This SDS packet was issued with item:

078305979

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078071120 078073823 078073864 078349207

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

078073831 078073849

MATERIAL SAFETY DATA SHEET

--

Vet-A-Mix, A Division of LLOYD, Inc. Phone No. (712) 246-4000 Page 1 of 2 P.O. Box 130, Shenandoah, IA 51601-0130

Derma-Form Liquid

MSDS Date: 4 Oct 2002 (Original)

6/27/06 (Revised)

Product Name: Derma-Form Liquid

1. INGREDIENTS: (% w/w), unless otherwise noted

EXPOSURE LIMITS, ppm

OSHA ACGIH
COMPONENT CAS# % PEL TLV (mg/m³)

--- Not Applicable ----

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Only those ingredients composing \geq 1% (\geq 0.1% for carcinogens or suspect carcinogens) of the formula (w/w) and which have hazards identified are listed.

2. PHYSICAL DATA:

APPEARANCE: Amber clear oil. Specific gravity = 0.925. Other physical data have not been determined.

3. FIRE AND EXPLOSION HAZARD DATA:

This has not been evaluated.

EXTINGUISHING MEDIA: Water fog, alcohol foam, CO₂, dry chemical.

4. REACTIVITY DATA:

This has not been evaluated. The product is expected to be stable under normal storage conditions; avoid strong oxidizers.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Cover with absorbent material, soak up and sweep up and dispose of in DOT-approved waste containers. Keep out of sewers, storm drains, surface waters and soil.

DISPOSAL METHOD: Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures.

6. HEALTH HAZARD DATA:

EYE: This product is not expected to irritate the eyes under normal conditions of use.

SKIN CONTACT: This product is not expected to irritate the skin under normal conditions of use.

INGESTION: This has not been evaluated.

INHALATION: Inhalation exposure under normal conditions of use is not likely to cause adverse effects. Should vegetable oil mist exist, respiratory protection should be worn; vegetable oil mists are classified as a respiratory "nuisance particulate" (no health effects) by ACGIH.

MATERIAL SAFETY DATA SHEET

__

Vet-A-Mix, A Division of LLOYD, Inc. Phone No. (712) 246-4000 Page 2 of 2

P.O. Box 130, Shenandoah, IA 51601-0130

Derma-Form Liquid MSDS Date: 4 Oct 2002 (Original)

6/27/06 (Revised)

7. FIRST AID:

EYES: Immediately flush eyes with copious amounts of running water for 15 minutes.

SKIN: Wash with soap and water.

INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY. Treatment is by gastric lavage or emesis.

INHALATION: If a person has been exposed to excessive quantities of dust due to mishaps, move the person to fresh air. Give artificial respiration if not breathing.

Seek medical attention immediately if excessive exposure occurs.

8. HANDLING PRECAUTIONS:

There is no OSHA PEL or ACGIH TLV for this product. Under normal conditions of use, no special handling precautions are required in areas with adequate ventilation. However, under conditions of prolonged exposure in which quantities of dust are generated, mechanical ventilation, safety glasses with side shields, gloves and a NIOSH approved dust respirator are recommended.

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Exercise reasonable care and caution.

REGULATORY INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSDS for health and safety information.

U.S. REGULATIONS: SARA HAZARD CATEGORY: This product has been reviewed according to the federal EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to be exempt from reporting requirements. Nevertheless, potential reporters should check with their state emergency response commissions to determine if this product must be reported under applicable state requirements.



Merck & Co., Inc. One Merck Dr. Whitehouse Station, NJ 08889

MATERIAL SAFETY DATA SHEET

Merck Animal Health urges each user or recipient of this MSDS to read the entire data sheet to become aware of the hazards associated with this material.

SECTION 1. IDENTIFICATION OF SUBSTANCE AND CONTACT INFORMATION

MSDS NAME: **OTOMAX**

Otomax SYNONYM(S):

CGB ointment Malotic ointment Otomax ointment

MSDS NUMBER: SP000063

(908) 423-6000 (24/7/365) English Only Emergencies - CHEMTREC: **EMERGENCY NUMBER(S):**

(800) 424-9300 (Inside Continental USA) (703) 527-3887 (Outside Continental USA)

MERCK MSDS HELPLINE: (800) 770-8878 (US and Canada)

(908) 473-3371 (Worldwide)

Monday to Friday, 9am to 5pm (US Eastern Time)

SECTION 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Viscous suspension Light beige

Light beig

Oil odor

May be absorbed through the skin.

May be harmful if absorbed through skin or if swallowed.

May cause dermal sensitization.

May be a reproductive toxicant.

May cause developmental effects.

Causes effects to:

skin

endocrine system

May cause effects to:
nervous system
muscoloskeletal system
gastrointestinal tract
immune system
liver
kidney
reproductive system
fetus

POTENTIAL HEALTH EFFECTS:

The toxicological properties of the mixture(s) have not been fully characterized in humans or animals. However, there are data to describe the toxicological properties of the individual ingredients. The following summary is based upon available information about the individual ingredients of the mixture(s), or of the expected properties of the mixture(s). Only information about the ingredients that are expected to contribute significantly to the potential health hazard profile of the formulation(s) are presented.

Clotrimazole is a broad-spectrum anti-fungal agent used for the treatment of dermal infections. Clotrimazole is poorly absorbed by skin or mucous membranes in humans. Clinical effects reported following the application of clotrimazole, as a 1% cream, on the skin included stinging, itching, redness, swelling, blisters, burning, peeling, itching eruptions (urticaria), and general irritation of the skin. Clotrimazole may cause sensitization of the skin in sensitive individuals. Reversible liver effects have also occurred in patients following clotrimazole treatment.

