

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Product code : Proquatic PondDtox

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : No data available

Manufacturer or supplier's details

Company : Merck & Co., Inc

Address : 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065

Telephone : +1-908-740-4000

Emergency telephone number : +1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

2. HAZARDS IDENTIFICATION**GHS Classification**

This material is not classified as hazardous under the Article 104 of the Occupational Safety and Health Act (OSHA). It is not regulated for the MSDS creation and labeling by the provision of Article 110 Paragraph 1 of the OSHA.

GHS label elements

This material is not classified as hazardous under the Article 104 of the Occupational Safety and Health Act (OSHA). It is not regulated for the MSDS creation and labeling by the provision of Article 110 Paragraph 1 of the OSHA.

Hazard pictograms : Not applicable

Signal word : Not applicable

Hazard statements : Not applicable

Precautionary statements : **Prevention:**
P264 Wash the contact area thoroughly after handling.

Disposal:
P501 Dispose of contents and container according to wastes

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

control act.

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 2.3 %

The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 2.3 %

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 2.3 %

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 2.3 %

Other hazards which do not result in classification

Dust contact with the eyes can lead to mechanical irritation.

Contact with dust can cause mechanical irritation or drying of the skin.

May form explosive dust-air mixture during processing, handling or other means.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name	CAS-No.	Concentration (% w/w)
Silicon dioxide	Silica	7631-86-9	$\geq 10 - < 20$
Paracoccus pantotrophus	No data available	Not Assigned	$\geq 1 - < 10$
Bacillus megaterium	No data available	68038-67-5	$\geq 1 - < 10$
Wheat bran	No data available	116469-86-4	$\geq 80 - < 90$

4. FIRST AID MEASURES

General advice	: In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
In case of eye contact	: If in eyes, rinse well with water. Get medical attention if irritation develops and persists.
In case of skin contact	: Wash with water and soap. Get medical attention if symptoms occur.
If inhaled	: If inhaled, remove to fresh air. Get medical attention if symptoms occur.
If swallowed	: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and	: Contact with dust can cause mechanical irritation or drying of the skin.

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

delayed	Dust contact with the eyes can lead to mechanical irritation.
Protection of first-aiders	: No special precautions are necessary for first aid responders.
Notes to physician	: Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES**Suitable and unsuitable extinguishing media**

Suitable extinguishing media	: Water spray Alcohol-resistant foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	: None known.
Specific hazards during fire-fighting	: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	: Carbon oxides Nitrogen oxides (NO _x)
Specific extinguishing methods	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

- | | | |
|-----------------------------|---|---|
| Technical measures | : | Static electricity may accumulate and ignite suspended dust causing an explosion.
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. |
| Local/Total ventilation | : | Use only with adequate ventilation. |
| Advice on safe handling | : | Do not breathe dust.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Minimize dust generation and accumulation.
Keep container closed when not in use.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment. |
| Conditions for safe storage | : | Keep in properly labelled containers.
Store in accordance with the particular national regulations. |
| Materials to avoid | : | Do not store with the following product types:
Strong oxidizing agents |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

- | | | |
|----------------------|---|---|
| Engineering measures | : | All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).
Minimize open handling. |
|----------------------|---|---|

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

Personal protective equipment. Among the following personal protective equipment, the PPEs which require safety certification need to be certified by KOSHA.

Respiratory protection	:	Use respiratory protection (dust mask) unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Filter type	:	Particulates type
Eye protection	:	Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.
Hand protection	:	
Material	:	Chemical-resistant gloves
Remarks	:	Consider double gloving.
Skin and body protection	:	Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Colour	:	brown
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling	:	No data available

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version 3.0	Revision Date: 2025/04/14	SDS Number (Internal): 11482470-00003	Date of last issue: 2024/12/23 Date of first issue: 2024/12/17
----------------	------------------------------	--	---

range

Flash point	:	No data available
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, handling or other means.
Flammability (liquids)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Solubility(ies) Water solubility	:	insoluble
Relative vapour density	:	Not applicable
Relative density	:	No data available
Density	:	0.5 g/cm ³
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle characteristics Particle size	:	No data available

10. STABILITY AND REACTIVITY

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

Chemical stability and possibility of hazardous reactions	:	Reactivity: Not classified as a reactivity hazard. Chemical stability: Stable under normal conditions. Possibility of hazardous reactions: May form explosive dust-air mixture during processing, handling or other means. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks. Avoid dust formation.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation Skin contact Ingestion Eye contact
--	---	--

Health hazard information**Acute toxicity****Components:****Silicon dioxide:**

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 2.08 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Paracoccus pantotrophus:

Acute oral toxicity	:	Assessment: Toxic effects cannot be excluded
Acute inhalation toxicity	:	Assessment: Toxic effects cannot be excluded
Acute dermal toxicity	:	Assessment: Toxic effects cannot be excluded

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version 3.0	Revision Date: 2025/04/14	SDS Number (Internal): 11482470-00003	Date of last issue: 2024/12/23 Date of first issue: 2024/12/17
----------------	------------------------------	--	---

Skin corrosion/irritation**Components:****Silicon dioxide:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation

