

# SAFETY DATA SHEET

## VERTEX HI-N 34

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS #: NP-0007-A  
Revision date: 2018-07-19  
Format: EU  
Version 1.02

### Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Code(s) NP-0007-A

Product Name VERTEX HI-N 34

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: A high nitrogen foliar feed with inorganic micronutrients

Restrictions on use Use as recommended by the label.

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer FMC Agro Limited  
Rectors Lane  
Pentre  
Flintshire  
CH5 2DH  
United Kingdom  
Tel: + 44 (0) 1244 537370  
E-mail: fmc.agro.uk@fmc.com

For further information, please contact:

Contact point Tel: +44(0)1244 537370  
Email: fmc.agro.uk@fmc.com

#### 1.4. Emergency telephone number

Emergency telephone Tel: +44(0)1244 537370 (Office hours only)

### Section 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 (H315)
Serious eye damage/eye irritation	Category 2 (H319)

#### 2.2. Label elements

Hazard pictograms



**Signal Word**  
WARNING**Hazard Statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements**

P264 - Wash hands thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P337 + P313 - If eye irritation persists: Get medical advice/attention

**2.3. Other hazards**

This product is not identified as a PBT/vPvB substance.

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

The product is a mixture, not a substance.

**3.2 Mixture containing the following hazardous ingredients:**

Chemical name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
AMMONIUM NITRATE	299-347-8	6484-52-2	10-30	Ox. Sol. 3 (H272) Eye Irrit. 2 (H319)	01-2119490981-27-XXXX
MANGANESE DINITRATE	233-828-8	10377-66-9	1-10	Ox. Sol. 2 (H272); Acute Tox. 4 (H302); Skin Corr. 1C (H314); STOT RE 2 (H373); Aquatic Chronic 3 (H412); (EUH071)	01-2119487993-17-0002
COPPER DINITRATE	221-838-5	3251-23-8	<1	Skin Corr. 1B (H314) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	No data available

**Additional Information**

For the full text of the H-, R- and EUH- phrases mentioned in this Section, see Section 16.

**Section 4: FIRST AID MEASURES****4.1. Description of first aid measures****Eye Contact**

Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Call a doctor if irritation persists.

**Skin Contact**

Immediately remove all stained or splashed clothing that is not adhering to the skin. Wash off immediately with soap and plenty of water. If symptoms persist, call a doctor.

**Inhalation**

Remove person from exposure ensuring one's own safety while doing so.

**Ingestion**

Rinse mouth. Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.

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

Skin contact: May see mild irritation at the site of contact.

Eye contact: Possible irritation and redness.

Ingestion: Possible irritation of the throat.

Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.

Delayed/Immediate effects: Immediate effects can be expected after short-term exposure.

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

##### **Indication of immediate medical attention and special treatment needed, if necessary**

Eye bathing equipment should be available on the premises.

## **Section 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.

#### **Unsuitable extinguishing media**

No information available

### **5.2. Special hazards arising from the substance or mixture**

Toxic fumes may be released in fire situations.

### **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus and full protective gear. Wear protective clothing to prevent contact with skin and eyes.

## **Section 6: ACCIDENTAL RELEASE MEASURES**

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

#### **Personal Precautions**

For personal protection see section 8. Stop leak if you can do it without risk. In case of spill, avoid contact. Isolate area and keep out animals and unprotected persons.

For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

#### **For emergency responders**

Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

Do not discharge into drains or rivers. Contain the spillage using bunding. Accidental release into water courses must be alerted to the appropriate regulatory body.

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

#### **Methods for Containment**

Surface drains within close vicinity of the spill should be covered. Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil.

#### **Methods for cleaning up**

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

### **6.4. Reference to other sections**

See section 8 for more information. See section 13 for more information.

## **Section 7: HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

#### **Handling**

Use only in area provided with appropriate exhaust ventilation. Avoid contact with skin, eyes and clothing.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

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

##### Storage

Protect from freezing. Store above 5°C. Keep in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from heat. Keep out of reach of children and animals. Keep away from food, drink and animal feedingstuffs.

