



N-Edge Pro

Revision Date 10/22/2020

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- Trade name N-Edge Pro

**1.2 Relevant identified uses of the substance or mixture and uses advised against****1.3 Details of the supplier of the safety data sheet****Company**

CHS Inc  
5500 Cenex Drive  
Inver Grove Heights, MN 55077  
US Telephone: 1-651-355-6000  
Website: www.chsinc.com

**1.4 Emergency telephone**

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 1-800-424-9300

**SECTION 2: Hazards identification**

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

**2.1 Classification of the substance or mixture****HCS 2012 (29 CFR 1910.1200)**

Flammable liquids, Category 4  
Serious eye damage, Category 1  
Reproductive toxicity, Category 2

**2.2 Label elements****HCS 2012 (29 CFR 1910.1200)****Pictogram****Signal Word**

- Danger

**Hazard Statements**

- H227 Combustible liquid.
- H318 Causes serious eye damage.
- H361 Suspected of damaging fertility or the unborn child.

**Precautionary Statements**Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

**2.3 Other hazards which do not result in classification**

None identified

**SECTION 3: Composition/information on ingredients****3.1 Substance**

- Not applicable, this product is a mixture.

**3.2 Mixture**

- Synonyms AgRho N Dual Protect Flex B 17/23 (NBPT/DCD)

**Hazardous Ingredients and Impurities**

Chemical name	Identification number CAS-No.	Concentration [%]
Organic solvent	*****	>= 50 - < 60
Phosphorothioic triamide, N-butyl-	94317-64-3	>= 15 - < 20
	*****	>= 1 - < 5
Butanoic acid, 3-methylbutyl ester	*****	>= 1 - < 5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4: First aid measures****4.1 Description of first-aid measures****General advice**

- First responder needs to protect himself.
- Place affected apparel in a sealed bag for subsequent decontamination.

**In case of inhalation**

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- If breathed in, move person into fresh air.
- If breathing is difficult, give oxygen.
- If victim has stopped breathing:
- administer CPR (cardio-pulmonary resuscitation)
- Get immediate medical advice/ attention.

#### **In case of skin contact**

- In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Seek medical advice.
- Wash contaminated clothing before reuse.

#### **In case of eye contact**

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Get immediate medical advice/ attention.

#### **In case of ingestion**

- Do not induce vomiting without medical advice.
- If victim is conscious:
- Rinse mouth with water.
- Keep at rest.
- Do not give anything to drink.
- Do not leave the victim unattended.
- Vomiting may occur spontaneously
- Risk of product entering the lungs on vomiting after ingestion.
- Lay victim on side.
- Seek medical advice.

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

##### **Effects**

- Skin contact may aggravate existing skin disease
- Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis

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

##### **Notes to physician**

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
- Treat symptomatically.
- There is no specific antidote available.

### **SECTION 5: Firefighting measures**

**Flash point** >=167 °F (75 °C)  
Method: closed cup

**Autoignition temperature** No data available

**Flammability / Explosive limit** No data available

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

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- Extinguishing media - small fires
- Dry chemical
- Carbon dioxide (CO2)
  
- Extinguishing media - large fires
- Foam
- Water spray

**Unsuitable extinguishing media**

- High volume water jet
- (frothing possible)

**5.2 Special hazards arising from the substance or mixture****Specific hazards during fire fighting**

- Under fire conditions:
- Will burn
- Container may rupture on heating.
- Vapors may spread long distances and ignite.
- Hazardous decomposition products formed under fire conditions.

**Hazardous combustion products:**

- On combustion or on thermal decomposition (pyrolysis), releases:
- Carbon oxides
- Hazardous combustion products

**5.3 Advice for firefighters****Special protective equipment for fire-fighters**

- Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

**Specific fire fighting methods**

- Do not use a solid water stream as it may scatter and spread fire.

**Further information**

- Standard procedure for chemical fires.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- Wear suitable protective equipment.
- For further information refer to section 8 "Exposure controls / personal protection."

