SAFETY DATA SHEET

BAYER ADVANCED 2 IN 1 SYSTEMIC ROSE & FLOWER CARE READY-TO-USE GRANULES III

Version 1.0 / USA
102000032713

Revision Date: 06/06/2016
Print Date: 12/12/2016

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

Product identifier

Trade name	BAYER ADVANCED 2 IN 1 SYSTEMIC ROSE & FLOWER CARE READY-TO-USE GRANULES III
SDS Number	102000032713
EPA Registration No.	192-211-72155

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

Use	Insecticide
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
Reproductive toxicity: Category 1B
Skin irritation: Category 2
Eye irritation: Category 2A
Specific target organ toxicity - single exposure: Category 3

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Danger

Hazard statements
May damage fertility or the unborn child.

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Wash thoroughly after handling.
Avoid breathing dust.
Use only outdoors or in a well-ventilated area.
IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN: Wash with plenty of water.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
This product contains an cholinesterase inhibitor.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Acephate	30560-19-1	1.5
Calcium carbonate	471-34-1	50 – 70
Diammonium hydrogenorthophosphate	7783-28-0	10 – 20
Ammonium sulphate	7783-20-2	5 – 15
Potassium chloride	7447-40-7	1 – 10
Ethenol, homopolymer	9002-89-5	<5.0
Boric acid	10043-35-3	<1.0

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	No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed

Risks	Cholinesterese inhibitor
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. The following antidote is generally accepted: atropine.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Water, Dry chemical, Foam
Unsuitable	None known.
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Ammonia, Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides

Advice for firefighters

Special protective equipment for firefighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	Not applicable

Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Avoid dust formation. Do not breathe dust. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

Methods and materials for containment and cleaning up

Methods for cleaning up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	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	Use only in area provided with appropriate exhaust ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.
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. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Acephate	30560-19-1	70ug/m3 (ST ESL)	07 2011	TX ESL
Acephate	30560-19-1	7ug/m3 (AN ESL)	07 2011	TX ESL
Calcium carbonate (Respirable.)	471-34-1	5 mg/m3 (REL)	2010	NIOSH
Calcium carbonate (Total)	471-34-1	10 mg/m3 (REL)	2010	NIOSH
Calcium carbonate (Respirable fraction.)	471-34-1	5 mg/m3 (PEL)	02 2006	OSHA Z1
Calcium carbonate (Total dust.)	471-34-1	15 mg/m3 (PEL)	02 2006	OSHA Z1
Calcium carbonate (Respirable fraction.)	471-34-1	5 mg/m3 (TWA)	1989	OSHA Z1A
Calcium carbonate (Total dust.)	471-34-1	15 mg/m3 (TWA)	1989	OSHA Z1A
Calcium carbonate (Total dust.)	471-34-1	15 mg/m3 (TWA)	06 2008	TN OEL
Calcium carbonate (Respirable fraction.)	471-34-1	5 mg/m3 (TWA)	06 2008	TN OEL
Calcium carbonate	471-34-1	50ug/m3 (ST ESL)	07 2011	TX ESL
Calcium carbonate	471-34-1	5ug/m3 (AN ESL)	07 2011	TX ESL
Diammonium hydrogenorthophosphate	7783-28-0	5ug/m3 (AN ESL)	03 2014	TX ESL
Diammonium hydrogenorthophosphate	7783-28-0	50ug/m3 (ST ESL)	03 2014	TX ESL
Ammonium sulphate	7783-20-2	50ug/m3 (ST ESL)	03 2014	TX ESL
Ammonium sulphate	7783-20-2	5ug/m3 (AN ESL)	03 2014	TX ESL
Potassium chloride	7447-40-7	5ug/m3 (AN ESL)	03 2014	TX ESL
Potassium chloride	7447-40-7	50ug/m3 (ST ESL)	03 2014	TX ESL
Potassium chloride	7447-40-7	10 mg/m3 (TWA)		OES BCS*
Ethenol, homopolymer	9002-89-5	5ug/m3 (AN ESL)	03 2014	TX ESL
Ethenol, homopolymer	9002-89-5	50ug/m3 (ST ESL)	03 2014	TX ESL

