BAYER ADVANCED NATRIA INSECT DISEASE & MITE CONTROL READY-TO-USE

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

Product identifier

Trade name	BAYER ADVANCED NATRIA INSECT DISEASE & MITE CONTROL READY-TO-USE
Product code (UVP)	79674155
SDS Number	102000022779
EPA Registration No.	67702-15-72155

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

Use	Insecticide
Restrictions on use	See product label for restrictions.

Information on manufacturer

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

All Emergencies, 24hr/ 7 days	1-800-334-7577 (24 hours/day)
Product Information Telephone No.	1-800-331-2867
SDS Information or Request	SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Flammable liquids : Category 3



Signal word: Warning

Hazard statements
Flammable liquid and vapour.

Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Wear protective gloves and eye/face protection.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of fire: Use sand, dry chemical or alcohol-resistant foam for extinction.
Store in a well-ventilated place.
Keep cool.
Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Pyrethrins including cinerins	8003-34-7	0.01
Sulfur	7704-34-9	0.20
Propan-2-ol	67-63-0	5.00

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	Water, Carbon dioxide (CO2), Foam
Unsuitable	None known.
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	Keep out of smoke. Fight fire from upwind position. 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	54 °C
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

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	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. Material can create slippery conditions. 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 Ensure adequate ventilation. Handle and open container in a manner as to prevent spillage.

Advice on protection against fire and explosion Keep away from heat and sources of ignition.

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.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Store at room temperature. Protect from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (TWA)		OES BCS*
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (TWA)	02 2012	ACGIH
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (REL)	2010	NIOSH
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (PEL)	02 2006	OSHA Z1
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (TWA)	1989	OSHA Z1A
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (TWA)	06 2008	TN OEL
Pyrethrins including cinerins	8003-34-7	50 ug/m3 (ST ESL)	07 2011	TX ESL
Pyrethrins including cinerins	8003-34-7	5 ug/m3 (AN ESL)	07 2011	TX ESL
Pyrethrins including cinerins	8003-34-7	5 mg/m3 (TWA PEL)	08 2010	US CA OEL
Sulfur	7704-34-9	10 mg/m3 (TWA)		OES BCS*

Sulfur	7704-34-9	5 ug/m3 (AN ESL)	03 2012	TX ESL
Sulfur	7704-34-9	50 ug/m3 (ST ESL)	03 2012	TX ESL
Propan-2-ol	67-63-0	200 ppm (SK-ABS)		OES BCS*
Propan-2-ol	67-63-0	400 ppm (STEL)	02 2012	ACGIH
Propan-2-ol	67-63-0	200 ppm (TWA)	02 2012	ACGIH
Propan-2-ol	67-63-0	1,225 mg/m3 / 500 ppm (STEL)	2010	NIOSH
Propan-2-ol	67-63-0	980 mg/m3 / 400 ppm (REL)	2010	NIOSH
Propan-2-ol	67-63-0	980 mg/m3 / 400 ppm (PEL)	02 2006	OSHA Z1
Propan-2-ol	67-63-0	980 mg/m3 / 400 ppm (TWA)	1989	OSHA Z1A
Propan-2-ol	67-63-0	1,225 mg/m3 / 500 ppm (STEL)	1989	OSHA Z1A
Propan-2-ol	67-63-0	1,225 mg/m3 / 500 ppm (STEL)	06 2008	TN OEL
Propan-2-ol	67-63-0	980 mg/m3 / 400 ppm (TWA)	06 2008	TN OEL
Propan-2-ol	67-63-0	492 ug/m3 (AN ESL)	07 2011	TX ESL
Propan-2-ol	67-63-0	2000 ppb (ST ESL)	07 2011	TX ESL
Propan-2-ol	67-63-0	4920 ug/m3 (ST ESL)	07 2011	TX ESL
Propan-2-ol	67-63-0	200 ppb (AN ESL)	07 2011	TX ESL
Propan-2-ol	67-63-0	1,225 mg/m3 / 500 ppm (STEL)	08 2010	US CA OEL
Propan-2-ol	67-63-0	980 mg/m3 / 400 ppm (TWA PEL)	08 2010	US CA OEL

*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	Tightly fitting safety goggles
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed. Do not allow children or pets to enter the treated area until it has dried. 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	yellow
Physical State	liquid suspension
Odor	slight alcoholic
Odour Threshold	no data available
pH	4.8 - 5.2 (100 %)
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	ca. 0.99 g/cm³ at 25 °C
Evapouration rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	miscible in all proportions
Minimum Ignition Energy	not applicable

Decomposition temperature	no data available
Partition coefficient: n-octanol/water	no data available
Viscosity	200 - 500 mPa.s
Flash point	54 °C
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	no data available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Elevated temperatures
Incompatible materials	no data available
Hazardous decomposition products	Carbon dioxide (CO2) Carbon monoxide Sulphur oxides Hydrogen sulfide

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Skin contact, Inhalation, Ingestion

Immediate Effects

Eye	Moderate eye irritation.
Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 > 5,000 mg/kg
Acute inhalation toxicity	no data available
Acute dermal toxicity	LD50 > 5,000 mg/kg
Skin irritation	no data available
Eye irritation	no data available
Sensitisation	no data available

Assessment repeated dose toxicity

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

Assessment Mutagenicity

Pyrethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Sulfur was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Pyrethrin was not carcinogenic in lifetime feeding studies in rats and mice.
Sulfur is not considered carcinogenic.

ACGIH

Pyrethrins including cinerins	8003-34-7	Group A4
Propan-2-ol	67-63-0	Group A4

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Pyrethrin did not cause reproductive toxicity in a two-generation study in rats.
Sulfur is not considered a reproductive toxicant at non-maternally toxic dose levels.

Assessment developmental toxicity

Pyrethrin did not cause developmental toxicity in rats and rabbits.
Sulfur is not considered a developmental toxicant.

Further information
Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Biodegradability	Pyrethrin: not rapidly biodegradable Sulfur: not rapidly biodegradable
Koc	Pyrethrin: Koc:12472 - 74175 Sulfur: Koc:1950
Bioaccumulation	Pyrethrin: Bioconcentration factor (BCF) 471 Does not bioaccumulate. Sulfur: Does not bioaccumulate.
Mobility in soil	Pyrethrin: Immobile in soil Sulfur: Slightly 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. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.
Contaminated packaging	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

NA-Number	**1993**
Packaging group	III
Proper shipping name	COMBUSTIBLE LIQUID, N.O.S. (ISOPROPANOL, PYRETHRINS)
RQ	Reportable Quantity is reached with 10,000 lb of product.

IMDG

UN number	**1993**
Class	3
Packaging group	III
Marine pollutant	NO
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)

IATA

UN number	**1993**
Class	3
Packaging group	III
Environm. Hazardous Mark	NO
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)

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.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 67702-15-72155

US Federal Regulations

TSCA list

Sulfur	7704-34-9
Propan-2-ol	67-63-0

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
None.

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

Pyrethrins including cinerins	8003-34-7	CA, CT, MN, RI
Sulfur	7704-34-9	CA, CT

Canadian Regulations

Canadian Domestic Substance List

Pyrethrins including cinerins	8003-34-7
Sulfur	7704-34-9
Propan-2-ol	67-63-0

Environmental

CERCLA

Pyrethrins including cinerins	8003-34-7	1 lbs

Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Pyrethrins including cinerins	8003-34-7
Sulfur	7704-34-9
Propan-2-ol	67-63-0

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.
Avoid inhalation of vapour or mist.
Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1	Flammability - 2	Instability - 0	Others - none

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

Health - 1	Flammability - 2	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: 11/07/2013

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