SAFETY DATA SHEET



NORTICA® 10 WP

Version 2.0 / USA 102000025782

Revision Date: 08/17/2015 Print Date: 04/09/2016

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

Product identifier

Trade name NORTICA® 10 WP

Product code (UVP) 80573219

SDS Number 102000025782

EPA Registration No. 432-1524

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

Use Insecticide, Nematicide

Restrictions on useSee product label for restrictions.

Information on supplier

Supplier Bayer Environmental Science

2 T.W. Alexander Drive

Research Triangle PK, NC 27709

United States

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)

1-800-334-7577

Product Information

Telephone Number

1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards

Micro-organisms may have the potential to provoke sensitising reactions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name CAS-No. Concentration % by weight

Bacillus firmus (Strain I-1582) 10.0

Ammonium chloride 12125-02-9 54.0

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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 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 To date no symptoms are known.

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. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

Special hazards arising from the substance or

mixture

Dangerous gases are evolved in the event of a fire.

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. Cool closed

containers exposed to fire with water spray. Do not allow run-off from

fire fighting to enter drains or water courses.

Flash point not applicable

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Autoignition temperature no data available

Lower explosion limit not applicable

Upper explosion limit not applicable

Explosivity Not explosive

92/69/EEC, A.14 / OECD 113

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact

with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in

suitable container for disposal. Clean contaminated floors and objects

thoroughly, observing environmental regulations.

Additional adviceUse personal protective equipment. Do not allow to enter soil,

waterways or waste water canal.

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 Avoid dust formation. Use only in area provided with appropriate

exhaust ventilation.

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 original container and out of the reach of children, preferably in a locked storage area. Keep containers tightly closed in a dry, cool and

well-ventilated place.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Ammonium chloride (Fume.)	12125-02-9	10 mg/m3 (TWA)	02 2012	ACGIH
Ammonium chloride (Fume.)	12125-02-9	20 mg/m3 (STEL)	02 2012	ACGIH
Ammonium chloride (Fume.)	12125-02-9	10 mg/m3 (REL)	2010	NIOSH
Ammonium chloride (Fume.)	12125-02-9	20 mg/m3 (STEL)	2010	NIOSH
Ammonium chloride (Fume.)	12125-02-9	20 mg/m3 (STEL)	1989	OSHA Z1A
Ammonium chloride (Fume.)	12125-02-9	10 mg/m3 (TWA)	1989	OSHA Z1A
Ammonium chloride (Fume.)	12125-02-9	20 mg/m3 (STEL)	06 2008	TN OEL
Ammonium chloride (Fume.)	12125-02-9	10 mg/m3 (TWA)	06 2008	TN OEL
Ammonium chloride	12125-02-9	100ug/m3 (ST ESL)	03 2014	TX ESL
Ammonium chloride	12125-02-9	10ug/m3 (AN ESL)	03 2014	TX ESL
Ammonium chloride (Fume.)	12125-02-9	20 mg/m3 (STEL)	08 2010	US CA OEL
Ammonium chloride (Fume.)	12125-02-9	10 mg/m3 (TWA PEL)	08 2010	US CA OEL
Ammonium chloride	12125-02-9	10 mg/m3 (TWA)		OES BCS*

^{*}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 nitrile rubber gloves

Eye protection Safety glasses with side-shields

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures Follow manufacturer's instructions for cleaning/maintaining PPE. If

no such instructions for washables, use detergent and warm/tepid

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water.

Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance light brown Physical State powder

Odor characteristic

Odour Threshold no data available

pH 7 - 8 at 1 %

Vapor Pressureno data availableVapor Density (Air = 1)no data availableBulk density55 - 65 lb/ft³Evapouration ratenot applicable

Boiling Point not applicable
Melting / Freezing Point not applicable
Water solubility dispersible

Minimum Ignition Energy not applicable

Decomposition no data available

temperature

Partition coefficient: n-

octanol/water

not applicable

Viscosity

not applicable

Flash point not applicable

Autoignition temperatureno data availableLower explosion limitnot applicableUpper explosion limitnot applicableExplosivityNot explosive

92/69/EEC, A.14 / OECD 113

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition no data available

Chemical stability Stable under normal conditions.