Boric acid (Inhalable fraction.)	10043-35-3	6 mg/m3 (STEL)	02 2012	ACGIH
Boric acid (Inhalable fraction.)	10043-35-3	2 mg/m3 (TWA)	02 2012	ACGIH
Boric acid	10043-35-3	10ug/m3 (ST ESL)	03 2014	TX ESL
Boric acid	10043-35-3	1ug/m3 (AN ESL)	03 2014	TX ESL

*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 water.
Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance various, depending on coloration

Physical State granular

Odor sulphurous

Odour Threshold No data available

pH Not applicable

Vapor Pressure No data available

Vapor Density (Air = 1) No data available

Bulk density 57 - 59 lb/ft³

Evaporation rate Not applicable

Boiling Point Not applicable

Melting / Freezing Point Not applicable

Water solubility No data available

Minimum Ignition Energy	Not applicable
Decomposition temperature	No data available
Partition coefficient: n-octanol/water	Not applicable
Viscosity	Not applicable
Flash point	Not applicable
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	No data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Heat, flames and sparks. Exposure to moisture.
Incompatible materials	Water, Acids, Alkali metals, Oxidizing agents
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Inhalation, Skin contact, Eye contact, Ingestion
Immediate Effects	
Eye	Causes eye irritation.
Skin	Causes skin irritation.

Information on toxicological effects

Acute oral toxicity	ATE (Mix) (Rat) > 2,000 mg/kg

Acute inhalation toxicity	ATE (Mix) (Rat) 5.0 mg/l Exposure time: 4 h
Acute dermal toxicity	ATE (Mix) (Rabbit) > 2,000 mg/kg
Skin irritation	Irritating to skin.
Eye irritation	Moderate eye irritation.
Sensitisation	No data available

Assessment repeated dose toxicity

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

Assessment mutagenicity

Acephate was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Acephate was not carcinogenic in a lifetime feeding study in rats. Acephate caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism that triggers these tumours is not relevant to humans.

ACGIH

Boric acid	10043-35-3	Group A4

NTP

None.

IARC

Ethenol, homopolymer	9002-89-5	Overall evaluation: 3

OSHA

None.

Assessment toxicity to reproduction

Acephate caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals.

Assessment developmental toxicity

Acephate caused developmental toxicity only at dose levels toxic to the dams. Acephate caused a reduced pup survival.

Further information

Acute toxicity studies have not been performed on this product as formulated.
The information is derived from the properties of the individual components.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 1,000 mg/l Exposure time: 96 h The ecological data given are those of the active ingredient.
Toxicity to other organisms	LD50 (Anas platyrhynchos (Mallard duck)) 350 mg/kg Exposure time: 96 h The ecological data given are those of the active ingredient.
	(Apis mellifera (bees)) 1.2 ug/bee The ecological data given are those of the active ingredient.
Biodegradability	Acephate: Not rapidly biodegradable
Koc	Acephate: Koc: 2.73
Bioaccumulation	Acephate: Does not bioaccumulate.
Mobility in soil	Acephate: Highly mobile in soils
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations. Follow advice on product label and/or leaflet.
Contaminated packaging	Do not re-use empty containers. Consult state and local regulations regarding the proper disposal of container. 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	Not dangerous goods / not hazardous material
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. 192-211-72155

US Federal Regulations

TSCA list

Calcium carbonate	471-34-1
Diammonium hydrogenorthophosphate	7783-28-0
Ammonium sulphate	7783-20-2
Potassium chloride	7447-40-7
Ethenol, homopolymer	9002-89-5
Boric acid	10043-35-3

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

Acephate	30560-19-1	
Diammonium hydrogenorthophosphate	7783-28-0	
Ammonium sulphate	7783-20-2	1.0%

US States Regulatory Reporting

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

Acephate	30560-19-1	NJ, RI
Calcium carbonate	471-34-1	MN

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

Acephate	30560-19-1

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.

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
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 - 2	Flammability - 1	Instability - 1	Others - none

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

Health - 1	Flammability - 1	Physical Hazard - 1	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 06/06/2016

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.