#### 7.3. Specific end use(s)

##### Specific Use(s)

No data available.

#### Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control parameters

Chemical name	Italy	Portugal	The Netherlands	Finland	Denmark
COPPER DINITRATE 3251-23-8	-	-	-	TWA 0.02 mg/m <sup>3</sup>	-

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

#### 8.2. Exposure controls

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

#### Personal protective equipment

**Eye/Face Protection** Safety glasses with side-shields. Provide emergency on-site eyewash.

**Hand Protection** Protective gloves. Impervious butyl rubber gloves. Wear chemical protective gloves made of materials such as nitrile or neoprene.

**Skin and Body Protection** Wear impervious gloves and/or clothing if needed to prevent contact with the material.

**Respiratory Protection** Not required under normal use.

**Environmental exposure controls** Refer to specific Member State legislation for requirements under Community environmental legislation.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Physical State</b>	Liquid
<b>Appearance</b>	Liquid
<b>Odour</b>	Barely perceptible
<b>Colour</b>	Blue
<b>Odour threshold</b>	No information available
<b>pH</b>	3.0 - 5.0
<b>Melting point/freezing point</b>	No information available
<b>Boiling point/boiling range</b>	No information available
<b>Flash point</b>	No information available
<b>Evaporation Rate</b>	No information available

<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit</b>	No information available
<b>Vapour pressure</b>	No information available
<b>Vapour density</b>	No information available
<b>Specific gravity</b>	1.34 - 1.36
<b>Water solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidising properties</b>	Non-oxidizing (by EC criteria)

**9.2. Other information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available
<b>K<sub>st</sub></b>	No information available

## Section 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

None under normal use conditions

**10.2. Chemical stability**

Stable under recommended storage conditions.

**Explosion data**

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

**10.3. Possibility of hazardous reactions****Hazardous polymerisation**

Hazardous polymerization does not occur.

**Hazardous reactions**

None under normal processing. Decomposition may occur on exposure to conditions or materials listed below.

**10.4. Conditions to avoid**

Heat.

**10.5. Incompatible materials**

Strong reducing agents, Strong bases.

**10.6. Hazardous decomposition products**

May emit toxic fumes under fire conditions: Nitrogen oxides (NO<sub>x</sub>).

## Section 11: TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects**

**Acute toxicity****Product Information**

Product does not present an acute toxicity hazard based on known or supplied information.

**LD50 Oral** > 5000 mg/kg (rat) (Calculated Estimated Acute Toxicity - EAT)

Chemical name	LD50 Oral	LD50 Dermal	Inhalation LC50
AMMONIUM NITRATE	>5000 mg/kg ( Rat )		> 88.8 mg/L ( Rat ) 4 h
MANGANESE DINITRATE	>300 mg/kg (rat)		
COPPER DINITRATE	= 940 mg/kg ( Rat )		

**Skin corrosion/irritation** See classification in Section 2.  
**Serious eye damage/eye irritation** See classification in Section 2.  
**Sensitisation** No information available  
**Mutagenicity** No information available.  
**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.

**Symptoms**

Skin contact: May see mild irritation at the site of contact.

Eye contact: Possible irritation and redness.

Ingestion: Possible irritation of the throat.

Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.

Delayed/Immediate effects: Immediate effects can be expected after short-term exposure.

**Aspiration hazard**

No information available.

**Section 12: ECOLOGICAL INFORMATION****12.1. Toxicity**

There is no data available for this product.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
AMMONIUM NITRATE	-	48 h LC50: 65 - 85 mg/L (Cyprinus carpio) semi-static	-
MANGANESE DINITRATE	Desmodesmus subspicatus: 72 ErC50 = 64.6 mg/L	Rainbow trout (Oncorhynchus mykiss): 96H LC50 = 47.2 mg/L	Daphnia magna: 48H EC50 = >100 mg/L
COPPER DINITRATE	ALGAE (Chlamydomonas reinhardtii): 72H ErC50 = 0.440 (CuCl2 data)mg/L	RAINBOW TROUT (Oncorhynchus mykiss): 96H LC50 = 0.590 (CuSO4 data) mg/L	DAPHNID (Ceriodaphnia dubia): 48H LC50 = 0.195 mg/L

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil****Mobility in soil**

No information available.

