

## SAFETY DATA SHEET

### QUIK-GEL GOLD®

Revision Date: 31-Aug-2016

Revision Number: 10

#### 1. Product Identifier & Identity for the Chemical

**Statement of Hazardous Nature** Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Non-Dangerous Goods according to the criteria of ADG.

##### 1.1. Product Identifier

**Product Name** QUIK-GEL GOLD®

##### Other means of Identification

**Synonyms** None  
**Hazardous Material Number:** HM006323

##### Recommended use of the chemical and restrictions on use

**Recommended Use** Viscosifier  
**Uses advised against** No information available

##### Supplier's name, address and phone number

**Manufacturer/Supplier** Halliburton/Baroid Australia Pty. Ltd.  
15 Marriott Road  
Jandakot  
WA 6164  
Australia

ACN Number: 009 000 775  
Telephone Number: 61 (08) 9455 8300  
Fax Number: 61 (08) 9455 5300

##### **Product Emergency Telephone**

Australia: + 61 1 800 686 951  
Papua New Guinea: + 61 1 800 686 951  
NewZealand: +64 800 451719

##### **Fire, Police & Ambulance - Emergency Telephone**

Australia: 000  
Papua New Guinea: 000  
New Zealand: 111

**E-mail Address** fdunexchem@halliburton.com

##### Emergency phone number

+ 61 1 800 686 951

##### **Australian Poisons Information Centre**

24 Hour Service: - 13 11 26  
Police or Fire Brigade: - 000 (exchange): - 1100

#### 2. Hazard Identification

**Statement of Hazardous Nature** Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Non-Dangerous Goods according to the criteria of ADG.

**Classification of the hazardous chemical**

Carcinogenicity	Category 2 - H351
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373

**Label elements, including precautionary statements**

**Hazard pictograms**



**Signal Word**

Warning

**Hazard Statements:**

H351 - Suspected of causing cancer if inhaled  
 H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

**Precautionary Statements**

**Prevention**

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
 P281 - Use personal protective equipment as required

**Response**

P308 + P313 - IF exposed or concerned: Get medical advice/attention  
 P314 - Get medical attention/advice if you feel unwell

**Storage**

P405 - Store locked up

**Disposal**

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

**Contains**

**Substances**

**CAS Number**

Crystalline silica, quartz	14808-60-7
Crystalline silica, cristobalite	14464-46-1
Crystalline silica, tridymite	15468-32-3

**Other hazards which do not result in classification**

None known

*For the full text of the H-phrases mentioned in this Section, see Section 16*

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Crystalline silica, quartz	14808-60-7	1 - 5%	Carc. 2 (H351) STOT RE 1 (H372)
Crystalline silica, cristobalite	14464-46-1	0.1 - 1%	Carc. 2 (H351) STOT RE 1 (H372)
Crystalline silica, tridymite	15468-32-3	0.1 - 1%	Carc. 2 (H351) STOT RE 1 (H372)

**4. First aid measures**

**Description of necessary first aid measures**

**Inhalation**

If inhaled, remove from area to fresh air. Get medical attention if respiratory

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<b>Eyes</b>	irritation develops or if breathing becomes difficult. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water. Get medical attention if irritation persists.
<b>Ingestion</b>	Under normal conditions, first aid procedures are not required.

**Symptoms caused by exposure**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

**Medical Attention and Special Treatment**

**Notes to Physician** Treat symptomatically

## 5. Fire Fighting Measures

**Suitable extinguishing equipment****Suitable Extinguishing Media**

All standard fire fighting media

**Extinguishing media which must not be used for safety reasons**

None known.

**Specific hazards arising from the chemical****Special exposure hazards in a fire**

Not applicable

**Special protective equipment and precautions for fire fighters****Special protective equipment for firefighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

## 6. Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust.

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3. Methods and material for containment and cleaning up**

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

## 7. Handling and storage

**7.1. Precautions for safe handling****Handling Precautions**

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities****Storage Information**

Do not reuse empty container. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Keep from excessive heat. Product has a shelf life of 24 months.

