Weatherford

Material Safety Data Sheet

WGA 15L

1. Product and Company Identification

Material name	**WGA 15L**
Patent Number	Not available
Revision date	September-29-2011
Version No.	7
CAS #	Mixture
Product use	Water Gelling Agent
Manufacturer information	WEATHERFORD INTERNATIONAL ENG.CHEM. 4420 SOUTH FLORES RD ELMENDORF, TX 78112 US Product Safety 210-626-0850 Chemtrec 800-424-9300
Emergency	Chemtrec 800-424-9300
Supplier information	Weatherford Fracturing Technologies 515 Post Oak Blvd Suite 1000 Houston, TX 77027 US
Supplier emergency telephone number(s)	Chemtrec 800-424-9300 Int'l 703-527-3887

2. Hazards Identification

Emergency overview	WARNING COMBUSTIBLE LIQUID AND VAPOR. Toxic by inhalation. Harmful in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause breathing disorders and lung damage. Components of the product may affect the nervous system. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation.
Eyes	Do not get this material in contact with eyes. Harmful in contact with eyes. Irritating to eyes.
Skin	Do not get this material in contact with skin. Harmful if absorbed through the skin. Irritating to skin.
Inhalation	Do not breathe vapor. Toxic by inhalation. Irritating to respiratory system.

Ingestion	Do not ingest. Irritating to mouth, throat, and stomach. May cause delayed lung damage. Harmful if swallowed.
Target organs	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged and may cause blood damage. These effects have not been observed in humans. Central nervous system. Lungs. Eyes. Skin contact
Chronic effects	Repeated inhalation may be harmful; lung irritation and serious central nervous system disorders may result.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Petroleum Distillates	64742-47-8	40 - 70

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.
Skin contact	Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Notes to physician	Symptoms may be delayed.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties	Combustible by OSHA criteria. Containers may explode when heated. Runoff to sewer may cause fire or explosion hazard.
Extinguishing media	
Suitable extinguishing media	Water. Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Protection of firefighters	
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters	In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly. Never return spills in original containers for re-use.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Do not use in areas without adequate ventilation. Do not handle or store near an open flame, heat or other sources of ignition. Do not smoke. All equipment used when handling the product must be grounded. Do not breathe vapors or spray mist. Use only with adequate ventilation. Wear self-contained breathing apparatus and protective suit. Avoid release to the environment. Wash thoroughly after handling. Avoid prolonged exposure.
Storage	Keep locked-up. Keep the container dry. Keep away from heat and sources of ignition (spark or flame). The pressure in sealed containers can increase under the influence of heat. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Engineering controls	Provide adequate ventilation.

Personal protective equipment

Eye / face protection	Wear chemical goggles. Face-shield.
Skin protection	Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Protective gloves.Impervious gloves.
General hygeine considerations	When using do not smoke. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Hazy liquid.
Color	Tan.
Odor	Hydrocarbon-like.
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	123.8 °F (51.45 °C) estimated
Flash point	151.3 °F (66.1 °C)
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.048 - 1.062
Relative density	1.0549 g/cm3 estimated
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
VOC	48.2188 % estimated
Pour point	0 °F (-17.8 °C)

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks. Avoid high temperatures.
Incompatible materials	Oxidizing materials.
Hazardous decomposition products	Carbon oxides.

Possibility of hazardous reactions Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute LD50: 5890 mg/kg estimated, Rat, Oral
Acute LD50: 4149 mg/kg estimated, Rat, Dermal
Acute LC50: 11 mg/l/4h estimated, Rat, Inhalation

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Petroleum Distillates	64742-47-8	Inhalation LC50 Rat: >5.2 mg/L/4H; Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Sensitization May cause sensitization of susceptible persons.

Chronic effects Prolonged exposure may cause chronic effects.

Carcinogenicity Not expected to be hazardous by OSHA criteria.

Neurological effects Excessive exposure may cause central nervous system effects such as dizziness, drowsiness or headaches.

12. Ecological Information

Ecotoxicity

LC50 93.91 mg/L estimated, Fish, 96.00 Hours,
Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

Petroleum Distillates	64742-47-8	96 Hr LC50 Pimephales promelas: 45 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1740 mg/L [static]

Ecotoxicity - Water Flea Data

Petroleum Distillates	64742-47-8	96 Hr LC50 Den-dronereides heteropoda: 4720 mg/L

Environmental effects

Ecotoxicity - Freshwater Fish Species Data

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Ecotoxicity - Water Flea Data

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13. Disposal Considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.20-24). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

IATA

Not regulated as hazardous goods.

15. Regulatory Information

Labelling

Contains 2-Butoxyethanol, Petroleum Distillates

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

U.S. - Texas - Effects Screening Levels - Long Term

Petroleum Distillates	64742-47-8	350 µg/m3 ESL

U.S. - Texas - Effects Screening Levels - Short Term

Petroleum Distillates	64742-47-8	3500 µg/m3 ESL

16. Other Information

HMIS® ratings	Health: 2 Flammability: 2 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 2 Instability: 0
Prepared by	Product Stewardship 515 Post Oak Blvd Houston, TX 77027 724-920-2729
Issue date	September-29-2011
MSDS sections updated	Product and Company Identification: Alternate Trade Names