Serious eye damage/eye irritation**Components:****Silicon dioxide:**

Species	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405

Respiratory or skin sensitisation**Respiratory sensitisation**

No data available

Skin sensitisation

No data available

Carcinogenicity**Components:****Silicon dioxide:**

No data available

Species	: Rat
Application Route	: Ingestion
Exposure time	: 103 weeks
Result	: negative

Paracoccus pantotrophus:

No data available

Bacillus megaterium:

No data available

Wheat bran:

No data available

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

Germ cell mutagenicity**Components:****Silicon dioxide:**

No data available

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow
cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative

Paracoccus pantotrophus:

No data available

Bacillus megaterium:

No data available

Wheat bran:

No data available

Reproductive toxicity**Components:****Silicon dioxide:**

No data available

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

Paracoccus pantotrophus:

No data available

Bacillus megaterium:

No data available

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version 3.0	Revision Date: 2025/04/14	SDS Number (Internal): 11482470-00003	Date of last issue: 2024/12/23 Date of first issue: 2024/12/17
----------------	------------------------------	--	---

Wheat bran:

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity**Components:****Silicon dioxide:**

Species	: Rat
NOAEL	: 1.3 mg/m3
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 13 Weeks

Aspiration toxicity

No data available

Experience with human exposure

No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity****Further information**

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 2.3 %

Components:**Silicon dioxide:**

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 10,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
------------------	--

Toxicity to daphnia and other	: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
-------------------------------	---

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version 3.0	Revision Date: 2025/04/14	SDS Number (Internal): 11482470-00003	Date of last issue: 2024/12/23 Date of first issue: 2024/12/17
----------------	------------------------------	--	---

aquatic invertebrates	Exposure time: 24 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: EC50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

Paracoccus pantotrophus:**Ecotoxicology Assessment**

Acute aquatic toxicity	: Toxic effects cannot be excluded
Chronic aquatic toxicity	: Toxic effects cannot be excluded

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues	: Dispose of contents and container according to wastes control act. Do not dispose of waste into sewer.
Contaminated packaging	: Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

Disposal precautions

Dispose of contents and container according to wastes control act.

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
Environmentally hazardous	: no

IATA-DGR

UN/ID No.	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
Packing instruction (cargo aircraft)	: Not applicable
Packing instruction (passenger aircraft)	: Not applicable

IMDG-Code

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
EmS Code	: Not applicable
Marine pollutant	: no

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

Not applicable for product as supplied.

National Regulations

Refer to section 15 for specific national regulation.

Special precautions for user

Not applicable

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

15. REGULATORY INFORMATION**National regulatory information****Regulation under the Occupational Safety and Health Act****Harmful Substances Prohibited from Manufacturing**

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Harmful Agents to be kept below Occupational Exposure Limits

Not applicable

Harmful Agents Required to be kept below Permission Levels

Not applicable

Hazardous substances requiring management

Not applicable

Special Management Materials

Not applicable

Controlled Substances Subject to Environment Monitoring

Chemical name	CAS-No.	Threshold limits (%)
Silica	7631-86-9	

Controlled Substances Subject to Health Examination

Not applicable

Hazardous Substances Subject to Process Safety Management (PSM) Reporting Obligation

Not applicable

K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 1)

Not applicable

K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 9)

Not applicable

Regulation under the Chemicals Control Act**Toxic Chemicals**

Not applicable

Restricted Chemicals

Not applicable

Prohibited Chemicals

Not applicable

Toxic Release Inventory

Not applicable

Bacillus Megaterium / Paracoccus Panto-
trophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

Accident Precaution Chemicals

Not applicable

Dangerous Substances Safety Management Act

Not Applicable to Dangerous Materials

Wastes Control Act

Industrial general wastes

Follow article 13 of the act to dispose the product waste

Other requirements in domestic and other countries**The components of this product are reported in the following inventories:**

AICS : not determined

DSL : not determined

IECSC : not determined

16. OTHER INFORMATION

Other information : none
Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Issuing date : 2024/12/17

Revision number and date

Number of Revision : 2

Revision Date : 2025/04/14

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

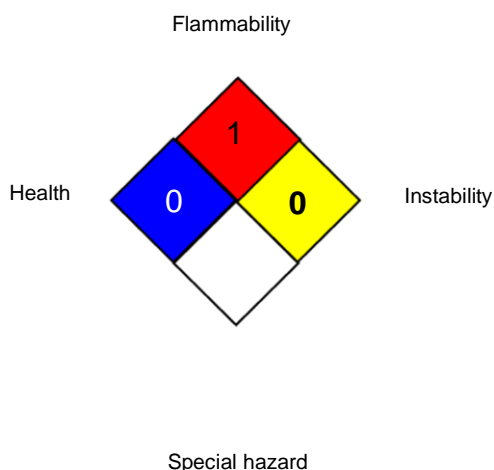
SAFETY DATA SHEET



Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version 3.0	Revision Date: 2025/04/14	SDS Number (Internal): 11482470-00003	Date of last issue: 2024/12/23 Date of first issue: 2024/12/17
----------------	------------------------------	--	---

NFPA:



Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; 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; TCSI - Taiwan Chemical Substance Inventory; TDG - Trans-

Bacillus Megaterium / Paracoccus Pantotrophus Formulation

Version	Revision Date:	SDS Number (Internal):	Date of last issue: 2024/12/23
3.0	2025/04/14	11482470-00003	Date of first issue: 2024/12/17

portation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

KR / EN