**6.2 Environmental precautions**

- Do not flush into surface water or sanitary sewer system.
- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
  
- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

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

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**Methods for containment**

- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.
- Dam up with sand or inert earth (do not use combustible materials).

**Recovery**

- Recover as much of the product as possible.
- Soak up with inert absorbent material.
- Shovel or sweep up.
- Keep in suitable, closed containers for disposal.
- Never return spills in original containers for re-use.

**Decontamination / cleaning**

- Clean contaminated surface thoroughly.
- Wash nonrecoverable remainder with large amounts of water.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.

**Disposal**

- Dispose of in accordance with local regulations.

**Additional advice**

- Material can create slippery conditions.

**6.4 Reference to other sections**

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

- Ethylene oxide may collect in container head space.
- Provide adequate ventilation.
- Ensure all equipment is electrically grounded before beginning transfer operations.
  
- Avoid inhalation of vapor or mist.
- Avoid contact with skin and eyes.
  
- Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
- Avoid localized overheating.
- Vent drums while heating
- Homogenize before using.

**Hygiene measures**

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
  - 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
  - 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
  - 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

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



### Technical measures/Storage conditions

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Stable under normal conditions.
- Keep container tightly closed in a dry and well-ventilated place.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer
- Keep away from: Strong oxidizing agents, Strong reducing agents.

### 7.3 Specific end use(s)

- no data available

## SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

### 8.1 Control parameters

#### Components with workplace occupational exposure limits

Components	Value type	Value	Basis
Organic solvent	WEEL	250 ppm	American Industrial Hygiene Association

### 8.2 Exposure controls

#### Control measures

##### **Engineering measures**

- Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :
  - Extract at emission point.
  - Effective exhaust ventilation system

#### Individual protection measures

##### **Respiratory protection**

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

##### **Hand protection**

- Recommended preventive skin protection
- Gloves
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

##### **Eye protection**

- Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.



- Eye contact should be prevented through the use of:
- Safety glasses with side-shields
- In case of contact through splashing:
- Face-shield

#### Skin and body protection

- Recommended preventive skin protection
- Footwear protecting against chemicals
- Impervious clothing
- Protective suit
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

#### Protective measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Emergency equipment immediately accessible, with instructions for use.
- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

### SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

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

<b><u>Appearance</u></b>	<b><u>Form:</u></b>	liquid
	<b><u>Physical state:</u></b>	liquid
	<b><u>Color:</u></b>	blue
<b><u>Odor</u></b>		characteristic
<b><u>Odor Threshold</u></b>		No data available
<b><u>pH</u></b>		No data available
<b><u>Melting point/freezing point</u></b>		No data available
<b><u>Initial boiling point and boiling range</u></b>	<b><u>Boiling point/boiling range:</u></b>	
<b><u>Flash point</u></b>		>= 167 °F (75 °C) Method: closed cup



<b><u>Evaporation rate (Butylacetate = 1)</u></b>	No data available
<b><u>Flammability (solid, gas)</u></b>	No data available
<b><u>Flammability (liquids)</u></b>	No data available
<b><u>Flammability / Explosive limit</u></b>	No data available
<b><u>Autoignition temperature</u></b>	No data available
<b><u>Vapor pressure</u></b>	No data available
<b><u>Vapor density</u></b>	No data available
<b><u>Density</u></b>	1.16 g/cm <sup>3</sup> ( 68 °F (20 °C))
<b><u>Relative density</u></b>	No data available
<b><u>Solubility</u></b>	No data available
<b><u>Partition coefficient: n-octanol/water</u></b>	No data available
<b><u>Decomposition temperature</u></b>	No data available
<b><u>Viscosity</u></b>	No data available
<b><u>Explosive properties</u></b>	No data available
<b><u>Oxidizing properties</u></b>	No data available

## 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

- no data available

### 10.2 Chemical stability

- Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

- polymerization**
- Hazardous polymerization does not occur.