**Other Guidelines**

No information available

## 8. Exposure Controls/Personal Protection

**Control parameters - exposure standards, biological monitoring**

**Exposure Limits**

Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA
Crystalline silica, quartz	14808-60-7	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>
Crystalline silica, cristobalite	14464-46-1	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>
Crystalline silica, tridymite	15468-32-3	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Controls**

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

**Personal protective equipment (PPE)**

**Personal Protective Equipment**

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

**Respiratory Protection**

Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

**Hand Protection**

Normal work gloves.

**Skin Protection**

Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.

**Eye Protection**

Wear safety glasses or goggles to protect against exposure.

**Other Precautions**

None known.

**Environmental Exposure Controls**

No information available

## 9. Physical and Chemical Properties

**9.1. Information on basic physical and chemical properties**

**Physical State:** Powder

**Color:** Tan

**Odor:** Mild earthy

**Odor Threshold:** No information available

Property

Values

Remarks/ - Method

**pH:**

8.5-9.5 (3%)

**Freezing Point / Range**

No data available

**Melting Point / Range**

No data available

**Boiling Point / Range**

No data available

**Flash Point**

No data available

**Evaporation rate**

No data available

**Vapor Pressure**

No data available

**Vapor Density**

No data available

**Specific Gravity**

2.5 - 2.6

**Water Solubility**

Partly soluble

**Solubility in other solvents**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition Temperature**

No data available

**Decomposition Temperature**

No data available

**Viscosity**

No data available

**Explosive Properties**

No information available

**Oxidizing Properties**

No information available

**9.2. Other information**

**VOC Content (%)**

No data available

**10. Stability and Reactivity**

**10.1. Reactivity**

Not expected to be reactive.

**10.2. Chemical stability**

Stable

**10.3. Possibility of hazardous reactions**

Will Not Occur

**10.4. Conditions to avoid**

None anticipated

**10.5. Incompatible materials**

Hydrofluoric acid.

**10.6. Hazardous decomposition products**

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

**11. Toxicological Information**

**Information on routes of exposure**

**Principle Route of Exposure** Eye or skin contact, inhalation.

**Symptoms related to exposure**

**Most Important Symptoms/Effects**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

**Numerical measures of toxicity**

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Crystalline silica, quartz	14808-60-7	> 15000 mg/kg (human)	No information available	No data available
Crystalline silica, cristobalite	14464-46-1	> 15000 mg/kg (human) (similar substance)	No information available	No data available
Crystalline silica, tridymite	15468-32-3	>15,000 mg/kg (Human)	No data available	No data available

**Immediate, delayed and chronic health effects from exposure**

**Inhalation**

Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

**Eye Contact**

May cause mechanical irritation to eye.

**Skin Contact**

None known.

**Ingestion**

None known.

**Chronic Effects/Carcinogenicity**

**Silicosis:** Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

**Cancer Status:** The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental

animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2). There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

**Exposure Levels**

No data available

**Interactive effects**

Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to quartz dust.

**Data limitations**

No data available

Substances	CAS Number	Skin corrosion/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin
Crystalline silica, cristobalite	14464-46-1	Non-irritating to the skin
Crystalline silica, tridymite	15468-32-3	Non-irritating to the skin

Substances	CAS Number	Serious eye damage/irritation
Crystalline silica, quartz	14808-60-7	Mechanical irritation of the eyes is possible. No information available
Crystalline silica, cristobalite	14464-46-1	Mechanical irritation of the eyes is possible.
Crystalline silica, tridymite	15468-32-3	Mechanical irritation of the eyes is possible.

Substances	CAS Number	Skin Sensitization
Crystalline silica, quartz	14808-60-7	No information available.
Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

Substances	CAS Number	Respiratory Sensitization
Crystalline silica, quartz	14808-60-7	No information available
Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

Substances	CAS Number	Mutagenic Effects
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.
Crystalline silica, cristobalite	14464-46-1	Not regarded as mutagenic.
Crystalline silica, tridymite	15468-32-3	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.
Crystalline silica, cristobalite	14464-46-1	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.
Crystalline silica, tridymite	15468-32-3	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this

		substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.
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Substances	CAS Number	Reproductive toxicity
Crystalline silica, quartz	14808-60-7	No information available
Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

Substances	CAS Number	STOT - single exposure
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.
Crystalline silica, cristobalite	14464-46-1	No significant toxicity observed in animal studies at concentration requiring classification.
Crystalline silica, tridymite	15468-32-3	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Crystalline silica, cristobalite	14464-46-1	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Crystalline silica, tridymite	15468-32-3	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)

