



**FINALE® HERBICIDE**

Version 3.0 / USA  
102000004004

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Revision Date: 07/14/2014  
Print Date: 02/04/2015

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**Product identifier**

**Trade name** FINALE® HERBICIDE  
**Product code (UVP)** 05950643  
**SDS Number** 102000004004  
**EPA Registration No.** 432-1229

**Relevant identified uses of the substance or mixture and uses advised against**

**Use** Herbicide  
**Restrictions on use** See product label for restrictions.

**Information on manufacturer**

Bayer CropScience  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States

**Emergency Telephone Number (24hr/ 7 days)** 1-800-334-7577  
**Product Information Telephone Number** 1-866-99BAYER (1-866-992-2937)  
**SDS Information or Request** SDSINFO.BCS-NA@bayer.com

**SECTION 2: HAZARDS IDENTIFICATION**

**Classification in accordance with regulation HCS 29CFR §1910.1200**

Reproductive toxicity : Category 1B  
Specific target organ toxicity - repeated exposure : Category 2  
Eye irritation : Category 2A  
Acute toxicity (Inhalation): Category 4



**Signal word:** Danger

**Hazard statements**

May damage fertility or the unborn child.  
May cause damage to organs (nervous system) through prolonged or repeated exposure.  
Causes serious eye irritation.  
Harmful if inhaled.



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**Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe spray.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
IF exposed or concerned: Get medical advice/attention.  
Get medical advice/attention if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor/physician if you feel unwell.  
Store locked up.  
Dispose of contents/container in accordance with local regulation.

**Other hazards**

No other hazards known.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name	CAS-No.	Concentration % by weight
Glufosinate ammonium	77182-82-2	11.33
Sodium alkyl ether sulphate	68585-34-2	12.70
1-Methoxy-2-propanol	107-98-2	10.00

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**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

**General advice** When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Inhalation** Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

**Skin contact** Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

**Eye contact** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

**Ingestion** Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless



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directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**                      Gastrointestinal disturbance, Tremors, Convulsions, Drowsiness, Diarrhoea, Vomiting, Nausea, muscular weakness, Tachycardia, Respiratory failure, Unconsciousness, Coma

Symptoms may be delayed.

**Indication of any immediate medical attention and special treatment needed**

**Treatment**                      Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.

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**SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing media**

**Suitable**                              Carbon dioxide (CO<sub>2</sub>), Foam, Water spray, Dry powder

**Unsuitable**                            None known.

**Special hazards arising from the substance or mixture**                      In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Oxides of phosphorus, Nitrogen oxides (NO<sub>x</sub>)

**Advice for firefighters**

**Special protective equipment for fire-fighters**                      Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**Further information**                      Fight fire from upwind position. Keep out of smoke. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.

**Flash point**                              > 100 °C

**Autoignition temperature**                      no data available

**Lower explosion limit**                      no data available

**Upper explosion limit**                      no data available

**Explosivity**                              not applicable

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

**Precautions** Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

**Methods and materials for containment and cleaning up**

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Advice on protection against fire and explosion** Keep away from heat and sources of ignition.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
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Glufosinate ammonium	77182-82-2	0.9 mg/m3 (TWA)		OES BCS*
Sodium alkyl ether sulphate (Particulate.)	68585-34-2	5ug/m3 (AN ESL)	02 2013	TX ESL
Sodium alkyl ether sulphate (Particulate.)	68585-34-2	50ug/m3 (ST ESL)	02 2013	TX ESL
1-Methoxy-2-propanol	107-98-2	50 ppm (TWA)	02 2013	ACGIH
1-Methoxy-2-propanol	107-98-2	100 ppm (STEL)	02 2013	ACGIH
1-Methoxy-2-propanol	107-98-2	360 mg/m3/100 ppm (REL)	2010	NIOSH
1-Methoxy-2-propanol	107-98-2	540 mg/m3/150 ppm (STEL)	2010	NIOSH
1-Methoxy-2-propanol	107-98-2	360 mg/m3/100 ppm (TWA)	1989	OSHA Z1A
1-Methoxy-2-propanol	107-98-2	540 mg/m3/150 ppm (STEL)	1989	OSHA Z1A
1-Methoxy-2-propanol	107-98-2	380 mg/m3/100 ppm (TWA)	06 2008	TN OEL
1-Methoxy-2-propanol	107-98-2	540 mg/m3/150 ppm (STEL)	06 2008	TN OEL
1-Methoxy-2-propanol	107-98-2	1000ppb (ST ESL)	07 2011	TX ESL
1-Methoxy-2-propanol	107-98-2	3700ug/m3 (ST ESL)	07 2011	TX ESL
1-Methoxy-2-propanol	107-98-2	370ug/m3 (AN ESL)	07 2011	TX ESL
1-Methoxy-2-propanol	107-98-2	100ppb (AN ESL)	07 2011	TX ESL
1-Methoxy-2-propanol	107-98-2	540 mg/m3/150 ppm (STEL)	08 2010	US CA OEL
1-Methoxy-2-propanol	107-98-2	360 mg/m3/100 ppm (TWA PEL)	08 2010	US CA OEL