### 10.4 Conditions to avoid

- Keep away from heat and sources of ignition.

### 10.5 Incompatible materials

- Strong oxidizing agents
- Strong reducing agents

### 10.6 Hazardous decomposition products

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- On combustion or on thermal decomposition (following the evaporation of water) releases:
- Carbon oxides

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

**Acute oral toxicity** No data available

**Acute inhalation toxicity** No data available

**Acute dermal toxicity** No data available

**Acute toxicity (other routes of administration)** No data available

**Skin corrosion/irritation** No data available

**Serious eye damage/eye irritation** No data available

**Respiratory or skin sensitization** No data available

#### Mutagenicity

**Genotoxicity in vitro** No data available

**Genotoxicity in vivo** No data available

**Carcinogenicity** No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP  
IARC  
OSHA  
NTP  
IARC  
OSHA

#### Toxicity for reproduction and development

**Toxicity to reproduction / fertility** No data available

**Developmental Toxicity/Teratogenicity** No data available

#### STOT

**STOT-single exposure** No data available

**STOT-repeated exposure** No data available

**Experience with human exposure** No data available

**Aspiration toxicity** No data available



## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic Compartment

Acute toxicity to fish No data available

Acute toxicity to daphnia and other aquatic invertebrates No data available

Toxicity to aquatic plants No data available

Toxicity to microorganisms No data available

Chronic toxicity to fish No data available

Chronic toxicity to daphnia and other aquatic invertebrates No data available

### 12.2 Persistence and degradability

Abiotic degradation No data available

Physical- and photo-chemical elimination No data available

Biodegradation No data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water No data available

Bioconcentration factor (BCF) No data available

### 12.4 Mobility in soil

Adsorption potential (Koc) No data available

Known distribution to environmental compartments No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product Disposal

- Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

**Advice on cleaning and disposal of packaging**

- Rinse with an appropriate solvent.
- Dispose of contents/container in accordance with local regulation.

**SECTION 14: Transport information**

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification. The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

**DOT**

<b>14.1 UN number</b>	NA 1993
<b>14.2 Proper shipping name</b>	COMBUSTIBLE LIQUID, N.O.S. (Dimethyl sulfoxide)
<b>14.3 Transport hazard class</b>	Combustible liquid.
<b>14.4 Packing group</b>	III
Packing group	III
ERG No	128
<b>14.5 Environmental hazards</b>	NO
<b>Marine pollutant</b>	

**TDG**

not regulated

**NOM**

not regulated

**IMDG**

not regulated

**IATA**

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

**SECTION 15: Regulatory information****15.1 Notification status**

- no data available

**15.2 Federal Regulations****US. EPA EPCRA SARA Title III****SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)**

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Flammable (gases, aerosols, liquids, or solids)	Yes
Serious eye damage or eye irritation	Yes
Reproductive toxicity	Yes

The categories not mentioned are not relevant for the product.

#### Section 313 Toxic Chemicals (40 CFR 372.65)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Components	CAS-No.	Threshold planning quantity	Remarks
	*****		

#### Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

This material does not contain any components with a SARA 302 RQ.

#### Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

This material does not contain any components with a section 304 EHS RQ.

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

This material does not contain any components with a CERCLA RQ.

#### 15.3 State Regulations

##### US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

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

### SECTION 16: Other information

#### Further information

- Product evaluated under the US GHS format.

**Date Prepared:** 10/22/2020

#### Key or legend to abbreviations and acronyms used in the safety data sheet

- TWA: 8-hr TWA
- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.

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- |         |  |
|---------|--|
| - vPvB: | Very Persistent and Very Bioaccumulative.      |
| - SEA:  | Classification, labeling, packaging regulation |
| - DNEL: | Derived No Effect Level                        |
| - PNEC: | Predicted No Effect Concentration              |
| - BHOT: | Specific Target Organ Toxicity                 |

**Not all acronyms listed above are referenced in this SDS.**

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.