Betamethasone is an anti-inflammatory corticosteroid used in the treatment of various disease states. As a class, corticosteroids are known to cause systemic effects such as reversible supression of the hypothalamic-pituitary-adrenal (HPA) axis, increased blood sugar, sugar in the urine, impairment of glucose tolerance, and changes in general metabolism, bone metabolism, white blood cell counts, and some blood serum chemistry levels. The clinical relevance of these changes in healthy adults is unknown. Cushing's syndrome may occur from excessive exposure to corticosteroids. Use of aerosolized corticosteroid inhalers has caused nasal irritation or burning, occasional sneezing, runny or bloody nose. Rare instances of nasal ulceration, septum perforation and increased intraocular pressure have been reported following prolonged use of or overexposure to aerosolized corticosteroids. Prolonged use of systemic steroids is also known to be associated with the formation of cataracts and glaucoma. Corticosteroids may mask some signs of infection, and opportunistic infections may appear during their use due to effects on immune system. Persons with pre-existing skin conditions including dermatitis and acne, a history of asthma, or those taking or those with a history of taking systemic steroids are more susceptible to allergic reactions from exposure to steroids. Serious health effects including death have occured in asthmatic patients during transfer from systemic corticosteroid to topical corticosteroid clinical use.

Reported occupational effects include allergic skin reactions such as dermatitis and rash.

The most common side effects in studies with betamethasone-containing topical preparations were local, including erythema, steroid-induced rosacea (redness, acne-like reaction on face), mild burning, itching, skin dryness and irritation. Betamethasone has been shown to decrease collagen synthesis in human skin following treatment with topical cream. Adverse reactions reported following injection of betamethasone include effects on fluid and electrolytes, musculoskeletal, gastrointestinal, dermatologic, neurological, endocrine, ophthalmic and metabolic parameters.

Corticosteroids are teratogenic in laboratory animals and may be considered teratogenic in non-human primates as well. Widespread clinical use of corticosteroids has resulted in very few reports of teratogenic activity in humans. There is no evidence of impaired fertility in humans treated with corticosteroids although hypo-adrenalism may occur in infants born to mothers receiving corticosteroids during pregnancy.

Ingestion of mineral oil may cause laxative effect, nausea, dehydration or lipid pneumonia. Long-term dermal exposure to mineral oil may cause dermatitis and oil acne.

MSDS NAME: OTOMAX MSDS NUMBER: SP000063

Latest Revision Date: 20-Jan-2012 Page 2 of 8

LISTED CARCINOGENS

INGREDIENT	CAS NUMBER	OSHA	IARC	NTP	ACGIH
Mineral Oil	8012-95-1				A2

This product contains a highly refined grade of mineral oil which is not classified as a carcinogen by IARC or NTP.

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

PRODUCT USE: Veterinary product

CHEMICAL FORMULA: Mixture.

The formulation for this product is proprietary information. Only hazardous ingredients in concentrations of 1% or greater and/or carcinogenic ingredients in concentrations of 0.1% or greater are listed in the Chemical Composition table. Active ingredients in any concentration are listed. For additional information about carcinogenic ingredients see Section 2.

CHEMICAL COMPOSITION

INGREDIENT	CAS NUMBER	PERCENT
Betamethasone Valerate	2152-44-5	0.12
Ethene Homopolymer (Polyethylene)	9002-88-4	29.88
Gentamicin Sulfate (Preservative)	1405-41-0	0.5
Clotrimazole	23593-75-1	1
Mineral Oil	8012-95-1	65-75

ADDITIONAL INFORMATION:

This MSDS is written to provide health and safety information for individuals who will be handling the final product formulation during research, manufacturing, and distribution. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate MSDS for each ingredient. Refer to the package insert or product label for handling guidance for the consumer.

SECTION 4. FIRST AID MEASURES

INHALATION: Remove to fresh air. If any trouble breathing, get immediate medical attention. Administer artificial

respiration if breathing has ceased. If irritation or symptoms occur or persist, consult a physician.

SKIN CONTACT: In case of skin contact, while wearing protective gloves, carefully remove any contaminated clothing,

including shoes, and wash skin thoroughly with soap and water. If irritation or symptoms occur or persist,

consult a physician.

EYE CONTACT: In case of eye contact, immediately rinse eyes thoroughly with plenty of water. If wearing contact lenses,

remove only after initial rinse, and continue rinsing eyes for at least 15 minutes. If irritation occurs or

persists, consult a physician.

INGESTION: Rinse mouth and drink a glass of water. Do not induce vomiting unless under the direction of a qualified

medical professional or Poison Control Center. If symptoms persist, consult a physician.

NOTE TO PHYSICIAN: This product contains clotrimazole, a broad spectrum antifungal agent, and betamethasone diproprionate,

a steroid hormone. This product is indicated for the topical treatment of dermal infections. Persons with a prior history of asthma, treatment with systemic steroids, or pre-existing skin conditions, such as acne and dermatitis, may be more susceptible to the adverse effects of exposure to this product. Serious health effects including death have occured in asthmatic patients during transfer from systemic corticosteroid to

topical corticosteroid clinical use.

SECTION 5. FIRE FIGHTING MEASURES

FLAMMABILITY DATA:

Flash Point: Not determined (liquids) or not applicable (solids).

SPECIAL FIRE FIGHTING PROCEDURES:

Wear full protective clothing and self-contained breathing apparatus (SCBA).

SUITABLE EXTINGUISHING MEDIA:

Carbon dioxide (CO2), extinguishing powder or water spray.

MSDS NAME: OTOMAX MSDS NUMBER: SP000063

Latest Revision Date: 20-Jan-2012 Page 3 of 8

SECTION 5. FIRE FIGHTING MEASURES

See Section 9 for Physical and Chemical Properties.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear appropriate personal protective equipment as specified in Section 8. Keep personnel away from the clean-up area.

SPILL RESPONSE / CLEANUP:

All spills should be handled according to site requirements and based on precautions cited in the MSDS. In the case of liquids, use proper absorbent materials. For laboratories and small-scale operations, incidental spills within a hood or enclosure should be cleaned by using a HEPA filtered vacuum or wet cleaning methods as appropriate. For large dry or liquid spills or those spills outside enclosure or hood, appropriate emergency response personnel should be notified. In manufacturing and large-scale operations, HEPA vacuuming prior to wet mopping or cleaning is required.

