



## Material Safety Data Sheet

# WBK 136L

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0
PERSONAL PROTECTION		

### 1. Product and Company Identification

<b>Material name</b>	<b>WBK 136L</b>
<b>Patent Number</b>	Not available
<b>Chemical description</b>	Alkanolamine
<b>Revision date</b>	March-26-2009
<b>Version No.</b>	1
<b>CAS #</b>	Mixture
<b>Product use</b>	Breaker
<b>Supplier information</b>	Weatherford Fracturing Technologies 515 Post Oak Blvd Suite 1000 Houston, TX 77027 US

### 2. Hazards Identification

<b>Emergency overview</b>	WARNING  May be ignited by heat, sparks or flames. Harmful in contact with eyes. Irritating to skin. Irritating to respiratory system. Prolonged exposure may cause chronic effects. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Inhalation. Skin contact.
<b>Eyes</b>	Eye contact may result in corneal injury. Contact may irritate or burn eyes. Do not get this material in contact with eyes.
<b>Skin</b>	Irritating to skin.
<b>Inhalation</b>	Irritating to respiratory system. Do not breathe dust/fume/gas/mist/vapors/spray.
<b>Ingestion</b>	Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Chronic effects</b>	Conjunctiva.
<b>Signs and symptoms</b>	Corneal damage. Conjunctivitis.
<b>Potential environmental effects</b>	May cause long-term adverse effects in the environment.

### 3. Composition / Information on Ingredients

Components	CAS #	Percent
Triethanolamine	102-71-6	80 - 90

#### 4. First Aid Measures

##### First aid procedures

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
<b>Skin contact</b>	Wash off immediately with plenty of water. Remove and isolate contaminated clothing and shoes. If skin irritation persists, call a physician.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.
<b>Ingestion</b>	Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If ingestion of a large amount does occur, seek medical attention.

##### Notes to physician

Symptoms may be delayed.

##### General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire Fighting Measures

##### Extinguishing media

<b>Suitable extinguishing media</b>	Alcohol foam. Polymer foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ). Halons.
<b>Unsuitable extinguishing media</b>	Do not use a solid water stream as it may scatter and spread fire.

##### Protection of firefighters

<b>Protective equipment and precautions for firefighters</b>	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. 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. Do not scatter spilled material with high pressure water streams.
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#### 6. Accidental Release Measures

##### Personal precautions

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.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

## 7. Handling and Storage

**Handling**

Do not handle or store near an open flame, heat or other sources of ignition. Do not breathe vapors or spray mist. Avoid contact with skin. Use only with adequate ventilation. Do not get this material in contact with eyes. Avoid release to the environment. Wash thoroughly after handling. Avoid prolonged exposure.

**Storage**

Keep away from heat and sources of ignition (spark or flame). Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

**Exposure limits****ACGIH****Components****CAS #****TWA****STEL****Ceiling**

Triethanolamine

102-71-6

5 mg/m<sup>3</sup>

Not established

Not established

**Engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment****Eye / face protection**

Do not get this material in contact with eyes. Wear chemical goggles.

**Skin protection**

Avoid contact with the skin. Protective gloves. Impervious gloves. Wear appropriate chemical resistant clothing.

**Respiratory protection**

Wear positive pressure self-contained breathing apparatus (SCBA). When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**General hygiene considerations**

When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical & Chemical Properties

**Appearance**

Pale Liquid

**Color**

Pale

**Odor**

Odorless.

**Odor threshold**

Not available

**Physical state**

Liquid.

**Form**

Liquid.

**pH**

10.3

**Melting point**

64.4 °F (17.94 °C) estimated

**Freezing point**

23 °F (-5 °C)



<b>Boiling point</b>	212 °F (100 °C)
<b>Flash point</b>	339.8 °F (171 °C) estimated
<b>Evaporation rate</b>	Not available
<b>Flammability</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Specific gravity</b>	1.12 @ 20 C
<b>Relative density</b>	1.1199 g/cm <sup>3</sup> estimated
<b>Solubility (water)</b>	> 10 % Soluble
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	527 °F (275 °C) estimated
<b>Decomposition temperature</b>	Not available

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable at normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible materials</b>	Isocyanates. Strong oxidizing agents. Acids. Vinyl acetates. Caustics.

## 11. Toxicological Information

<b>Acute effects</b>	Acute LD50: 4929 mg/kg estimated, Rat, Oral Acute LD50: 2353 mg/kg estimated, Rat, Dermal
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### Component analysis - LD50

#### Toxicology Data - Selected LD50s and LC50s

Triethanolamine	102-71-6	Oral LD50 Rat: 4190 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg; Dermal LD50 Rat:>16 mL/kg
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<b>Sensitization</b>	Not expected to be hazardous by OSHA criteria.
<b>Local effects</b>	Contact may irritate or burn eyes. Irritating to skin. Irritating to respiratory system.
<b>Chronic effects</b>	Hazardous by OSHA criteria.
<b>Carcinogenicity</b>	Not expected to be hazardous by OSHA criteria.
<b>Neurological effects</b>	Not expected to be hazardous by OSHA criteria.



## 12. Ecological Information

**Ecotoxicity** LC50 13882 mg/L estimated, Fish, 96.00 Hours,  
IC50 254 mg/L estimated, Algae, 72.00 Hours,  
Components of this product have been identified as having potential environmental concerns.

### Ecotoxicity - Freshwater Algae Data

Triethanolamine	102-71-6	72 Hr EC50 Scenedesmus subspicatus: 216 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 169 mg/L
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### Ecotoxicity - Freshwater Fish Species Data

Triethanolamine	102-71-6	96 Hr LC50 Pimephales promelas: 11800 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 450-1000 mg/L [static]
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### Ecotoxicity - Microtox Data

Triethanolamine	102-71-6	30 min EC50 Pseudomonas putida: >10000 mg/L
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### Ecotoxicity - Water Flea Data

Triethanolamine	102-71-6	24 Hr EC50 Daphnia magna: 1386 mg/L
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## Environmental effects

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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 261.4 (b)(4)). 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 dangerous goods.

### Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.



**15. Regulatory Information**

**Labelling**

**Contains** Triethanolamine

**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.

**U.S. - FDA - Direct Food Additives**

Triethanolamine 102-71-6 21 CFR 173.315

**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 - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Inventory status**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	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)

**International regulations**

**Canada - WHMIS - Ingredient Disclosure List**

Triethanolamine 102-71-6 1 %



**State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**U.S. - Massachusetts - Right To Know List**

Triethanolamine 102-71-6 Present

**U.S. - Minnesota - Hazardous Substance List**

Triethanolamine 102-71-6 Present

**U.S. - Pennsylvania - RTK (Right to Know) List**

Triethanolamine 102-71-6 Present

**U.S. - Rhode Island - Hazardous Substance List**

Triethanolamine 102-71-6 Flammable

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

Triethanolamine 102-71-6 5 µg/m3 ESL

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

Triethanolamine 102-71-6 50 µg/m3 ESL

**16. Other Information**

**HMIS® ratings**

Health: 2\*  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**

Health: 1  
Flammability: 1  
Instability: 0

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**Disclaimer**

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**Issue date**

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