

### FEATURES

### MILES, QUEENSLAND

Sibelco's Trugel 13A is an American Petroleum Institute (API) Spec 13A Section 9 drilling grade sodium Bentonite, produced under License Number 13A-0002, mined and processed near Miles in Queensland. Trugel 13A contains a high proportion of the active mineral species montmorillonite, which has a unique structure and chemistry. These are responsible for a range of characteristics that makes Trugel 13A useful for oil and gas drilling.

Trugel 13A is tested and controlled to rigorous standards which ensure consistent chemical and physical properties resulting in predictable and repeatable performance. Sibelco Australia actively manages a Quality Management System certified to ISO9001:2008.

Trugel 13A forms thixotropic suspensions when mixed in clean water. The resulting gel strength holds the cuttings in suspension, particularly when operations are interrupted. The flat plate-like particles of Bentonite deposit an impermeable cake on the walls of the drill hole. This unique feature of Bentonite stabilizes the hole and maintains the hole dimensions. Sibelco's range of Trugel Bentonite is used in a wide range of civil and geotechnical applications. An outstanding feature of Trugel 13A is its ability to maintain rheology and filtrate loss properties at temperatures in excess of 400 °F. The following typical properties may help you to determine the suitability of the product to best suit your application.

Miles Trugel 13A (06/14)

### CHEMICAL & ANALYTICAL DATA

Mean Values. These Do Not Represent A Specification

Mean Percent by Weight	(UAL 8.5)	
Silicon Dioxide (SiO <sub>2</sub> )		<b>63.8</b>
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )		<b>13.6</b>
Titanium Dioxide (TiO <sub>2</sub> )		<b>0.3</b>
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )		<b>2.8</b>
Calcium Oxide (CaO)		<b>0.2</b>
Sodium Oxide (Na <sub>2</sub> O)		<b>2.3</b>
Magnesium Oxide (MgO)		<b>2.0</b>
Potassium Oxide (K <sub>2</sub> O)		<b>0.2</b>
Loss on Ignition (1000°C)		<b>14.8</b>

Dry Screen (% Passing 75microns)		<b>78</b>
Wet Screen (% Retained 75microns)		<b>2</b>
Bulk Density, Loose (t/m <sup>3</sup> )		<b>1.0</b>
Cation Exchange (meq/100ml)		<b>80</b>
Moisture Content (%)		<b>10</b>

### ORDERING INFORMATION

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

### PHYSICAL PROPERTIES

Mean Values. These Do Not Represent A Specification

#### Suspension Properties

Apparent Viscosity (cP)		<b>20</b>
Plastic Viscosity (cP)		<b>11</b>
Yield Point (lb/100ft <sup>2</sup> )		<b>18</b>
YP/PV Ratio		<b>1.6</b>
Gel – 10 sec (lb/100ft <sup>2</sup> )		<b>5</b>
Gel – 10 min (lb/100ft <sup>2</sup> )		<b>12</b>
Filtrate Loss (cm <sup>3</sup> )		<b>13</b>
pH		<b>9.5</b>

**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. Sibelco 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 Sibelco 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

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