See Sections 9 and 10 for additional physical, chemical, and hazard information.

SECTION 7. HANDLING AND STORAGE

HANDLING:

Keep containers adequately sealed during material transfer, transport, or when not in use. Wash face, hands, and any exposed skin after handling. Do not eat, drink, or smoke when using this substance or mixture.

Appropriate handling of this material is dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. See Section 8 (Exposure Controls) for additional guidance.

STORAGE:

Store in a cool, dry, well ventilated area.

See Section 8 for exposure controls and additional safe handling information.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following guidance applies to the handling of the active ingredient(s) in this formulation.

OCCUPATIONAL EXPOSURE BAND (OEB):

OEB 4: 1-10 mcg/m³. Materials in an OEB 4 category are considered high health hazards. The OEB is range of airborne concentrations expressed as an 8-hour Time Weighted Average (8-hr. TWA) and is intended to be used with Industrial Hygiene Risk Assessment to assist with industrial hygiene sampling and selection of proper controls for worker protection. Consult your site safety and industrial hygiene staff for guidance on handling and control strategies.

OCCUPATIONAL EXPOSURE GUIDELINE (OEG):

An Occupational Exposure Guideline of 5 mcg/m³ (8-hr TWA) has been established for betamethasone (base).

OEB/OEL NOTATION(S):

Betamethasone: This material has a notation of "S" for its ability to cause systemic toxicity through skin absorption.

EXPOSURE CONTROLS

The health hazard risks of handling this material are dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. Exposure controls for normal operating or routine procedures follow a tiered strategy. Engineering controls are the preferred means of long-term or permanent exposure control. If engineering controls are not feasible, appropriate use of personal protective equipment (PPE) may be considered as alternative control measures. Exposure controls for non-routine operations must be evaluated and addressed as part of the site-specific risk assessment.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE):

Respiratory Protection: Respiratory protective equipment (RPE) may be required for certain laboratory and large-scale

manufacturing tasks if potential airborne breathing zone concentrations of substances exceed the relevant exposure limit(s). Workplace risk assessment should be completed before specifying and implementing RPE usage. Potential exposure points and pathways, task duration and frequency, potential employee contact with the substance, and the ability of the substance to be rendered airborne during specific tasks should be evaluated. Initial and ongoing strategies of quantitative exposure measurement should be obtained as required by the workplace risk assessment. All RPE must conform to local and regional specifications for efficacy and performance. Consult your site or corporate health and safety professional

for additional guidance.

Skin Protection: Gloves that provide an appropriate barrier to the skin are recommended if there is potential for contact with

this material. Consult your site safety staff for guidance.

MSDS NAME: OTOMAX MSDS NUMBER: SP000063

Latest Revision Date: 20-Jan-2012 Page 4 of 8

Eye Protection: Safety glasses with side shields. Use of goggles or full face protection may be required based on hazard,

potential for contact, or level of exposure. Consult your site safety staff for guidance.

Body Protection: In small-scale or laboratory operations, lab coats or equivalent protection is required. Disposable Tyvek or

other dust impermeable suit should be considered based on procedure or level of exposure. Use of additional PPE such as shoe coverings, gauntlets, hood, or head covering may be necessary. Consult

your site safety staff for guidance.

In large-scale or manufacturing operations, disposable Tyvek or other dust impermeable suit is recommended and based on level of exposure. Use of additional PPE such as shoe coverings, gauntlets,

hood, or head covering may be necessary. Consult your site safety staff for guidance.

EXPOSURE LIMIT VALUES

INGREDIENT	CAS NUMBER	ACGIH TLV (TWA)	OSHA PEL (TWA)
Mineral Oil	8012-95-1	5 mg/m³	5 mg/m³

Fields in the above table(s) that do not contain data indicate that exposure limits are not available for those endpoints.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Viscous suspension
COLOR: Light beige
ODOR: Oil odor

SOLUBILITY:

Water: Not determined

See Section 5 for flammability/explosivity information.

SECTION 10. STABILITY AND REACTIVITY

STABILITY/ REACTIVITY:

Stable under normal conditions.

INCOMPATIBLE MATERIALS / CONDITIONS TO AVOID:

Open flames and high temperatures. Oxidizers. Strong acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS / REACTIONS:

Carbon oxides (COx).

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA

There are no ecotoxicity data available for these products or their components.

ENVIRONMENTAL DATA

There are no environmental data available for this product or its components.

SECTION 11. TOXICOLOGICAL INFORMATION

The toxicological properties of this material have not been fully characterized in humans or animals. The information presented below pertains to the following individual ingredients in this formulation, unless indicated otherwise.

ACUTE TOXICITY DATA

MSDS NAME: OTOMAX MSDS NUMBER: SP000063

Latest Revision Date: 20-Jan-2012 Page 5 of 8

INHALATION:

Rats dosed with clotrimazole at 0.73 mg/L (maximum attainable level) for 4 hours exhibited lacrimation, salivation, nasal discharge, ano-genital staining, stool changes, and dried black material on extremities. Significant weight loss was observed the day after exposure and continued for a week after treatment. One animal died six days after exposure. All other animals appeared normal by the end of the observation period. At necropsy, discolored liver, nasal turbinates, and dilated renal pelvis were noted; however, it was unclear if these were treatment related effects.

In an acute inhalation toxicity study in rats at 0.59 mg/l betamethasone dipropionate (maximum attainable concentration), animals exhibited labored breathing, eye closure and decreased activity during exposure. All animals recovered within one day after exposure.

Rats and mice were exposed by inhalation to an aerosol containing 0.3 mg of betamethasone dipropionate per liter over a 5-hour period. Both species exhibited body weight decreases during the 4 day post treatment period. During exposure the mice exhibited transient central nervous system stimulation including excitation, tremors and convulsions. Recovery was prompt. Upon microscopic examination, partial thymic involution was seen in both species. This finding together with the loss in body weight was attributed to the known pharmacological activity of a corticosteroid.

