DIAMOND™ 0.83 EC

Version Revision Date: MSDS Number: Country: US 1.16 10/05/2015 400000004029 Language: EN

SECTION 1. IDENTIFICATION

Product name : DIAMOND™ 0.83 EC

Product code : 40000004029

Manufacturer or supplier's details

Company: MacDermid Agricultural Solutions, Inc

245 Freight St Waterbury, CT

United States of America

06702

Telephone: +1 800 423 8569

Prepared by sds.request@arysta.com

Further information for the safety data sheet:

sds.request@arysta.com

1.4 Emergency telephone number

Emergency telephone number: Agriphar Crop Solutions: +1 800 423 8569(24 hours) 800-424-9300

For additional emergency telephone numbers see section 16 of the

Safety Data Sheet.

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Agriculture, For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2A

Reproductive toxicity : Category 1B

Specific target organ toxicity

- single exposure

: Category 3 (Respiratory system)

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Specific target organ toxicity

- repeated exposure (Oral)

: Category 2 (Blood)

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

GHS Label element

Hazard pictograms







Signal word : Danger

Hazard statements : H315 Causes skin irritation.

H319 Causes serious eye irritation. H335 May cause respiratory irritation.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs (Blood) through prolonged

or repeated exposure if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment. P280 Wear eve protection/ face protection.

P280 Wear protective gloves.

P281 Use personal protective equipment as required.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

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

tion.
P337 + P313 If eye irritation persists: Get medical advice/ atten-

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

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container

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tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Substance name : Novaluron 9.3% EC

Chemical nature : Insecticide

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
1-methyl-2-pyrrolidone	872-50-4	>= 30 - < 50
Novaluron	116714-46-6	>= 5 - < 10

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.

If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Call a POISON CENTER or doctor/ physician.

In case of skin contact : Remove contaminated clothing and shoes.

Wash off immediately with plenty of water for at least 15

minutes.

Call a POISON CENTER or doctor/ physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

Remove contact lenses, if present, after the first 5 minutes, then

continue rinsing eye.

Call a POISON CENTER or doctor/physician.

If swallowed : Call a physician or poison control centre immediately.

If swallowed, DO NOT induce vomiting unless directed to do so by

medical personnel.

Have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person.

Most important symptoms and

: irritant effects

effects, both acute and delayed Symptoms may be delayed.

Causes skin irritation.

Causes serious eye irritation. May cause respiratory irritation.

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May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated

exposure if swallowed.

The first aid procedure should be established in consultation Notes to physician

with the doctor responsible for industrial medicine.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Extinguishing media - large fires

Alcohol-resistant foam

(on small fires)

Carbon dioxide (CO2)

Dry chemical Water spray

Unsuitable extinguishing media : Water spray jet

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circum-

stances and the surrounding environment.

Further information : Do not discharge extinguishing waters into streams, rivers and lakes.

firefighters

Special protective equipment for : Body covering protective clothing, full "turn-out" gear.

Self-contained breathing apparatus (EN 133)

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Wear suitable protective equipment.

Environmental precautions

: Prevent leaks and prevent soil / water pollution caused by leaks.

May be harmful to aquatic life.

Methods and materials for containment and cleaning up

: Absorb on inert material such as sand, earth, vermiculite.

Collect for disposal.

Dam up.

Large spills should be collected mechanically (remove by pumping)

for disposal.

Pump excess material into suitable container (metal drums, metal

tank, or such).

In accordance with local and national regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid contact with skin, eyes and clothing.

Use with adequate ventilation.

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Conditions for safe storage : Keep in a dry place.

Keep away from direct sunlight. Keep in a cool place away from acids.

Keep away from strong bases.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of ex-	Control parameters / Permissible con-	Basis
		posure)	centration	
1-methyl-2-pyrrolidone	872-50-4	TWA	10 ppm	US WEEL

Biological occupational exposure limits

Components	CAS-No.	Control	Biological	Sam-	Permissible	Basis
		parameters	specimen	pling	concentra-	
				time	tion	
1-methyl-2-pyrrolidone	872-50-4	5-Hydroxy- N-methyl-2- pyrrolidone	Urine	End of shift (As soon as possible after exposure ceases)	100 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory

equipment.

Hand protection

Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : Lightweight protective clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : light yellow

Odour : slight, characteristic

Odour Threshold : No data available

pH : 2.9, 1% Solution

Melting point/range : Not applicable

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Boiling point/boiling range : No data available

Flash point : > 102 °C

Evaporation rate : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 1.08 g/cm3

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Self-Accelerating decomposition

temperature (SADT)

: Method: No information available.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reac-

tions

: Hazardous polymerisation does not occur.

Conditions to avoid : Exposure to sunlight.

Heat, flames and sparks.

Incompatible materials : Strong acids

Strong bases

Hazardous decomposition prod-

ucts

: Burning produces noxious and toxic fumes.