**Mobility**

Soluble in water.

**12.5. Results of PBT and vPvB assessment**

This product is not identified as a PBT/vPvB substance.

**12.6. Other adverse effects**

Negligible

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods****Waste from residues / unused products**

Transfer to a suitable container and arrange for collection by specialised disposal company. Do not contaminate ponds, waterways or ditches with chemical or used containers. Do not discharge to sewer systems.

**Contaminated Packaging**

Clean container with water. Dispose of rinse water in accordance with local and national guidelines. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**EWC Waste Disposal No**

02 01 08

**OTHER INFORMATION**

NOTE : The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal.

## Section 14: TRANSPORT INFORMATION

**NOTE**

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

**IMDG/IMO****14.1 UN/ID no**

Not regulated

**14.2 Proper Shipping Name**

Not regulated

**14.3 Hazard class**

Not regulated

**14.4 Packing Group**

Not regulated

**14.5 Marine Pollutant**

Not applicable

**14.6 Special Provisions**

None

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

This product is not transported in bulk containers.

**RID****14.1 UN/ID no**

Not regulated

**14.2 Proper Shipping Name**

Not regulated

**14.3 Hazard class**

Not regulated

**14.4 Packing Group**

Not regulated

**14.5 Environmental Hazard**

Not applicable

**14.6 Special Provisions**

None

**ADR/RID**

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

**ICAO/IATA**

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

## Section 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### European Union

##### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

##### Persistent Organic Pollutants

Not Applicable

##### Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not Applicable

#### International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
AMMONIUM NITRATE 6484-52-2	X	X	X	X	X	X	X	X
MANGANESE DINITRATE 10377-66-9	X	X	X	X	X	X	X	X
COPPER DINITRATE 3251-23-8	X	X	X	X	X	X	X	X

### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## Section 16: OTHER INFORMATION

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

##### Full text of R-phrases referred to under sections 2 and 3

Not applicable

##### Full text of H-Statements referred to under sections 2 and 3

EUH071 - Corrosive to the respiratory tract



- H272 - May intensify fire; oxidiser
- H302 - Harmful if swallowed
- H314 - Causes severe skin burns and eye damage
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H373 - May cause damage to organs through prolonged or repeated exposure
- H400 - Very toxic to aquatic life
- H411 - Toxic to aquatic life with long lasting effects
- H412 - Harmful to aquatic life with long lasting effects

**Legend**

- ADR:** European Agreement concerning the International Carriage of Dangerous Goods by Road
- CAS:** CAS (Chemical Abstracts Service)
- Ceiling:** Maximum limit value:
- DNEL:** Derived No Effect Level (DNEL)
- EINECS:** EINECS (European Inventory of Existing Chemical Substances)
- GHS:** Globally Harmonised System (GHS)
- IATA:** International Air Transport Association (IATA)
- ICAO:** International Civil Aviation Organization
- IMDG:** International Maritime Dangerous Goods (IMDG)
- LC50:** LC50 (lethal concentration)
- LD50:** LD50 (lethal dose)
- PBT:** Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
- RID:** Regulations Concerning the International Transport of Dangerous Goods by Rail
- STEL:** Short term exposure limit
- SVHC:** SVHC: Substances of Very High Concern for Authorisation:
  
- TWA:** time weighted average
- vPvB:** very Persistent and very Bioaccumulative

**Revision date:** 2018-07-19

**Reason for revision:** Format Change.

**Disclaimer**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

**Prepared By**

FMC Corporation

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**End of Safety Data Sheet**