Ethene homopolymer: Practically not toxic.

SKIN:

Clotrimazole was practically not irritating to rabbit skin.

Betamethasone produced erythema which was present five hours after dosing in a skin irritation study in rabbits but resolved by 96 hours after dosing. There were no adverse skin changes detected in dermal toxicity studies of betamethasone diproprionate cream (0.05% or 0.1%) in hairless mice, rats, rabbits or dogs.

Mineral oil was slightly irritating to the skin of rabbits.

EYE

OTOMAX is minimally irritating to the eyes of rabbits.

ORAL:

Clotrimazole: Oral LD50: 708 mg/kg (rat); 761-923 mg/kg (mouse); >1000 mg/kg (rabbit); >1000 mg/kg (dog)

Betamethasone dipropionate: Oral LD50: >1000 mg/kg (dog); >5000 mg/kg (rat); >50 mg/kg (mice)

One male and one female dog were each administered a single oral dose of 1000 mg/kg of betamethasone dipropionate and observed for five weeks. Urine output and water consumption were increased and eosinophil counts decreased during the week post treatment.

Ethene homopolymer: Practically not toxic.

Mineral Oil: Oral LD50: 22,000 mg/kg (mouse)

DERMAL AND RESPIRATORY SENSITIZATION:

A betamethasone dipropionate (0.05%) ointment formulation was determined to be a potentially weak sensitizer in guinea pigs. Local irritation at the intradermal injection sites was observed during the induction phase.

Mineral oil was not a skin sensitizer in guinea pigs.

REPEAT DOSE TOXICITY DATA

MSDS NAME: OTOMAX MSDS NUMBER: SP000063

Latest Revision Date: 20-Jan-2012 Page 6 of 8

SUBCHRONIC / CHRONIC TOXICITY:

Clotrimazole was fed to rats at doses of 10, 25, 50, or 150 mg/kg/day in the diet for 18 months. The only clinical effect observed during the study was decreased body weight in the 50 (females) and 150 mg/kg/day dosage groups; however, reversal of body weight loss was noted in rats not dosed during the last 25 weeks of the study. Chemical and pathological effects observed during the study included decreases in hematocrit and hemoglobin values (50 and 150 mg/kg/day), increases in serum chemistry levels (150 mg/kg/day males), dose- and treatment-related incidences of liver mottling, nodular enlargement, pigmentation of the renal cortices, fatty metamorphosis and regenerative hyperplasia of the liver, and deposits of intracellular fat in the adrenal glands. Reversal of liver effects were observed in rats not dosed during the last 25 weeks of the study. A NOEL was not determined for this study.

Dogs were treated with clotrimazole at doses of 25, 50, or 150 mg/kg/day for six or twelve months. Dose-related clinical effects observed included emesis shortly after dosing, soft stool, transient increased salivation, conjuctivitis accompanied by lacrimation, and body weight loss (high-dose group). Most effects were not observed during the recovery period. Chemical and pathological effects were observed in the mid- or high-dose groups and included increases in serum chemistry levels (similar to those seen in rats) and increased fat deposits in the adrenal glands. A NOEL was not determined for this study.

Rabbits are the most sensitive species tested with betamethasone dipropionate in regards to repeated topical skin application. Serious effects including death, hypothalamic-pituitary-adrenal (HPA) axis suppression, skeletal muscle wasting, immune organ atrophy, and abdominal distention in more than 50% of animals tested were observed following application for 10 to 30 days with 0.05% betamethasone propionate cream, lotion or ointment formulations. However, rats and mice demonstrated only minimal systemic effects, principally thymic involution, when either 0.05% or 0.1% cream was applied to skin six days a week for up to eight weeks.

In a 14-day oral toxicity study testing the 0.1% betamethasone topical cream formulation in rats and mice, drug-related clinical signs including diarrhea, hypothermia and rough coat, were observed within three hours to six days after dosing. Hypoactivity and ptosis were also seen in rats. In a 28-day oral toxicity study in dogs treated with 0.05 to 1 mg/kg/day of betamethasone dipropionate, drug-related effects observed included reversible changes in hematological, biochemical and physiological data (increased fluid intake and urinary output, decreased hematocrit and hemoglobin values, alterations in white blood cell counts, increases in liver enzymes, thymic involution and adrenal atrophy) which were attributed to the known pharmacological activity of corticosteroid drugs.

Female rats received mineral oil in the diet at dosages up to 20,000 ppm for 90 days. Effects observed included increased liver, kidney, and spleen weights, and enlargement of the lymph nodes together with granulomatous lipoid granules.

REPRODUCTIVE / DEVELOPMENTAL TOXICITY:

High oral doses of clotrimazole in rats and mice ranging from 50 to 120 mg/kg resulted in embryotoxicity (possibly secondary to maternal toxicity), impairment of mating, decreased litter size and number of viable young, and decreased pup survival to weaning. Clortrimazole was not teratogenic in rats, rabbits, or mice given oral doses up to 100, 180, or 200 mg/kg, respectively. Intravaginal dosing of 100 mg/kg in pregnant rats did not result in harm to the fetuses.

Corticosteroids are known teratogens in rodent species with some teratogenic effects having been observed in non-human primates. They are generally teratogenic in laboratory animals when administered systemically at low dosages.

Subcutaneous administration of up to 0.42 mg of a mixture of betamethasone/sodium phosphate and betamethasone/acetate suspension, on days 12 and 13 of gestation in pregnant rats, caused decreases in maternal and fetal weight gain, occurence of cleft palate and omphalocele (umbilical hernia), and impaired growth of fetal heart, liver, adrenals, kidneys, and skeletal muscle. Dose-related increases in fetal resorptions in rabbits and mice following single intramuscular doses up to 1 and 33 mg/kg, respectively were observed. Additionally, betamethasone diproprionate has been shown to produce umbilical hernias, cephalocele (cranial protrusion) and cleft palate in rabbits when given intramuscular doses of 0.05 mg/kg/day during gestation. Suppression of adrenocorticotropic hormone (ACTH), following intramuscular administration of betamethasone in monkeys during gestation resulted in decreases in fetal adrenal weight, cortical cell size, appearance of apoptosis and cellular disorganization.

