



NORTICA® 10 WP

Version 2.0 / USA
102000025782

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Revision Date: 08/17/2015
Print Date: 01/05/2017

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 use See 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 advice Use 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 Pressure	no data available
Vapor Density (Air = 1)	no data available
Bulk density	55 - 65 lb/ft ³
Evaporation rate	not applicable
Boiling Point	not applicable
Melting / Freezing Point	not applicable
Water solubility	dispersible
Minimum Ignition Energy	not applicable
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	not applicable
Viscosity	not applicable
Flash point	not applicable
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 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	EC50 (Daphnia magna (Water flea)) > 100 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient.
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
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
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)

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