

Revision Date: 02/15/2019

Print Date: 02/16/2019

**RHAPSODY®** 

Version 2.0 / USA 102000027846

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

**Product identifier** 

Trade name RHAPSODY®

Product code (UVP) 80924771

**SDS Number** 102000027846

**EPA Registration No.** 264-1155

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

**Use** Fungicide

**Restrictions on use**See product label for restrictions.

Information on supplier

Supplier Bayer CropScience

2 T.W. Alexander Drive

Research Triangle PK, NC 27709

USA

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

1-866-99BAYER (1-866-992-2937)

# **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.

# **Hazards Not Otherwise Classified (HNOC)**

Micro-organisms may have the potential to provoke sensitising reactions.

No health hazards not otherwise classified.

# **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name CAS-No. Concentration % by weight

Bacillus subtilis strain QST 713

Bacillus subtilis strain QST 713: >= 1.0E+09 CFU/g

1.34



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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.

Hold eye open and rinse slowly and gently with water for 15-20 Eye contact

> 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

**Treatment** Treat symptomatically. 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 firefighters

Firefighters should wear NIOSH approved self-contained breathing

apparatus and full protective clothing.

**Further information** Use appropriate extinguishing media for material that is supplying fuel.

> 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.



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Flash point > 91 °C

No flash point - Determination conducted up to the boiling point.

Auto-ignition temperature475 °C / 887 °FLower explosion limitNo data availableUpper explosion limitNo data available

**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** 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. Clean with disinfectants.

Additional advice Use personal protective equipment. If the product is accidentally

spilled, 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 No specific precautions required when handling unopened

packs/containers; follow relevant manual handling advice. Ensure

adequate ventilation.

Advice on protection against fire and explosion

No special precautions required.

**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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean

clothing.



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Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

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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.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Bacillus subtilis strain QST 713		20,000,000 CFU/m³		OES BCS*

<sup>\*</sup>OES BCS: Internal Bayer AG, Crop Science Division "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** Respiratory protection is not required under anticipated

circumstances of exposure.

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 Waterproof 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 light brown
Physical State suspension
Odor sweet earthy
Odour Threshold No data avail

Odour Threshold No data available

**pH** 5.2 - 5.4 (100 %) (23 °C)

Vapor Pressure No data available



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Vapor Density (Air = 1) No data available

**Density** ca. 1.05 g/cm<sup>3</sup> (20 °C)

**Evaporation rate** No data available **Boiling Point** >= 100 °C / 212 °F **Melting / Freezing Point** No data available

Water solubility dispersible **Minimum Ignition Energy** Not applicable **Decomposition** No data available

temperature

Partition coefficient: n-

octanol/water

Not applicable

**Viscosity** 10 - 100 mPa.s (21 °C)

Flash point > 91 °C

No flash point - Determination conducted up to the boiling point.

**Auto-ignition temperature** 475 °C / 887 °F Lower explosion limit No data available **Upper explosion limit** No data available

**Explosivity** Not explosive

92/69/EEC, A.14 / OECD 113

Other information Further safety related physical-chemical data are not known.

## **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

Extremes of temperature and direct sunlight.

Incompatible materials No data available

**Hazardous decomposition** 

products

No decomposition products expected under normal conditions of use.



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## **SECTION 11: TOXICOLOGICAL INFORMATION**

**Exposure routes** Inhalation, Eye contact, Skin contact

**Immediate Effects** 

**Eye** May cause mild irritation to eyes. **Skin** May cause mild irritation to the skin.

**Inhalation** Harmful if inhaled. Mists may cause respiratory tract irritation.

Information on toxicological effects

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

Acute inhalation toxicity LC50 (Rat) > 5.19 mg/l

Exposure time: 4 h

Determined in the form of liquid aerosol.

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

Skin corrosion/irritation No skin irritation (Rabbit)

Serious eye damage/eye

irritation

No eye irritation (Rabbit)

**Respiratory or skin** Skin: Non-sensitizing. (Guinea pig) **sensitisation** Test conducted with a similar formulation.

#### Assessment STOT Specific target organ toxicity - repeated exposure

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

#### **Assessment mutagenicity**

Bacillus subtilis: Test not required for microorganisms.

# Assessment carcinogenicity

Bacillus subtilis: Test not required for microorganisms.

**ACGIH** 

None.

NTP

None.

**IARC** 

None.

**OSHA** 

None.

# Assessment toxicity to reproduction

Bacillus subtilis: Test not required for microorganisms.

## Assessment developmental toxicity

Bacillus subtilis: Test not required for microorganisms.



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## **SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 162 mg/l 3.24 x 10<sup>9</sup>

CFU/L

Exposure time: 30 d

The value mentioned relates to the active ingredient.

NOEC (Oncorhynchus mykiss (rainbow trout)) 86 mg/l 1.72 x 10^9

CFU/L

Exposure time: 30 d

The value mentioned relates to the active ingredient.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 108 mg/l 2.16 x 10^9 CFU/L

Exposure time: 48 h

The value mentioned relates to the active ingredient.

NOEC (Daphnia magna (Water flea)) 13 mg/l 2.6 x 10^8 CFU/L

Exposure time: 48 h

The value mentioned relates to the active ingredient.

EC50 (Daphnia magna (Water flea)) 1.6 x 10^6 CFU/mL

Exposure time: 21 d

The value mentioned relates to the active ingredient.

NOEC (Daphnia magna (Water flea)) 7.9 x 10^5 CFU/mL

Exposure time: 21 d

The value mentioned relates to the active ingredient.

Toxicity to aquatic plants NOEC (Desmodesmus subspicatus (green algae)) >= 100 mg/l

The value mentioned relates to the active ingredient.

LOEC (Desmodesmus subspicatus (green algae)) > 100 mg/l

The value mentioned relates to the active ingredient.

Biodegradability Bacillus subtilis:

Evaluation of biodegradability is not relevant for micro-organisms.

**Bioaccumulation** Bacillus subtilis:

Evaluation of bioaccumulation is not relevant for micro-organisms.

Mobility in soil Bacillus subtilis: Evaluation of mobility in soil is not relevant for micro-

organisms.

**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.

Do not apply when weather conditions favor runoff or drift.

Apply this product as specified on the label.



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## **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** Triple rinse containers.

Puncture container to avoid re-use.

Dispose of empty container in a sanitary landfill or by incineration, or, if

allowed by State/Provincial and local authorities, by burning.

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**

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

## **SECTION 15: REGULATORY INFORMATION**

EPA Registration No. 264-1155

**US Federal Regulations** 

**TSCA list** 

Water 7732-18-5

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

Not applicable.

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 contains a chemical known to the State of California to cause cancer.

Attapulgite clay 12174-11-7 Crystalline quartz (respirable) 14808-60-7

This product does not contain any substances known to the State of California to cause reproductive harm.

## **US State Right-To-Know Ingredients**



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Attapulgite clay 12174-11-7 CA Crystalline quartz (respirable) 14808-60-7 MN, RI 1,2-Propanediol 57-55-6 MN, RI

#### **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:** Harmful if inhaled.

Avoid breathing spray mist.

Remove and wash contaminated clothing before re-use.

#### **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 - 1 Flammability - 1 Instability - 0 Others - none

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

Health - 0 Flammability - 1 Physical Hazard - 0 PPE -

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



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**Reason for Revision:** Reviewed and updated for general editorial purposes. The following sections have been revised: Section 5: Fire Fighting Measures. Section 9: Physical and Chemical Properties. Section 11: Toxicological Information.

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