SAFETY DATA SHEET



1. Identification

Product identifier Ultrabac 7 / Somubac

Other means of identification

Ultrabac® 7/Somubac® * ULTRABAC® 7/SOMUBAC® * Clostridium **Synonyms**

Chauvoei-Septicum-Novyi-Sordelli-Perfringens Types C&D Haemophilus Somnus Bacterin-Toxoid

Recommended use Veterinary vaccine **Recommended restrictions** Not for human use Manufacturer/Importer/Supplier/Distributor information

Company Name (US) Zoetis Inc.

10 Sylvan Way

Parsippany, New Jersey 07054 (USA)

Rocky Mountain Poison

and Drug Center

1-866-531-8896

Product Support/Technical

Services

1-800-366-5288

Emergency telephone

numbers

CHEMTREC (24 hours): 1-800-424-9300

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

Company Name (EU) Zoetis Belgium S.A.

> Mercuriusstraat 20 1930 Zaventem

Belgium

Emergency telephone

number

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

Contact E-Mail VMIPSrecords@zoetis.com

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2

> Serious eye damage/eye irritation Category 2A Sensitization, respiratory Category 1A Sensitization, skin Category 1A Germ cell mutagenicity Category 2 Category 1A Carcinogenicity

Environmental hazards Not classified. Not classified. **OSHA** defined hazards

Label elements



Signal word Danger

Hazard statement Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May

cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing

genetic defects. May cause cancer.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory

protection.

If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water, If Response

skin irritation or rash occurs: Get medical advice/attention. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get

medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

None.

Supplemental information

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|--------------------------------|--------------------------|--------------|-------|
| Aluminum hydroxide gel | | 21645-51-2 | 1-3 |
| Formaldehyde | | 50-00-0 | 0.1-1 |
| Clostridium chauvoei | | NOT ASSIGNED | * |
| Clostridium novyi | | NOT ASSIGNED | * |
| Clostridium perfringens type C | | NOT ASSIGNED | * |
| Clostridium perfringens type D | | NOT ASSIGNED | * |
| Clostridium septicum | | NOT ASSIGNED | * |
| Clostridium sordellii | | NOT ASSIGNED | * |
| Haemophilus somnus | | NOT ASSIGNED | * |

Composition comments

* Non-hazardous Ingredients

In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. If experiencing respiratory symptoms: Call a POISON CENTER or

doctor/physician. For breathing difficulties, oxygen may be necessary.

Skin contact Remove contaminated clothing. In the case of skin contact, immediately wash the skin with plenty

of soap and water. In the event of accidental self injection or needle stick injury, wash the injury thoroughly with clean running water. Get medical attention immediately. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. In case of eczema or

other skin disorders: Seek medical attention and take along these instructions.

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if Eye contact

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Rinse mouth. Call a physician or poison control center immediately. Do not induce vomiting without Ingestion advice from poison control center. Never give anything by mouth to a victim who is unconscious or

is having convulsions.

Most important symptoms/effects, acute and

delayed

Indication of immediate medical attention and special

treatment needed **General information** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

For personal protection, see section 8 of the SDS. IF exposed or concerned: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting

equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Ventilate the contaminated area. Avoid inhalation of vapors or mists. Avoid contact with eyes, skin, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Ensure adequate ventilation. Avoid release to the environment.

Large Spills: Stop the flow of material, if this is without risk. Absorb in vermiculite, dry sand or earth and place into containers. Clean contaminated surface thoroughly.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid accidental injection. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash thoroughly after handling. When using, do not eat, drink or smoke. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Keep away from heat, sparks and open flame. Store in a well-ventilated place. Store at 2-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

Value

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

| Components | Туре | Value | |
|--|--------|----------|----------------------|
| Formaldehyde (CAS 50-00-0) | STEL | 2 ppm | |
| • | TWA | 0.75 ppm | |
| US. OSHA Table Z-3 (29 CFR 1910 | .1000) | | |
| Components | Туре | Value | Form |
| Aluminum hydroxide gel (CAS 21645-51-2) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |
| US. ACGIH Threshold Limit Value | s | | |
| Components | Туре | Value | Form |
| Aluminum hydroxide gel (CAS 21645-51-2) | TWA | 1 mg/m3 | Respirable fraction. |

Material name: Ultrabac 7 / Somubac

SDS US

US. ACGIH Threshold Limit Values Form Value Components **Type** Formaldehyde (CAS Ceiling 0.3 ppm 50-00-0) **US. NIOSH: Pocket Guide to Chemical Hazards** Components Type Value Formaldehyde (CAS Ceiling 0.1 ppm 50-00-0) **TWA** 0.016 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Control banding approach Not available.

Appropriate engineering

controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses or goggles if eye contact is possible.

Skin protection

Wear appropriate chemical resistant gloves. Hand protection

Other Wear suitable protective clothing. Use protective clothing (uniforms, lab coats, disposable

coveralls, etc.) in both production and laboratory areas.

No personal respiratory protective equipment normally required. In case of insufficient ventilation, Respiratory protection

wear suitable respiratory equipment. 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.

Thermal hazards Not applicable.

General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance Liquid solution

Liquid. Physical state Liquid. **Form**

Color Not available. Not available. Odor Odor threshold Not available.

6 - 8

Not available. Melting point/freezing point

Initial boiling point and boiling > 212 °F (> 100 °C)

range

Flash point **Evaporation rate**

Non-flammable Not available. Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

Flammability limit - upper

Vapor density

Not available.

