

Revision date : 2020/03/19 Page: 1/11

Version: 1.3 (30747714/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Nodulator Duo SCG

Recommended use of the chemical and restriction on use

Recommended use*: Biological beneficial agent

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION 100 Park Avenue Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox. 4 (Inhalation - dust) Acute toxicity

STOT SE 3 (irritating to Specific target organ toxicity — single exposure

respiratory system)

Comb. Dusts Combustible Dust (1) Combustible dusts

Label elements

Pictogram:

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Revision date: 2020/03/19 Page: 2/11
Version: 1.3 (30747714/SDS GEN US/EN)



Signal Word: Warning

Hazard Statement:

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

May form combustible dust concentration in air.

Precautionary Statements (Prevention):

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

P261 Avoid breathing dust.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Precautionary Statements (Response):

P312 Call a POISON CENTER or physician if you feel unwell.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for

oreathing.

Precautionary Statements (Storage):

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

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste

collection point.

Hazards not otherwise classified

Labeling of special preparations (GHS):

This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Rhizobium leguminosarum

Content (W/W): 0.14 % Synonym: No data available.

Bacillus subtilis

CAS Number: 68038-70-0 Content (W/W): 0.1 % Synonym: No data available.

Plaster of Paris (Ca(SO4).1/2H2O)

CAS Number: 26499-65-0 Content (W/W): 25.0 - 50.0% Synonym: CIRCLE SUPPLY

Raw Peat

Revision date: 2020/03/19 Page: 3/11 Version: 1.3 (30747714/SDS GEN US/EN)

> Content (W/W): 3.0 - 5.0% Synonym: NutriHold Dry

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Wash thoroughly with soap and water

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons: carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, Hydrogen chloride, nitrogen oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Revision date: 2020/03/19 Page: 4/11
Version: 1.3 (30747714/SDS GEN US/EN)

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up.

Avoid raising dust. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect against moisture. Protect from direct sunlight.

Protect product from freezing temperatures

Protect from temperatures below: 2 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 25 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

Revision date: 2020/03/19 Page: 5/11 Version: 1.3 (30747714/SDS GEN US/EN)

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Plaster of Paris OSHA PEL PEL 5 mg/m3 Respirable fraction ; PEL 15

(Ca(SO4).1/2H2O) mg/m3 Total dust; TWA value 5 mg/m3 Respirable fraction; TWA value 15 mg/m3

Total dust ;

ACGIH TLV TWA value 10 mg/m3 Inhalable fraction;

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Breathing protection if breathable aerosols/dust are formed. Wear a NIOSH approved (or equivalent) particulate respirator if ventilation is inadequate to control dust.

Hand protection:

Wear chemical resistant protective gloves., Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form: solid

Lower explosion limit:

Odour: characteristic

Odour threshold: Not determined due to potential health hazard by inhalation.

Colour: No data available.

pH value:

Melting point:

Boiling point:

Flash point:

The product has not been tested.

The product has n

As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Upper explosion limit: As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Revision date: 2020/03/19 Page: 6/11 Version: 1.3 (30747714/SDS GEN US/EN)

Vapour pressure: not applicable approx. 0.91 g/cm3

(approx. 20 °C)

Vapour density: not applicable Partitioning coefficient n- not applicable

octanol/water (log Pow):

Self-ignition Based on its structural properties the temperature: product is not classified as self-

igniting.

Thermal decomposition: No decomposition if stored and handled as

prescribed/indicated.

Viscosity, dynamic: not applicable, the product is a solid

Solubility in water: dispersible Evaporation rate: not applicable

Other Information: The product has not been tested. The statement has been

derived from substances/products of a similar structure or

composition.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Revision date: 2020/03/19 Page: 7/11 Version: 1.3 (30747714/SDS GEN US/EN)

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Virtually nontoxic after a single ingestion. Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact.

Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 423)

No mortality was observed.

Inhalation

Type of value: LC50

Species: rat

Value: 1.9 mg/l (OECD Guideline 403)

Exposure time: 4 h

Dermal

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Not irritating to the skin. Not irritating to the eyes.

Skin

Species: rabbit Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: The product has not been tested. The statement has been derived from the properties of the individual components. There is no evidence of a skin-sensitizing potential.

Information on: Plaster of Paris (Ca(SO4).1/2H2O)

Buehler test

Revision date: 2020/03/19 Page: 8/11 Version: 1.3 (30747714/SDS GEN US/EN)

Species: guinea pig Result: Non-sensitizing. Method: OECD Guideline 406

The product has not been tested. The statement has been derived from substances/products of a

similar structure or composition.

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Aspiration Hazard

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organization was observed after repeated administration to animals.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on: Plaster of Paris (Ca(SO4).1/2H2O)

LC50 (96 h) > 100 mg/l, Oryzias latipes (OECD Guideline 203)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Revision date: 2020/03/19 Page: 9/11 Version: 1.3 (30747714/SDS GEN US/EN)

Aquatic invertebrates

Information on: Plaster of Paris (Ca(SO4).1/2H2O)

LC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1)

The product has not been tested. The statement has been derived from substances/products of a

similar structure or composition.

Aquatic plants

Information on: Plaster of Paris (Ca(SO4).1/2H2O)

EC50 (72 h) > 100 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201)

The product has not been tested. The statement has been derived from substances/products of a

similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: Plaster of Paris (Ca(SO4).1/2H2O)

Not applicable for inorganic substances.

Bioaccumulative potential

Bioaccumulation potential not applicable

Mobility in soil

Assessment transport between environmental compartments not applicable

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Must be disposed of or incinerated in accordance with local regulations.

Container disposal:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Revision date: 2020/03/19 Page: 10/11 Version: 1.3 (30747714/SDS GEN US/EN)

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Fertilizer TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK CAS Number Chemical name

PA 26499-65-0 Plaster of Paris (Ca(SO4).1/2H2O)

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including PALYGORSKITE FIBERS (> 5 MICROMETERS IN LENGTH), which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2020/03/19

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our

Revision date : 2020/03/19 Page: 11/11 Version: 1.3 (30747714/SDS_GEN_US/EN)

operations on society and the environment during production, storage, transport, use and disposal of our products.

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