product residue). If you do not have an MSDS, please ring the following ACOHS 24 hour emergency phone number: 1800 638 556 and you will be sent one.

### FOR PRODUCT INFORMATION AND CUSTOMER SERVICE

**AUST:** Adelaide +61 8 8240 8200 Brisbane +61 7 3275 2499 Melbourne +61 3 9586 5400  
 Sydney +61 2 9637 7066 Perth +61 8 9362 1411 Newcastle +61 2 4967 1222  
**NZ** Auckland +64 9 914 7010 Visit our website [www.unimin.com.au](http://www.unimin.com.au)



**UNIMIN AUSTRALIA LIMITED**  
 ACN 000 971 844