

Safety Data Sheet

Finale Herbicide

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1. Identification

Product identifier used on the label

Finale Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 861443
EPA Registration number: 7969-444

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Repr.	1B (fertility)	Reproductive toxicity
Repr.	1B (unborn child)	Reproductive toxicity
STOT RE	2	Specific target organ toxicity — repeated exposure
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

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Aquatic Acute

3

Hazardous to the aquatic environment - acute

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H319 Causes serious eye irritation.
H315 Causes skin irritation.
H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure.
H360 May damage fertility. May damage the unborn child.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P260 Do not breathe dust/gas/mist/vapours.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
77182-82-2	11.33 %	Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
68585-34-2	12.7 %	sodium lauryl ether sulfate

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107-98-2

10.0 %

1-methoxypropan-2-ol

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Immediately wash thoroughly with soap and water, seek medical attention. After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Consult a doctor if skin irritation persists.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Remove contact lenses, if present. If symptoms persist, seek medical advice.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., gastrointestinal complaints, tremors, convulsions, diarrhea, vomiting, nausea, weakness, unconsciousness, coma, respiratory arrest, tachycardia, Symptoms may be delayed for several hours.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, hydrogen cyanide, nitrogen oxides, phosphorus oxides

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

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Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Protect contents from the effects of light. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

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8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

1-methoxypropan-2-ol	OSHA PEL	TWA value 100 ppm 360 mg/m ³ ; STEL value 150 ppm 540 mg/m ³ ;
	ACGIH TLV	TWA value 50 ppm ; STEL value 100 ppm ;

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid
Odour:	pungent
Odour threshold:	Not determined since harmful by inhalation.
Colour:	blue
pH value:	approx. 5 - 8 (undiluted)
Melting point:	not determined
Boiling point:	not determined
Flash point:	> 100 °C
Flammability:	not applicable

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Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	Based on the water content the product does not ignite.
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.
Density:	approx. 1.06 g/cm ³ (20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not determined
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	not determined
Solubility in water:	miscible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See MSDS section 7 - Handling and storage.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

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No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Oral

Type of value: LD50
Species: rat (male/female)
Value: 3,570 mg/kg

Inhalation

Type of value: LC50
Species: rat (female)
Value: 4.14 mg/l
Exposure time: 4 h
An aerosol was tested.

Dermal

Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Eye contact causes irritation.

Skin

Species: rabbit
Result: Slightly irritating.

Eye

Species: rabbit
Result: Irritant.

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Species: guinea pig
Result: Non-sensitizing.

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Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
Assessment of repeated dose toxicity: Prolonged or repeated exposure may cause neurological disturbances.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
Assessment of reproduction toxicity: Causes impairment of fertility in laboratory animals.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
Assessment of teratogenicity: The substance caused malformations/developmental toxicity in laboratory animals. The substance did not cause malformations in animal studies; however, toxicity to development was observed at doses that were toxic to the parental animals.

Other Information

Misuse can be harmful to health.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., gastrointestinal complaints, tremors, convulsions, diarrhea, vomiting, nausea, weakness, unconsciousness, coma, respiratory arrest, tachycardia, Symptoms may be delayed for several hours.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

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There is a high probability that the product is not acutely harmful to aquatic organisms.
The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
LC50 (96 h) 710 mg/l, Oncorhynchus mykiss (other, static)

Aquatic invertebrates

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
Limit concentration test only (LIMIT test).
EC50 (48 h) 668 mg/l, Daphnia magna (other, static)

Aquatic plants

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
EC50 (96 h) > 1,000 mg/l (growth rate), Scenedesmus subspicatus
No observed effect concentration (96 h) 320 mg/l, Scenedesmus subspicatus

Chronic toxicity to fish

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
No observed effect concentration (21 d) 100 mg/l, Oncorhynchus mykiss (OECD Guideline 204, Flow through.)

Chronic toxicity to aquatic invertebrates

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
No observed effect concentration (21 d) 18 mg/l, Daphnia magna (other, semistatic)

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt
Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

Bioaccumulation potential

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Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt

*Bioconcentration factor: 0.05 - 0.3 (42 d), Lepomis macrochirus
Does not accumulate in organisms.*

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

Chemical TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

<u>CERCLA RQ</u>	<u>CAS Number</u>	<u>Chemical name</u>
100 LBS	107-98-2	1-methoxypropan-2-ol

State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
NJ	107-98-2	1-methoxypropan-2-ol
PA	107-98-2	1-methoxypropan-2-ol

Labeling requirements under FIFRA

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 workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

WARNING:

Causes substantial but temporary eye injury.

HARMFUL IF SWALLOWED.

HARMFUL IF INHALED.

HARMFUL IF ABSORBED THROUGH SKIN.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of mists/vapours.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2019/04/29

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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