

Revision date: 06-Nov-2014 Version: 2.5 Page 1 of 11

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE **COMPANY/UNDERTAKING**

Product Identifier

Material Name: MG-Bac

Trade Name: MG-Bac; Poulvac MG

Poulvac MG; Mycoplasma gallisepticum, inactivated bacterin Synonyms:

Chemical Family:

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Veterinary Vaccine Restrictions on Use: Not for human use

Details of the Supplier of the Safety Data Sheet

Zoetis Belgium S.A. Zoetis Inc. 100 Campus Drive, P.O. Box 651 Mercuriusstraat 20 Florham Park, New Jersey 07932 (USA) 1930 Zaventem **Belgium**

Rocky Mountain Poison Control Center Phone: 1-866-531-8896

Product Support/Technical Services Phone: 1-800-366-5288

Emergency telephone number: Emergency telephone number:

CHEMTREC (24 hours): 1-800-424-9300 International CHEMTREC (24 hours): +1-703-527-3887

VMIPSrecords@zoetis.com Contact E-Mail:

2. HAZARDS IDENTIFICATION

Appearance: Pale yellow to Reddish White Opaque Liquid

Classification of the Substance or Mixture

GHS - Classification Not classified as hazardous

EU Classification:

EU Indication of danger: Not classified

Label Elements

Signal Word: Not Classified

Hazard Statements: Not classified in accordance with international standards for workplace safety.

Other Hazards

May cause mild eye irritation. May cause slight skin irritation. In the event of accidental **Short Term:**

> injection, an allergic reaction may occur. If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate therapy instituted. This product

is an oil-adjuvanted suspension. Oil-adjuvant containing products may cause severe

vasospasm following accidental injection.

Australian Hazard Classification

(NOHSC):

Non-Hazardous Substance. Non-Dangerous Goods.

Material Name: MG-Bac Page 2 of 11
Revision date: 06-Nov-2014 Version: 2.5

Note: This document has been prepared in accordance with standards for workplace safety, which

requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases.

Your needs may vary depending upon the potential for exposure in your workplace.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Mineral oil, white	8042-47-5	232-455-8	Not Listed	Not Listed	<75
Formaldehyde	50-00-0	200-001-8	T; R23/24/25 C; R34 Carc.Cat.3; R40 R43	Acute Tox. 3 (H301) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Carc. 1A (H350) Acute Tox. 3 (H331)	<0.1
METHANOL	67-56-1	200-659-6	F; R11 T; R23/24/25- 39/23/24/25	Acute Tox. 3 (H301) STOT SE 1 (H370) Flam. Liq. 2 (H225) Acute Tox. 3 (H331)	<0.1

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Mycoplasma Gallisepticum	Not Assigned	Not Listed	Not Listed	Not Listed	*

Additional Information: * Proprietary

Ingredient(s) indicated as hazardous have been assessed under standards for workplace

safety.

For the full text of the R phrases and CLP/GHS abbreviations mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of First Aid Measures

Eye Contact: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention

immediately.

Skin Contact: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek

medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not

induce vomiting unless directed by medical personnel. Seek medical attention immediately.

Inhalation: Remove to fresh air and keep patient at rest. Seek medical attention immediately.

Most Important Symptoms and Effects, Both Acute and Delayed

Material Name: MG-Bac Page 3 of 11
Revision date: 06-Nov-2014 Version: 2.5

Symptoms and Effects of

For information on potential signs and symptoms of exposure, See Section 2 - Hazards

Exposure:

Identification and/or Section 11 - Toxicological Information.

Medical Conditions
Aggravated by Exposure:

None known

Indication of the Immediate Medical Attention and Special Treatment Needed

Notes to Physician: Where parenteral oil-adjuvanted vaccine exposure has occurred, the patient should be

promptly evaluated for the development of vasospasm and/or compartment syndrome.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Extinguish fires with CO2, extinguishing powder, foam, or water.