MUTAGENICITY / GENOTOXICITY:

Clotrimazole (100 mg/kg/day) was negative in a chromosome spermatophore study in Chinese hamsters.

Betamethasone was negative in a bacterial mutagenicity study (Ames) and mammalian cell mutagenicity assay (CHO/HGPRT) and positive in the in vitro human lymphocyte chromosome abberation assay. Equivocal results were seen in the in vivo mouse bone marrow micronucleus assay.

CARCINOGENICITY:

Clotrimazole was not carcinogenic in rats exposed to oral doses for 18 months.

There was no evidence of carcinogenicity in animals exposed to mineral oil mist at 100 mg/m³ or higher for as long as two years.

SECTION 13. DISPOSAL CONSIDERATIONS

MATERIAL WASTE:

Disposal must be in accordance with applicable federal, state/provincial, and/or local regulations. Incineration is the preferred method of disposal, when appropriate. Operations that involve the crushing or shredding of waste materials or returned goods must be handled to meet the recommended exposure limit(s).

PACKAGING AND CONTAINERS:

Disposal must be in accordance with applicable federal, state/provincial, and/or local regulations.

MSDS NAME: OTOMAX MSDS NUMBER: SP000063

Latest Revision Date: 20-Jan-2012 Page 7 of 8

SECTION 14. TRANSPORT INFORMATION

This material is not subject to the transportation regulations of DOT, IATA, IMO, and the ADR.

SECTION 15. REGULATORY INFORMATION

TSCA LISTING

INGREDIENT	TSCA	
Ethene Homopolymer (Polyethylene)	X	
Mineral Oil	X	

Substances not included in the table above are TSCA exempt or not regulated under TSCA.

U.S. STATE REGULATIONS

INGREDIENT	California	CARTK	NJRTK	CTRTK	MARTK
	Proposition 65				
Mineral Oil		Χ	1437		X

INGREDIENT	PARTK	MNRTK	MIRTK	RIRTK
Mineral Oil	X	X		X

Fields in the above tables that do not contain data indicate that those materials have not been listed by local regulations.

X: Listed on applicable state hazardous substance or right-to-know lists.

SECTION 16. OTHER INFORMATION

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

DEPARTMENT ISSUING MSDS: Global Safety & the Environment

Merck & Co., Inc. One Merck Drive

Whitehouse Station, NJ 08889

(800) 770-8878 (US and Canada) **MERCK MSDS HELPLINE:**

(908) 473-3371 (Worldwide)

Monday to Friday, 9am to 5pm (US Eastern Time)

01-Dec-1999 **MSDS CREATION DATE:**

SUPERSEDES DATE: 25-Mar-2010

Latest Revision Date: 20-Jan-2012

SECTIONS CHANGED (US SUBFORMAT): Complete rewrite SIGNIFICANT CHANGES (US SUBFORMAT): Conversion, OEG, OEB

MSDS NAME: OTOMAX MSDS NUMBER: SP000063 Page 8 of 8

INCORPORATED

LLOYD, Inc.

SAFETY DATA SHEET

DERMA-FORM LIQUID Revision 01 Revision Date: 23 July 2015

1. <u>IDENTIFICATION</u>

Product Name: Derma-Form Liquid

Synonyms: Vitamin Supplement

Company: LLOYD, Inc.

604 West Thomas Avenue

P.O. Box 130

Shenandoah, IA 51601-0130

USA

(712) 246-4000

Emergency Contact: National Capital Poison Center

(800) 222-1222

Recommended Use: To maintain healthy skin and hair coat by providing polyunsaturated

fatty acids and vitamins A, D and E in the diet of dogs and cats.

2. HAZARDS IDENTIFICATION

WARNING



EYE: This product is not expected to irritate the eyes under normal conditions of use.

SKIN CONTACT: This product is not expected to irritate the skin under normal conditions of use.

INGESTION: This has not been evaluated.

INHALATION: Inhalation exposure under normal conditions of use is not likely to cause adverse effects. Should vegetable oil mist exist, respiratory protection should be worn; vegetable oil mists are classified as a respiratory "nuisance particulate" (no health effects) by ACGIH.

3. INFORMATION ON INGREDIENTS

(% w/w), unless otherwise noted

EXPOSURE LIMITS, ppm OSHA ACGIH

COMPONENT CAS# % PEL TLV (mg/m³)

- - - - Not Applicable - - - -

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Only those ingredients composing \geq 1% (\geq 0.1% for carcinogens or suspect carcinogens) of the formula (w/w) and which have hazards identified are listed.

Revision Date: 23 July 2015

4. FIRST AID MEASURES

EYES: Immediately flush eyes with copious amounts of running water for 15 minutes.

SKIN: Wash with soap and water.

INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY. Treatment is by gastric lavage or emesis.

INHALATION: If a person has been exposed to excessive quantities of dust due to mishaps, move the person to fresh air. Give artificial respiration if not breathing.

SEEK MEDICAL ATTENTION IMMEDIATELY IF EXCESSIVE EXPOSURE OCCURS.

5. FIREFIGHTING MEASURES

This has not been evaluated.

Extinguishing media: Water fog, alcohol foam, CO₂, dry chemical.

6. <u>ACCIDENTAL RELEASE MEASURES</u>

Action to take for spills/leaks: Sweep up and dispose of in DOT-approved waste containers. Keep out of sewers, storm drains, surface waters and soil.

7. HANDLING AND STORAGE

Special precautions to be taken in handling and storage: Exercise reasonable care and caution.