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Eye contact Skin contact Ingestion

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: 4,723 mg/kg

Method: Calculation method

Components:

1-methyl-2-pyrrolidone:

Acute oral toxicity : LD50 Oral (Rat): 3,914 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 8,000 mg/kg

Novaluron:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.15 mg/l

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Components:

1-methyl-2-pyrrolidone: Result: Mild skin irritation

Novaluron:Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Components:

1-methyl-2-pyrrolidone: Result: Severe irritation

Novaluron:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Components:

Novaluron:

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Test Type: Maximisation Test (GPMT)

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

Novaluron:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Metabolic activation: with and without metabolic activation

Result: negative

: Test Type: Unscheduled DNA synthesis (UDS)

Metabolic activation: with and without metabolic activation

Result: negative

: Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse Result: negative

Germ cell mutagenicity -

Assessment

: In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

Novaluron:

Carcinogenicity - Assess-

ment

: Not classifiable as a human carcinogen.

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

NTP No component of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Components:

Novaluron:

Reproductive toxicity - As-

sessment

: No toxicity to reproduction No effects on or via lactation

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STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

Components:

Novaluron:

Exposure routes: Oral Target Organs: Blood

Assessment: May cause damage to organs through prolonged or repeated exposure.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

1-methyl-2-pyrrolidone:

Toxicity to fish : LC50 (Fish): > 100 mg/l

Exposure time: 96 h

Novaluron:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.002

ma/l

Exposure time: 96 h

Test Type: flow-through test

GLP: yes

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 9.68 mg/l

Toxicity to fish (Chronic tox-

icity)

: NOEC (Oncorhynchus mykiss (rainbow trout)): 0.00616 mg/l

Exposure time: 28 d

Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

: NOEC (Daphnia magna (Water flea)): 0.00003 mg/l

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Novaluron:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 14,431

Partition coefficient: n- : log Pow: 4.3

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octanol/water

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Pro-

tection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Sec-

tion 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Novaluron)

: 9 Class Packing group : 111 Labels 9

IATA-DGR

UN/ID No. : UN 3082

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, Proper shipping name

N.O.S.

(Novaluron)

Class : 9 Packing group Ш

Labels Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen-

ger aircraft)

: 964

964

IMDG-Code

UN number UN 3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

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(Novaluron)

Class : 9
Packing group : III
Labels : 9

EmS Code : F-A, S-F Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID,

N.O.S.

(Novaluron)

Class : 9 Packing group : III

Labels : CLASS 9 ERG Code : 171

Marine pollutant : yes(Novaluron) Remarks : RQ appllies

Not regulated by DOT and TDG if shipped or transported in

packaging less than 450 liters by road and/or rail. Please

refer to 49 CFR for any details.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SSARA 311/312 Hazards : Acute Health Hazard

Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting require-

ments of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels es-

tablished by SARA Title III, Section 313:

1-methyl-2-pyrrolidone 872-50-4 50 %

Clean Air Act

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This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

California Prop. 65 WARNING: This product contains a chemical known to the

State of California to cause birth defects or other reproductive

harm.

1-methyl-2-pyrrolidone 872-50-4

FIFRA Hazard Information:

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

The hazard information required on the pesticide label is reproduced below.

WARNING

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

This pesticide is toxic to freshwater and estuarine/ marine invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Do not contaminate water when disposing of equipment wash waters or rinsate. This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several days to weeks after application. Poorly draining soil with shallow water tables is more prone to produce runoff. A level, well maintained vegetative (grass) buffer strip between areas to which this product is applied and the surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

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In order to minimize the possibility of developmental effects on pollinator larvae, including honey bee brood, do not use Rimon 0.83EC Insecticide on blooming crops.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

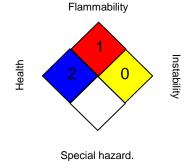
(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

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Further information

NFPA:



HMIS III:



0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Revision Date : 10/05/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

Carechem24 International Worldwide Coverage

Emergency Phone Number

Europe:	All European Countries	+44 (0) 1235 239 670 (NCEC)
Asia Pacific:	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China	+86 532 8388 9090
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285 +82 (0)234 798 401
	Vietnam	+65 3158 1255
	India	+65 3158 1198 0800 100 7479

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Pakistan +65 3158 1329 Philippines +65 31581203 Sri Lanka +65 3158 1195 **Emergency Phone Number** +65 3158 1200 Middle East / Africa: Arabic speaking countries +44 (0) 1235 239 671 South Africa +27 21 300 2732 All other countries +44 (0) 1235 239 670 United States of America and Canada **America** +1866 928 0789 +1 215 207 0061 Latin America: Brazil +55 113 711 9144 Mexico +52 555 004 8763 Chile +56 225 829 336 All other countries +44 (0) 1235 239 670