Substances	CAS Number	Aspiration hazard
Crystalline silica, quartz	14808-60-7	Not applicable
Crystalline silica, cristobalite	14464-46-1	Not applicable
Crystalline silica, tridymite	15468-32-3	Not applicable

**12. Ecological Information**

**Ecotoxicity**

**Product Ecotoxicity Data**

No data available

**Substance Ecotoxicity Data**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Crystalline silica, quartz	14808-60-7	EC50 (72 h) =440 mg/L (Selenastrum capricornutum)	LL0 (96 h) =10000 mg/L (Danio rerio)	No information available	LL50 (24 h) >10000 mg/L (Daphnia magna)
Crystalline silica, cristobalite	14464-46-1	No information available	LL0 (96 h) 10000 mg/L (Danio rerio)	No information available	LL50 (24 h) >10000 mg/L (Daphnia magna)
Crystalline silica, tridymite	15468-32-3	No information available	LL0 (96h) 10,000 mg/L(Danio rerio) (similar substance)	No information available	LL50 (24h) > 10,000 mg/L (Daphnia magna) (similar substance)

**12.2. Persistence and degradability**

Substances	CAS Number	Persistence and Degradability
Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, cristobalite	14464-46-1	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, tridymite	15468-32-3	The methods for determining biodegradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

Substances	CAS Number	Log Pow
Crystalline silica, quartz	14808-60-7	No information available
Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

**12.4. Mobility in soil**

Substances	CAS Number	Mobility
Crystalline silica, quartz	14808-60-7	No information available
Crystalline silica, cristobalite	14464-46-1	No information available

Crystalline silica, tridymite	15468-32-3	No information available
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**12.6. Other adverse effects**

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**13. Disposal Considerations**

**Safe handling and disposal methods**

If practical, recover and reclaim, recycle, or reuse by the guidelines of an approved local reuse program. Should contaminated product become a waste, dispose of in a licensed industrial landfill according to federal, state, and local regulations.

**Disposal of any contaminated packaging**

Follow all applicable national or local regulations.

**Environmental regulations**

Not applicable

**14. Transport Information**

**Transportation Information**

**Australia ADG**

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**IMDG/IMO**

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**IATA/ICAO**

UN Number	Not restricted
UN proper shipping name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

**Special precautions during transport**

None

**HazChem Code**

None Allocated

**15. Regulatory Information**

**Safety, health and environmental regulations specific for the product**

**International Inventories**

<b>Australian AICS Inventory</b>	All components are listed on the AICS or are subject to a relevant exemption, permit, or assessment certificate.
<b>New Zealand Inventory of Chemicals</b>	All components are listed on the NZIoC or are subject to a relevant exemption, permit, or assessment certificate.
<b>EINECS (European Inventory of Existing Chemical Substances)</b>	This product, and all its components, complies with EINECS
<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.



**Canadian Domestic Substances List** All components listed on inventory or are exempt.  
**(DSL)**

**Poisons Schedule number**

None Allocated

**International Agreements**

**Montreal Protocol - Ozone Depleting Substances:**

Does not apply

**Stolkhom Convention - Persistent Organic Pollutants:**

Does not apply

**Rotterdam Convention - Prior Informed Consent:**

Does not apply

**Basel Convention - Hazardous Waste:**

Does not apply

<b>16. Other information</b>
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**Date of preparation or review**

**Revision Date:** 31-Aug-2016

**Revision Note**

**Full text of H-Statements referred to under sections 2 and 3**

None

**Additional information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

**Key abbreviations or acronyms used**

bw – body weight

CAS – Chemical Abstracts Service

EC50 – Effective Concentration 50%

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

NOEC – No Observed Effect Concentration

OEL – Occupational Exposure Limit

PBT – Persistent Bioaccumulative and Toxic

ppm – parts per million

STEL – Short Term Exposure Limit

TWA – Time-Weighted Average

vPvB – very Persistent and very Bioaccumulative

h - hour

mg/m<sup>3</sup> - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

w/w - weight/weight

d - day

**Key literature references and sources for data**

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

NZ CCID

**Disclaimer Statement**

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**End of Safety Data Sheet**