



# N-Edge 2

## Safety Data Sheet 40144

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision date: 05/29/2019

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : N-Edge 2  
Product code : 40144

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

CHS Inc.  
5500 Cenex Drive  
Inver Grove Heights, MN 55077  
T 1-800-232-3639

#### 1.4. Emergency telephone number

Emergency number : 1-800-424-9300  
ChemTrec

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H302 - Harmful if swallowed.  
H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H361 - Suspected of damaging fertility or the unborn child.

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear Eye protection, Face protection, Skin protection. Clothing protection.  
P301+P312 - If swallowed: Call a doctor or poison control center if ingested or eye contact has occurred if you feel unwell  
P302+P352 - If on skin: Wash with plenty of water  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P310 - Immediately call a doctor or poison control center if ingested or eye contact has occurred  
P321 - Specific treatment (see additional precautions on this label)  
P330 - Rinse mouth.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362 - Take off contaminated clothing.

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P405 - Store locked up.  
P501 - Dispose of contents/container to a licensed hazardous waste facility in accordance with state and local agencies

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
N-(n-butyl) thiophosphoric triamide (NBPT)	(CAS-No.) 94317-64-3	41.351	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318 Repr. 2, H361

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

- Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
- Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Combustible liquid.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.

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Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

For containment : Contain released product, pump into suitable containers.  
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Employees should wash their hands and face before eating, drinking, or smoking and before leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed and in a well-ventilated area. Long-term storage at temperatures above 100 F (36 C) and long term storage of opened containers, can adversely impact the efficacy of products containing N-(n-butyl)-thiophosphoric triamide. Store in accordance with all applicable local, state, and national regulations.  
Incompatible products : Strong bases. Strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.  
Storage temperature : 25 (5 - 36) °C

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)

Not applicable

### 8.2. Appropriate engineering controls

No additional information available

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Respiratory protection:

Wear appropriate mask

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Colour : Green  
Odour : Characteristic odour  
Odour threshold : No data available  
pH :  $\geq 7.5$  (7 - 9)

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Melting point	: No data available
Freezing point	: <= 0 °C
Boiling point	: >= 100 °C
Flash point	: 108 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Combustible liquid.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.111 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

No additional information available

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE US (oral)	500 mg/kg bodyweight
<b>N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)</b>	
LD50 oral rat	2000 mg/kg
LD50 dermal rat	2000 mg/kg
ATE US (oral)	2000 mg/kg bodyweight
ATE US (dermal)	2000 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation. pH: >= 7.5 (7 - 9)
Serious eye damage/irritation	: Causes serious eye damage. pH: >= 7.5 (7 - 9)
Respiratory or skin sensitisation	: Not classified

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC. The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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#### N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)

LC50 fish 1	>= 1140 mg/l Bluegill
EC50 Daphnia 1	>= 290 mg/l

#### 12.2. Persistence and degradability

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Persistence and degradability	Biodegradable in the soil.
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##### N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)

Persistence and degradability	Not established.
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#### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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##### N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)

Bioaccumulative potential	Not established.
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#### 12.4. Mobility in soil

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Ecology - soil	Not toxic to plants.
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#### 12.5. Other adverse effects

Other information	: No other effects known.
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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Product/Packaging disposal recommendations	: Dispose of contents/containers in hazardous or special waste collection point, an approved disposal plant, a licensed hazardous waste disposal contractor or authorized waste collection site in accordance with local, regional and/or international regulation, except for empty clean containers which can be disposed of as non hazardous waste.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Other information	: No supplementary information available.
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### Transportation of Dangerous Goods

#### Transport by sea

#### Air transport

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

## SECTION 16: Other information

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Other information : Some testing has been conducted to assess the stability and compatibility of this product with certain herbicides and adjuvants. Test results show that the rate of the degradation should not preclude the use of this product with most commonly used agricultural herbicides under normal use. Most agricultural chemicals compatible with UAN solutions are also compatible with this product. However, compatibility tests prior to use are recommended. Glyphosate herbicides may cause an increase in the rate of degradation when tank-mixed with this product. Therefore such mix should be applied soon after mixing to avoid a possible reduction in the effectiveness of the active ingredient. Product should not be combined with Dicyandiamide (DCD) products.

Full text of H-statements:

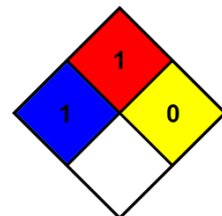
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

NFPA specific hazard : None



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### Hazard Rating

- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
- Personal protection : C  
C - Safety glasses, Gloves, Synthetic apron

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*