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Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid no data available

Incompatible materials no data available

Hazardous decomposition

products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Eye contact, Skin contact, Inhalation

Immediate Effects

Eye Causes eye irritation.

Skin May cause slight irritation.

Information on toxicological effects

Acute oral toxicity LD50 (rat) > 2,000 mg/kg

Acute inhalation toxicity

no data available

Acute dermal toxicity LD50 (rat) > 2,000 mg/kg
Skin irritation Slight irritation (rabbit)

Eye irritation Moderate eye irritation. (rabbit)

Sensitisation

Micro-organisms may have the potential to provoke sensitising

reactions.

Assessment repeated dose toxicity

Bacillus firmus did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Bacillus firmus: Test not required for microorganisms.

Assessment carcinogenicity

Bacillus firmus: Test not required for microorganisms.

ACGIH

None.

NTP

None.

IARC

None.

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OSHA

None.

Assessment toxicity to reproduction

Bacillus firmus: Test not required for microorganisms.

Assessment developmental toxicity

Bacillus firmus: Test not required for microorganisms.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).

The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) > 100 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient.

Toxicity to aquatic

invertebrates Exposure time: 48 h

The value mentioned relates to the active ingredient.

EC50 (Daphnia magna (Water flea)) > 100 mg/l

Toxicity to aquatic plants IC50 (Raphidocelis subcapitata (freshwater green alga)) 24.2 mg/l

Growth rate; Exposure time: 72 h

The value mentioned relates to the active ingredient.

Biodegradability Bacillus firmus:

Evaluation of biodegradability is not relevant for micro-organisms.

Bioaccumulation Bacillus firmus:

Evaluation of bioaccumulation is not relevant for micro-organisms.

Mobility in soil Bacillus firmus: Evaluation of mobility in soil is not relevant for micro-

organisms.

Environmental precautions Do not apply directly to water, to areas where surface water is present

or to intertidal areas below the mean high water mark.

Do not contaminate surface or ground water by cleaning equipment or

disposal of wastes, including equipment wash water.

Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

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Product Follow container label instructions for disposal of wastes generated

during use in compliance with the product label.

Dispose in accordance with all local, state/provincial and federal

regulations.

Contaminated packaging Do not re-use empty containers.

Completely empty container into application equipment, then dispose of

empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.

If burned, stay out of smoke.

Follow advice on product label and/or leaflet.

RCRA Information 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.

SECTION 14: TRANSPORT INFORMATION

49CFR

UN number 3077
Class 9
Packaging group III

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID,

N.O.S.

(AMMONIUM CHLORIDE)

RQ Reportable Quantity is reached with 9,259 lb of product.

IMDG Not dangerous goods / not hazardous material

IATA Not dangerous goods / not hazardous material

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1524

US Federal Regulations

TSCA list

Ammonium chloride 12125-02-9

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

Ammonium chloride 12125-02-9

US States Regulatory Reporting

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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

Ammonium chloride 12125-02-9 CA, CT, IL, MN, NJ, RI

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

Ammonium chloride 12125-02-9 5,000 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

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: Caution!

Hazard statements: Moderate eye irritation.

Avoid contact with skin, eyes and clothing.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet

or applying cosmetics.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
CAS-Nr. Chemical Abstracts Service number

EINECS European inventory of existing commercial substances

ELINCS European list of notified chemical substances

IARC US. IARC Monographs on Occupational Exposures to Chemical Agents

IATA International Air Transport Association
IMDG International Maritime Dangerous Goods

N.O.S. Not otherwise specified

NTP US. National Toxicology Program (NTP) Report on Carcinogens

Bayer Environmental Science SAFETY DATA SHEET



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OECD Organization for Economic Co-operation and Development

TDG Transportation of Dangerous Goods

TWA Time weighted average

UN United Nations

WHO World health organisation

NFPA 704 (National Fire Protection Association):

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

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

Health - 1 Flammability - 0 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: 08/17/2015

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