Special Hazards Arising from the Substance or Mixture

Hazardous Combustion

Formation of toxic gases is possible during heating or fire.

Products:

Fine / Explosion Hazards: Fine particles (such as dust and mists) may fuel fires/explosions.

Advice for Fire-Fighters

During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

Environmental Precautions

Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Methods and Material for Containment and Cleaning Up

Measures for Cleaning /

Collecting:

Contain the source of the spill if it is safe to do so. Wipe up with a damp cloth and place in

container for disposal. Clean contaminated surface thoroughly.

Additional Consideration for

Large Spills:

Non-essential personnel should be evacuated from affected area. Report emergency

situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling

When handling, use proper personal protective equipment as specified in Section 8. Use with adequate ventilation. Avoid inhalation and contact with skin, eye, and clothing. Avoid accidental injection. Wash thoroughly after handling. Prevent environmental releases.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Store at room temperature in properly labeled containers. Keep away from heat, sparks and

flames.

Specific end use(s): Veterinary Vaccine

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Refer to available public information for specific member state Occupational Exposure Limits.

Mineral oil, white

Material Name: MG-Bac Page 4 of 11
Revision date: 06-Nov-2014 Version: 2.5

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ACGIH Threshold Limit Value (TWA) 5 mg/m³

ACGIH Threshold Limit Value (STEL) 10 mg/m³ (oil mist)

Formaldehyde

Japan - OELs - Ceilings

ACGIH Ceiling Threshold Limit:

ACGIH - Sensitizer Designation

Australia STEL

2 ppm
2.5 mg/m³

Australia TWA

1 ppm

 Australia TWA
 1 ppm

 1.2 mg/m³

 Austria OEL - MAKs
 0.5 ppm

Bulgaria OEL - TWA 1.0 mg/m³
Czech Republic OEL - TWA 0.5 mg/m³
Estonia OEL - TWA 0.5 ppm
0.6 mg/m³

 Finland OEL - TWA
 0.3 ppm

 0.37 mg/m³

 France OEL - TWA
 0.5 ppm

France OEL - TWA 0.5 ppm
Germany (DFG) - MAK 0.3 ppm

0.37 mg/m³ no irritation should occur during mixed exposure

Greece OEL - TWA

2 ppm

 $\begin{tabular}{lll} \textbf{Greece OEL - TWA} & 2 ppm \\ 2.5 mg/m^3 \\ \textbf{Hungary OEL - TWA} & 0.6 mg/m^3 \\ \textbf{Ireland OEL - TWAs} & 2 ppm \\ \end{tabular}$

2 ppm 2.5 mg/m³ 0.2 ppm

 Latvia OEL - TWA
 0.24 mg/m³

 Lithuania OEL - TWA
 0.5 ppm

 0.0 ppm/m³
 0.0 ppm/m³

 Netherlands OEL - TWA
 0.6 mg/m³

 Netherlands OEL - TWA
 0.15 mg/m³

 Vietnam OEL - TWAs
 0.5 mg/m³

 OSHA - Final PELS - TWAs:
 0.75 ppm

OSHA - Final PELS - TWAs: 0.75 ppm
OSHA - Specifically Regulated Chemicals 2 ppm
0.5 ppm

 $\begin{array}{c} 0.75 \text{ ppm} \\ \textbf{Poland OEL - TWA} & 0.5 \text{ mg/m}^3 \\ \textbf{Romania OEL - TWA} & 1 \text{ ppm} \end{array}$

1.20 mg/m³

Slovakia OEL - TWA

0.3 ppm
0.37 mg/m³

Slovenia OEL - TWA

0.5 ppm

 Switzerland OEL -TWAs
 0.37 mg/m³

 0.3 ppm
 0.37 mg/m³

METHANOL

ACGIH Threshold Limit Value (TWA) 200 ppm
ACGIH Threshold Limit Value (STEL) 250 ppm
ACGIH - Biological Exposure Limit: 15 mg/L