Not available.

Not available. Explosive limit - lower (%) Explosive limit - upper (%) Not available. Not available. Vapor pressure

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.
(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

Specific gravity 0.8 - 1.2

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials. Heat, flames and sparks. Sunlight. Protect from freezing.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation

may be harmful.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Formaldehyde Species: Rabbit

Severity: Moderate to Severe

Eye contact Causes serious eye irritation.

Formaldehyde Species: Rabbit

Severity: Severe

Ingestion Health injuries are not known or expected under normal use.

Symptoms related to the physical, chemical and toxicological characteristics

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic

skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Product Species Test Results

Ultrabac 7 / Somubac

<u>Acute</u> Dermal

ATE > 10000 mg/kg

Inhalation

ATE 48 mg/l/4h

Oral

ATE 10000 mg/kg

Material name: Ultrabac 7 / Somubac 351 Version #: 01 Issue date: 06-16-2017 Components Species Test Results

Aluminum hydroxide gel (CAS 21645-51-2)

Acute Other

LD50 Rat 150 mg/kg

Formaldehyde (CAS 50-00-0)

Acute Dermal

LD50 Rabbit 270 mg/kg

Inhalation

LC50 Mouse 0.414 mg/L, 4 hours

Rat 0.48 mg/L, 4 hours

Oral

LD50 Rat 100 mg/kg

Chronic Inhalation

LOAEL Mouse 15 ppm, 2 years Tumors

Rat 15 ppm, 90 days Respiratory system

6 ppm, 2 years Tumors

Skin corrosion/irritation

Serious eye damage/eye irritation

e damage/eye Causes serious

Causes serious eye irritation.

Causes skin irritation.

Eye Contact

Formaldehyde Species: Rabbit

Severity: Severe

Respiratory or skin sensitization

ACGIH sensitization

FORMALDEHYDE (CAS 50-00-0) Dermal sensitization

Respiratory sensitization

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization May cause an allergic skin reaction.

Skin sensitization

Formaldehyde Species: Guinea Pig

Severity: Positive

Germ cell mutagenicity Suspected of causing genetic defects.

Mutagenicity

Formaldehyde In Vitro Bacterial Mutagenicity (Ames)

Result: Positive Species: Bacteria

In Vitro Chromosome Aberration

Result: Positive Species: Rodent

In Vitro Sister Chromatid Exchange

Result: Positive Species: Rodent

In Vivo Chromosome Aberration

Result: Positive Species: Not specified

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Formaldehyde (CAS 50-00-0) 1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Formaldehyde (CAS 50-00-0)

US. National Toxicology Program (NTP) Report on Carcinogens

Formaldehyde (CAS 50-00-0) Known To Be Human Carcinogen.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Developmental effects

Formaldehyde 185 mg/kg/day Embryo / Fetal Development, Not teratogenic

Maternal toxicity Species: Mouse Organ: Oral

40 ppm Embryo / Fetal Development, Not Teratogenic

Maternal Toxicity Species: Rat Organ: Inhalation

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity repeated exposure

Not classified.

Not an aspiration hazard.

Aspiration hazard

Further information In the event of accidental injection, an allergic reaction may occur. The antigens included in this

product are non-infectious. All have been prepared from killed or inactivated preparations of

microorganisms.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Avoid release to the environment.

| Components | | Species | Test Results |
|-------------------|----------|-------------------------------------|--------------------------------|
| Formaldehyde (CAS | 50-00-0) | | |
| | EC50 | Daphnia magna (Water Flea) | 42 mg/L, 24 Hours |
| | LC50 | Oncorhynchus mykiss (Rainbow Trout) | 118 ppm, 96 Hours |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia pulex) | 4.3 - 7.8 mg/l, 48 hours |
| Fish | LC50 | Striped bass (Morone saxatilis) | 10.302 - 16.743 mg/l, 96 hours |

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available for this product.

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Avoid release to the environment. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Hazardous waste code

Dispose in accordance with all applicable regulations.

Waste from residues / unused

None known.

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Not established.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Formaldehyde (CAS 50-00-0) Listed.

SARA 304 Emergency release notification

Formaldehyde (CAS 50-00-0) 100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Formaldehyde (CAS 50-00-0) Cancer

Skin sensitization Respiratory sensitization

Eye irritation Skin irritation

respiratory tract irritation

Acute toxicity Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name **CAS** number Reportable **Threshold** Threshold **Threshold** planning quantity, quantity planning quantity planning quantity, (pounds) (pounds) lower value upper value (pounds) (pounds)

Formaldehyde 50-00-0 100 500

SARA 311/312 Hazardous No

chemical

SARA 313 (TRI reporting)

Chemical nameCAS number% by wt.Formaldehyde50-00-00.1-1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Formaldehyde (CAS 50-00-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Formaldehyde (CAS 50-00-0)

Safe Drinking Water Act Not regulated.

(SDWA)

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Formaldehyde (CAS 50-00-0) Listed: January 1, 1988

Material name: Ultrabac 7 / Somubac 351 Version #: 01 Issue date: 06-16-2017

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Formaldehyde (CAS 50-00-0)

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | No |
| Canada | Domestic Substances List (DSL) | No |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | No |

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 06-16-2017

Version # 01

List of abbreviations ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).

Disclaimer 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. The information in the sheet was written based on the best knowledge and experience currently

available.

Revision information This document has undergone significant changes and should be reviewed in its entirety.