8. <u>EXPOSURE CONTROLS/PERSONAL PROTECTION</u>

There is no OSHA PEL or ACGIH TLV for this product. Under normal conditions of use, no special handling precautions are required in areas with adequate ventilation. However, under conditions of prolonged exposure in which quantities of dust are generated, mechanical ventilation, safety glasses with side shields, gloves and a NIOSH approved dust respirator are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber clear oil. Specific gravity = 0.925.

Other physical data have not been determined.

10. STABILITY AND REACTIVITY

This has not been evaluated. The product is expected to be stable under normal storage conditions; avoid strong oxidizers.

11. TOXICOLOGICAL INFORMATION

N/A

Revision Date: 23 July 2015

12. ECOLOGICAL INFORMATION

Action to take for spills/leaks: Sweep up and dispose of in DOT-approved waste containers. Keep out of sewers, storm drains, surface waters and soil.

13. DISPOSAL CONSIDERATIONS

Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures.

14. TRANSPORT INFORMATION

No special transportation required

15. REGULATORY INFORMATION

(Not meant to be all-inclusive--selected regulations represented.)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See SDS for health and safety information.

U.S. REGULATIONS: SARA HAZARD CATEGORY: This product has been reviewed according to the federal EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to be exempt from reporting requirements. Nevertheless, potential reporters should check with their state emergency response commissions to determine if this product must be reported under applicable state requirements.

16. OTHER INFORMATION

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

SECTION 1. IDENTIFICATION

Product name : Clotrimazole / Gentamicin / Betamethasone (0.1%) Formula-

tion

Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc

Address : 2000 Galloping Hill Road

Kenilworth - New Jersey - USA 1685

Telephone : 908-740-4000

Telefax : 908-735-1496

Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Reproductive toxicity : Category 1A

Specific target organ

systemic toxicity - repeated

exposure (Oral)

Category 2 (Liver, Kidney, Adrenal gland)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H360Df May damage the unborn child. Suspected of damaging

fertility.

H373 May cause damage to organs (Liver, Kidney, Adrenal gland) through prolonged or repeated exposure if swallowed.

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

P260 Do not breathe mist or vapors.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
White mineral oil (petroleum)	8042-47-5	>= 90 - <= 100
clotrimazole	23593-75-1	>= 1 - < 5
Gentamicin	1403-66-3	>= 0.1 - < 1
Betamethasone	378-44-9	>= 0.1 - < 1

SECTION 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.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

2/23



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Most important symptoms and effects, both acute and

delayed

: May damage the unborn child. Suspected of damaging fertili-

ty.

May cause damage to organs through prolonged or repeated

exposure if swallowed.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment

when the potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod- :

ucts

Carbon oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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 fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec: : tive equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice and personal protective

equipment recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

For large spills, provide diking or other appropriate

containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate

container.

Clean up remaining materials from spill with suitable

absorbent.

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.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe vapors or spray mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Store locked up. Keep tightly closed.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents Organic peroxides

Explosives

Explosives Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

		-		
Ingredients	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
White mineral oil (petroleum)	8042-47-5	TWA (Mist)	5 mg/m³	OSHA Z-1
		TWA (Inhal-	5 mg/m³	ACGIH
		able fraction)		



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 12/01/2016

 1.3
 01/05/2017
 808853-00004
 Date of first issue: 07/22/2016

		TWA (Mist)	5 mg/m³	NIOSH REL		
		ST (Mist)	10 mg/m³	NIOSH REL		
clotrimazole	23593-75-1	TWA	0.2 mg/m3 (OEB 2)	Merck		
Gentamicin	1403-66-3	TWA	0.1 mg/m3 (OEB 2)	Merck		
Betamethasone	378-44-9	TWA	1 μg/m3 (OEB 4)	Merck		
	Further inform	Further information: Skin				
		Wipe limit	10 μg/100 cm ²	Merck		

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.

Essentially no open handling permitted.

Use closed processing systems or containment technologies. If handled in a laboratory, use a properly designed biosafety cabinet, fume hood, or other containment device if the potential exists for aerosolization. If this potential does not

exist, handle over lined trays or benchtops.

Personal protective equipment

Respiratory protection

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any

hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other

circumstance where air purifying respirators may not provide

adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

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.

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.

disposable suits) to avoid exposed skill sulfaces.

Use appropriate degowning techniques to remove potentially



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

contaminated clothing.

Hygiene measures : Ensure that eye flushing systems and safety showers are

located 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : No data available

Odor : No information available.

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 200 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version 1.3

Revision Date: 01/05/2017

SDS Number: 808853-00004

Date of last issue: 12/01/2016 Date of first issue: 07/22/2016

Ingredients:

White mineral oil (petroleum):

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

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

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

Assessment: The substance or mixture has no acute dermal

toxicity

clotrimazole:

Acute oral toxicity : LD50 (Rat): 708 mg/kg

LD50 (Mouse): 761 mg/kg

LD50 (Rabbit): > 1,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.73 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Mouse): 923 mg/kg

Gentamicin:

Acute oral toxicity : LD50 (Rat): 8,000 - 10,000 mg/kg

LD50 (Mouse): 10,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.2 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Remarks: No mortality observed at this dose.