ZT00125

Material Name: MG-Bac Page 5 of 11
Revision date: 06-Nov-2014 Version: 2.5

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8. EXPOSURE CONTROLS	S/PERSONAL PROTECTION
ACGIH - Skin Absorption Designation	Skin - potential significant contribution to overall exposure by the
, ,	cutaneous route
Australia STEL	250 ppm
Adolfana OTEL	328 mg/m ³
Australia TWA	200 ppm
AUSTIAIIA TVVA	
A	262 mg/m ³
Austria OEL - MAKs	200 ppm
	260 mg/m ³
Belgium OEL - TWA	200 ppm
	266 mg/m ³
Bulgaria OEL - TWA	260.0 mg/m ³
U	200 ppm
Cyprus OEL - TWA	200 ppm
Oypido OLL TITA	260 mg/m ³
Czoch Popublic OEL TWA	250 mg/m³
Czech Republic OEL - TWA	•
Denmark OEL - TWA	200 ppm
	260 mg/m ³
Estonia OEL - TWA	200 ppm
	250 mg/m ³
Finland OEL - TWA	200 ppm
	270 mg/m ³
France OEL - TWA	200 ppm
	260 mg/m ³
Germany - TRGS 900 - TWAs	200 ppm
Commany Tree Coo Trees	270 mg/m ³
Germany (DFG) - MAK	200 ppm
Germany (DI G) - MAR	270 mg/m ³
Cormony Biological Evenous Limits	30 mg/L
Germany - Biological Exposure Limit:	
Greece OEL - TWA	200 ppm
	260 mg/m ³
Hungary OEL - TWA	260 mg/m ³
Ireland OEL - TWAs	200 ppm
	260 mg/m ³
Italy OEL - TWA	200 ppm
·	260 mg/m ³
Latvia OEL - TWA	200 ppm
	260 mg/m ³
Lithuania OEL - TWA	200 ppm
Lititudina OLL TWA	260 mg/m ³
Luxembourg OEL - TWA	-
Luxellibourg OEL - TWA	200 ppm
Marka OFI TIMA	260 mg/m ³
Malta OEL - TWA	200 ppm
	260 mg/m ³
Netherlands OEL - TWA	133 mg/m ³
	100 ppm
Vietnam OEL - TWAs	50 mg/m ³
OSHA - Final PELS - TWAs:	200 ppm
	260 mg/m ³
Poland OEL - TWA	100 mg/m ³
Portugal OEL - TWA	200 ppm
Romania OEL - TWA	200 ppm
Nomania CEL - TVVA	260 mg/m ³
Demania Dialaminal Francesco Limite	•
Romania - Biological Exposure Limit:	6 mg/L

ZT00125

Material Name: MG-Bac Page 6 of 11
Revision date: 06-Nov-2014 Version: 2.5

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Slovakia OEL - TWA 200 ppm

260 mg/m³

Slovak Republic - Biological Exposure Limit: 30 mg/L Slovenia OEL - TWA 200 ppm

260 mg/m³

Spain OEL - TWA 200 ppm 266 mg/m³

Spain - Biological Exposure Limit: 15 mg/L Sweden OEL - TWAs 200 ppm

200 ppm 250 mg/m³

Switzerland OEL -TWAs 200 ppm

260 mg/m³

Exposure Controls

Engineering Controls: Engineering controls should be used as the primary means to control exposures. General

room ventilation is adequate unless the process generates dust, mist or fumes.

Personal Protective Refer to applicable national standards and regulations in the selection and use of personal

Equipment: protective equipment (PPE).

Hands: Wear impervious gloves if skin contact is possible.

Eyes: Safety glasses or goggles

Skin: Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and

laboratory areas.