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**Exposure controls**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**Hand protection**

Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)



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<b>Eye protection</b>	Tightly fitting safety goggles
<b>Skin and body protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>General protective measures</b>	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry. Eye wash facility and safety shower should be available.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	blue
<b>Physical State</b>	Liquid
<b>Odor</b>	weakly pungent
<b>Odour Threshold</b>	no data available
<b>pH</b>	5.5 - 7.5 at 100 %
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.06 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	no data available
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	soluble
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	not applicable
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	no data available
<b>Flash point</b>	> 100 °C
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	not applicable

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**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**

<b>Thermal decomposition</b>	not applicable
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	Bases
<b>Hazardous decomposition products</b>	Ammonia

**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>Exposure routes</b>	Eye contact, Inhalation, Skin Absorption, Ingestion
<b>Immediate Effects</b>	
<b>Eye</b>	Causes substantial but temporary eye injury. May cause severe eye irritation.
<b>Skin</b>	Harmful if absorbed through skin. May cause slight irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (male/female combined rat) 3,570 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (female rat) 4.14 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.
<b>Acute dermal toxicity</b>	LD50 (rat) > 2,000 mg/kg
<b>Skin irritation</b>	Slight irritation (rabbit)
<b>Eye irritation</b>	Severe eye irritation. (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (guinea pig)
<b>Assessment repeated dose toxicity</b>	
	Glufosinate-ammonium caused neurobehavioral effects and/or neuropathological changes in animal studies. Glufosinate-ammonium was well tolerated in rats and mice but less well tolerated in the dog in subchronic studies.
<b>Assessment Mutagenicity</b>	
	Glufosinate-ammonium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.







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<b>Product</b>	Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility. Dispose in accordance with all local, state/provincial and federal regulations.
<b>Contaminated packaging</b>	Do not use containers for other products. Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.
<b>RCRA Information</b>	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

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**SECTION 14: TRANSPORT INFORMATION**

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: COMPOUNDS, TREE OR WEEDKILLING, N.O.I., other than poison; HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 432-1229

**US Federal Regulations**

**TSCA list**

Sodium alkyl ether sulphate	68585-34-2
1-Methoxy-2-propanol	107-98-2

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**  
None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

None.



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**Canadian Regulations**

**Canadian Domestic Substance List**

Sodium alkyl ether sulphate	68585-34-2
1-Methoxy-2-propanol	107-98-2

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**

**European Inventory of Existing Commercial Substances (EINECS)**

1-Methoxy-2-propanol	107-98-2
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**EPA/FIFRA Information:**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

**Signal word:** Warning!

**Hazard statements:** Causes substantial but temporary eye injury.  
Harmful if swallowed, inhaled or absorbed through the skin.  
Avoid contact with skin, eyes and clothing.  
Avoid inhalation of vapour or mist.

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**SECTION 16: OTHER INFORMATION**

**NFPA 704 (National Fire Protection Association):**

Health - 2      Flammability - 1      Instability - 0      Others - none

**HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)**

Health - 2      Flammability - 1      Physical Hazard - 0      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

**Revision Date:** 07/14/2014

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are

**Bayer CropScience**  
SAFETY DATA SHEET



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