Acute toxicity (other routes of :

administration)

LD50 (Rat): 67 - 96 mg/kg

Application Route: Intravenous

LD50 (Rat): 371 - 384 mg/kg Application Route: Intramuscular

LDLo (Monkey): 30 mg/kg Application Route: Intravenous

Betamethasone:

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



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

LD50 (Mouse): > 4,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.4 mg/l

Exposure time: 4 h

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

White mineral oil (petroleum):

Species: Rabbit

Result: No skin irritation

clotrimazole:

Species: Rabbit

Result: No skin irritation

Gentamicin:

Species: Rabbit

Result: Mild skin irritant

Betamethasone:

Species: Rabbit

Result: Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

White mineral oil (petroleum):

Species: Rabbit

Result: No eye irritation

clotrimazole:

Species: Rabbit

Result: Mild eye irritation

Gentamicin:

Species: Rabbit

Result: Mild eye irritant

Betamethasone:

Species: Rabbit

Result: No eye irritation



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Ingredients:

White mineral oil (petroleum):

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig Result: negative

Gentamicin:

Remarks: No data available

Betamethasone:

Routes of exposure: Dermal Species: Guinea pig Result: Weak sensitizer

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

White mineral oil (petroleum):

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

Remarks: Based on data from similar materials

clotrimazole:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

: Test Type: Chromosome aberration test in vitro

Result: negative

: Test Type: in vitro micronucleus test

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version 1.3

Revision Date: 01/05/2017

SDS Number: 808853-00004

Date of last issue: 12/01/2016 Date of first issue: 07/22/2016

cytogenetic assay) Species: Rat

Application Route: Oral

Result: negative

Test Type: Mammalian spermatogonial chromosome aberra-

tion test (in vivo) Species: Hamster Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Gentamicin:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Result: negative

: Test Type: Chromosome aberration test in vitro

Result: equivocal

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Intravenous injection

Result: negative

Betamethasone:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

: Test Type: In vitro mammalian cell gene mutation test

Result: negative

: Test Type: Chromosome aberration test in vitro

Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse Application Route: Oral Result: equivocal

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Carcinogenicity

Not classified based on available information.

Ingredients:

White mineral oil (petroleum):

Species: Rat



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Application Route: Ingestion Exposure time: 24 Months

Result: negative

clotrimazole:

Species: Rat

Application Route: Oral Exposure time: 78 weeks

Result: negative

Gentamicin:

Carcinogenicity - Assess-

ment

: No data available

IARC No ingredient of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

May damage the unborn child. Suspected of damaging fertility.

Ingredients:

White mineral oil (petroleum):

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Skin contact

Result: negative

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat

Application Route: Ingestion

Result: negative

clotrimazole:

Effects on fertility : Test Type: Fertility/early embryonic development

Species: Rat

Application Route: Oral

Fertility: LOAEL: 50 mg/kg body weight

Result: Effects on fertility.

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version 1.3

Revision Date: 01/05/2017

SDS Number: 808853-00004

Date of last issue: 12/01/2016 Date of first issue: 07/22/2016

Application Route: Oral

Developmental Toxicity: LOAEL: 100 mg/kg body weight Result: Embryo-fetal toxicity., No teratogenic effects.

Test Type: Embryo-fetal development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 50 mg/kg body weight Result: Embryo-fetal toxicity., No teratogenic effects.

Test Type: Embryo-fetal development

Species: Mouse Application Route: Oral

Developmental Toxicity: NOAEL: 200 mg/kg body weight

Result: No effects on fetal development.

Test Type: Embryo-fetal development

Species: Rabbit Application Route: Oral

Developmental Toxicity: NOAEL: 180 mg/kg body weight

Result: No effects on fetal development.

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of

adverse effects on development, based on animal

experiments.

Gentamicin:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Fertility: NOAEL: 20 mg/kg body weight

Result: No significant adverse effects were reported

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Developmental Toxicity: NOAEL: 3.6 mg/kg body weight

Result: No embryo-fetal toxicity.

Test Type: Embryo-fetal development

Species: Rat

Application Route: Intraperitoneal

Developmental Toxicity: LOAEL: 75 mg/kg body weight

Result: Embryo-fetal toxicity.

Test Type: Embryo-fetal development

Species: Mouse

Application Route: Intraperitoneal

Developmental Toxicity: LOAEL: 10 mg/kg body weight Result: Fetal mortality., No malformations were observed.

Test Type: Embryo-fetal development

Species: Rat

Application Route: Intraperitoneal



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Developmental Toxicity: LOAEL: 50 mg/kg body weight Result: Fetal mortality., No malformations were observed.

Reproductive toxicity - As-

sessment

Positive evidence of adverse effects on development from

human epidemiological studies.

Betamethasone:

Effects on fetal development : Species: Rabbit

Application Route: Intramuscular

Developmental Toxicity: LOAEL: 0.05 mg/kg body weight Result: Fetotoxicity., Malformations were observed.

Species: Rat

Application Route: Subcutaneous

Developmental Toxicity: LOAEL: 0.42 mg/kg body weight

Result: Malformations were observed.

Species: Mouse

Application Route: Intramuscular

Developmental Toxicity: LOAEL: 1 mg/kg body weight

Result: Malformations were observed.

Reproductive toxicity - As-

sessment

Clear evidence of adverse effects on development, based on

animal experiments.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (Liver, Kidney, Adrenal gland) through prolonged or repeated exposure if swallowed.

Ingredients:

clotrimazole:

Target Organs: Liver, Kidney, Adrenal gland

Assessment: May cause damage to organs through prolonged or repeated exposure.

Gentamicin:

Target Organs: Kidney, inner ear

Assessment: Causes damage to organs through prolonged or repeated exposure.

Betamethasone:

Target Organs: Pituitary gland, Immune system, muscle, thymus, Blood, Adrenal gland Assessment: Causes damage to organs through prolonged or repeated exposure.



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Repeated dose toxicity

Ingredients:

White mineral oil (petroleum):

Species: Rat LOAEL: 160 mg/kg

Application Route: Ingestion Exposure time: 90 Days

Species: Rat LOAEL: >= 1 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

clotrimazole:

Species: Rabbit LOAEL: 5 - 40 mg/kg

Application Route: Skin contact

Exposure time: 3 Weeks Target Organs: Skin

Symptoms: Edema, Fissuring, Necrosis, Redness

Species: Rat LOAEL: 10 mg/kg Application Route: Oral Exposure time: 18 Months

Target Organs: Liver, Kidney, Adrenal gland

Species: Dog LOAEL: 25 mg/kg Application Route: Oral Exposure time: 6 - 12 Months Target Organs: Adrenal gland

Symptoms: Salivation, Lachrymation, Vomiting

Gentamicin:

Species: Dog LOAEL: 3 mg/kg

Exposure time: 12 Months Target Organs: Kidney

Symptoms: Vomiting, Salivation

Species: Monkey LOAEL: 50 mg/kg

Application Route: Subcutaneous

Exposure time: 3 Weeks

Target Organs: Kidney, inner ear

Species: Monkey LOAEL: 6 mg/kg



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Application Route: Intramuscular

Exposure time: 3 Weeks

Target Organs: Blood, Kidney, inner ear, Liver

Species: Rat NOAEL: 5 mg/kg LOAEL: 10 mg/kg

Application Route: Intramuscular Exposure time: 52 Weeks Target Organs: Kidney, Blood

Species: Rat NOAEL: 12.5 mg/kg LOAEL: 50 mg/kg

Application Route: Intramuscular Exposure time: 13 Weeks Target Organs: Kidney

Betamethasone:

Species: Rabbit LOAEL: 0.05 %

Application Route: Skin contact Exposure time: 10 - 30 d

Target Organs: Pituitary gland, Immune system, muscle

Species: Rat LOAEL: 0.05 %

Application Route: Skin contact Exposure time: 8 Weeks Target Organs: thymus

Species: Mouse LOAEL: 0.1 %

Application Route: Skin contact Exposure time: 8 Weeks Target Organs: thymus

Species: Dog LOAEL: 0.05 mg/kg Application Route: Oral Exposure time: 28 d

Target Organs: Blood, thymus, Adrenal gland

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Ingredients:

clotrimazole:

Skin contact : Symptoms: Rash, Itching, Blistering, Edema, Redness



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Ingestion : Symptoms: Abdominal pain, Nausea, Vomiting, Diarrhea

Gentamicin:

Ingestion : Target Organs: Kidney

Target Organs: inner ear

Symptoms: Dizziness, Vertigo, hearing loss

Betamethasone:

Inhalation : Target Organs: Adrenal gland

Symptoms: Redness, pruritis

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

White mineral oil (petroleum):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 100

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 1,000 mg/l

Exposure time: 28 d

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 1,000 mg/l

Exposure time: 21 d

clotrimazole:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 0.29 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.02 mg/l

Exposure time: 48 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 0.268 mg/l

Exposure time: 72 h



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

NOEC (Desmodesmus subspicatus (green algae)): 0.017 mg/l

Exposure time: 72 h

M-Factor (Acute aquatic tox-

icity)

10

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.025 mg/l

Exposure time: 32 d

Method: OECD Test Guideline 210

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.01 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

10

Toxicity to microorganisms : EC50: > 10,000 mg/l

Exposure time: 3 h

Test Type: Respiration inhibition Method: OECD Test Guideline 209

Gentamicin:

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 86 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

LC50 (Americamysis): 30 mg/l

Exposure time: 96 h

Method: US-EPA OPPTS 850.1035

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 10 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 1.5

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

EC50 (Microcystis aeruginosa (blue-green algae)): 4.7 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Microcystis aeruginosa (blue-green algae)): 1.6 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50: 288.7 mg/l

Exposure time: 3 h

Test Type: Respiration inhibition Method: OECD Test Guideline 209



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Betamethasone:

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Americamysis): > 50 mg/l

Exposure time: 96 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 34

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility.

NOEC (Pseudokirchneriella subcapitata (green algae)): 34

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility.

Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 0.052 mg/l

Exposure time: 32 d

Method: OECD Test Guideline 210

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 8 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

: 1

Persistence and degradability

Ingredients:

White mineral oil (petroleum):

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 31 % Exposure time: 28 d

clotrimazole:

Stability in water : Hydrolysis: 50 %(242 d)

Gentamicin:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 100 % Exposure time: 28 d

Method: OECD Test Guideline 314

Bioaccumulative potential

Ingredients:

Gentamicin:

Partition coefficient: n- : log Pow: < -2



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version SDS Number: Date of last issue: 12/01/2016 Revision Date: 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

octanol/water

Betamethasone:

Partition coefficient: n-

octanol/water

log Pow: 2.11

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Dispose of in accordance with local regulations.

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.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number UN 3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(clotrimazole, betamethasone)

Class 9 Packing group Ш Labels 9

IATA-DGR

UN/ID No.

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.

(clotrimazole, Betamethasone)

9 Class Ш Packing group

Miscellaneous Labels Packing instruction (cargo 964

aircraft)

Packing instruction (passen-

ger aircraft)

964

IMDG-Code

UN 3082 **UN** number

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(clotrimazole, Betamethasone)

Class 9

20 / 23



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(clotrimazole, Betamethasone)

Class : 9 Packing group : III

Labels : CLASS 9 ERG Code : 171

Marine pollutant : yes(clotrimazole, Betamethasone)

Remarks : Above applies only to containers over 119 gallons or 450

liters., Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard

classification to facilitate multi-modal transport involving ICAO

(IATA) or IMO.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Chronic Health Hazard

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

White mineral oil (petroleum) 8042-47-5

California Prop. 65 WARNING: This product contains a chemical known in the

State of California to cause birth defects or other reproductive

harm.

Gentamicin 1403-66-3



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Revision Date: SDS Number: Date of last issue: 12/01/2016 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

California List of Hazardous Substances

White mineral oil (petroleum) 8042-47-5

California Permissible Exposure Limits for Chemical Contaminants

White mineral oil (petroleum) 8042-47-5

The ingredients of this product are reported in the following inventories:

AICS : not determined

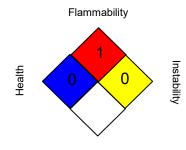
DSL : not determined

IECSC : not determined

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded

at any time during a workday

OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Sched-



Clotrimazole / Gentamicin / Betamethasone (0.1%) Formulation

Version Date of last issue: 12/01/2016 Revision Date: SDS Number: 1.3 01/05/2017 808853-00004 Date of first issue: 07/22/2016

ule; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR -No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance 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

Sources of key data used to compile the Material Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Revision Date 01/05/2017

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

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.

US / Z8