Respiratory protection: Whenever excessive air contamination (dust, mist, vapor) is generated, respiratory protection,

with appropriate protection factors, should be used to minimize exposure. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a

protection factor sufficient to control exposures to below the OEL.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Opaque liquid Color: Pale yellow to Reddish

white

Odor: Odorless Odor Threshold: No data available.

Molecular Formula: Mixture Molecular Weight: Mixture

Solvent Solubility: Soluble: Diethylether, n-octanol, Acetone, Methanol

Water Solubility: Soluble pH: Soluble

Melting/Freezing Point (°C):

Boiling Point (°C):

No data available.

No data available.

Partition Coefficient: (Method, pH, Endpoint, Value)

No data available

Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s):

Vapor Pressure (kPa):

Vapor Density (g/ml):

Relative Density:

No data available

Flammablity:

Autoignition Temperature (Solid) (°C):

Flammability (Solids):

Flash Point (Liquid) (°C):

No data available
No data available

Material Name: MG-Bac Page 7 of 11 Revision date: 06-Nov-2014 Version: 2.5

Upper Explosive Limits (Liquid) (% by Vol.): No data available Lower Explosive Limits (Liquid) (% by Vol.): No data available

10. STABILITY AND REACTIVITY

No data available Reactivity:

Chemical Stability: Stable under normal conditions of use.

Possibility of Hazardous Reactions

Oxidizing Properties: No data available

Conditions to Avoid: Fine particles (such as dust and mists) may fuel fires/explosions. As a precautionary measure, keep away from strong oxidizers **Incompatible Materials:**

Hazardous Decomposition No data available

Products:

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

General Information:

Toxicological properties of the formulation have not been fully investigated. The information in this section describes the potential hazards of the individual ingredients and the formulation. The antigens included in this product are non-infectious. All have been prepared from modified or inactivated preparations of microorganisms.

Acute Toxicity: (Species, Route, End Point, Dose)

Formaldehyde

Rat Oral LD50 800 mg/kg

Mineral oil, white

Rat Oral LD50 > 5000 mg/kg

Irritation / Sensitization: (Study Type, Species, Severity)

Formaldehyde

Eye Irritation Rabbit Severe

Moderate Severe Skin Irritation Rabbit

Skin Sensitization Positive

Mineral oil, white

Skin Irritation Rabbit Slight Eye Irritation Rabbit Slight

Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

Formaldehyde

90 Day(s) Dog Inhalation Not Specified Lungs 90 Day(s) Rat Inhalation Not Specified Lungs 90 Day(s) Monkey Inhalation Not Specified

90 Day(s) Inhalation 15 ppm LOAEL Rat Respiratory system

Material Name: MG-Bac Page 8 of 11
Revision date: 06-Nov-2014 Version: 2.5

11. TOXICOLOGICAL INFORMATION

Reproduction & Development Toxicity: (Duration, Species, Route, Dose, End Point, Effect(s))

Formaldehyde

Embryo / Fetal Development Mouse Oral 185 mg/kg/day Not teratogenic, Maternal toxicity Embryo / Fetal Development Rat Inhalation 40 ppm Not Teratogenic, Maternal Toxicity

Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

Formaldehyde

In Vitro Bacterial Mutagenicity (Ames) Bacteria Positive
In Vitro Chromosome Aberration Rodent Positive
In Vitro Sister Chromatid Exchange Rodent Positive
In Vivo Chromosome Aberration Not specified Positive

Formaldehyde

2 Year(s) Rat Inhalation 6 ppm LOAEL Tumors2 Year(s) Mouse Inhalation 15 ppm LOAEL Tumors

Carcinogen Status: None of the components present in this material at concentrations equal to or greater than

0.1% are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

Formaldehyde

IARC: Group 1 (Carcinogenic to Humans)

NTP: Known Human Carcinogen

OSHA: Listed

12. ECOLOGICAL INFORMATION

Environmental Overview: Environmental properties of the formulation have not been investigated. Releases to the

environment should be avoided.

Toxicity: No data available

Persistence and Degradability: No data available

Bio-accumulative Potential: No data available

Mobility in Soil: No data available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste in accordance with all applicable laws and regulations. Member State

specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental

releases. This may include destructive techniques for waste and wastewater.

Material Name: MG-Bac Page 9 of 11
Revision date: 06-Nov-2014 Version: 2.5

Formaldehyde

RCRA - U Series Wastes Listed

METHANOL

RCRA - U Series Wastes Listed

14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.

U.S. DOT Reportable Quantity (RQ), 49 CFR 172.101 Appendix A:

Formaldehyde

CERCLA/SARA Hazardous Substances 100 lb and their Reportable Quantities: 45.4 kg

METHANOL

CERCLA/SARA Hazardous Substances 5000 lb and their Reportable Quantities: 2270 kg

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Canada - WHMIS: Classifications

WHMIS hazard class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Mineral oil, white

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Present

232-455-8

Formaldehyde

CERCLA/SARA 313 Emission reporting 0.1 %
CERCLA/SARA Hazardous Substances 100 lb and their Reportable Quantities: 45.4 kg
CERCLA/SARA - Section 302 Extremely Hazardous 500 lb

TPQs

Material Name: MG-Bac Page 10 of 11
Revision date: 06-Nov-2014 Version: 2.5

15. REGULATORY INFORMATION

CERCLA/SARA - Section 302 Extremely Hazardous 100 lb

Substances EPCRA RQs California Proposition 65

EU EINECS/ELINCS List

carcinogen initial date 1/1/88 gas

OSHA - Specifically Regulated Chemicals 2 ppm

0.5 ppm 0.75 ppm

200-001-8

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Standard for the Uniform Scheduling
for Drugs and Poisons:

Present
Schedule 2
Schedule 6

METHANOL

CERCLA/SARA 313 Emission reporting 1.0 %
CERCLA/SARA Hazardous Substances 5000 lb and their Reportable Quantities: 2270 kg

California Proposition 65 developmental toxicity initial date 3/16/12

Inventory - United States TSCA - Sect. 8(b)PresentAustralia (AICS):PresentStandard for the Uniform SchedulingSchedule 5for Drugs and Poisons:Schedule 6EU EINECS/ELINCS List200-659-6

Mycoplasma Gallisepticum

CERCLA/SARA 313 Emission reporting

California Proposition 65

EU EINECS/ELINCS List

Not Listed

Not Listed

16. OTHER INFORMATION

Text of R phrases and GHS Classification abbreviations mentioned in Section 3

Acute toxicity, oral-Cat.3; H301 - Toxic if swallowed Acute toxicity, inhalation-Cat.3; H331 - Toxic if inhaled

Skin corrosion/irritation-Cat.1B; H314 - Causes severe skin burns and eye damage

Sensitization, skin-Cat.1; H317 - May cause an allergic skin reaction

Carcinogenicity-Cat.1A; H350 - May cause cancer

Specific target organ toxicity, single exposure-Cat.1; H370 - Causes damage to organs

Flammable liquids-Cat.2; H225 - Highly flammable liquid and vapor

T - Toxic

C - Corrosive

Carcinogenic: Category 3 F - Highly flammable

R34 - Causes burns.

R40 - Limited evidence of a carcinogenic effect

R43 - May cause sensitization by skin contact.

R11 - Highly flammable.

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Material Name: MG-Bac Page 11 of 11
Revision date: 06-Nov-2014 Version: 2.5

Data Sources: The data contained in this MSDS may have been gathered from confidential internal sources,

raw material suppliers, or from the published literature.

Reasons for Revision: Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking.

Updated Section 2 - Hazard Identification. Updated Section 3 - Composition / Information on Ingredients. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 9 -

Physical and Chemical Properties. Updated Section 16 - Other Information.

Prepared by: Toxicology and Hazard Communication

Zoetis Global Risk Management

Zoetis Inc. believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time.

End of Safety Data Sheet
