

SAFETY DATA SHEET



Revision date: 28-May-2014

Version: 1.0

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

Product Identifier

Material Name: High D 2X

Trade Name: Not established
Synonyms: D3 4 MIU/OZ DLC
Chemical Family: Mixture

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

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

Details of the Supplier of the Safety Data Sheet

Zoetis Inc.
100 Campus Drive, P.O. Box 651
Florham Park, New Jersey 07932 (USA)
Rocky Mountain Poison Control Center Phone: 1-866-531-8896
Product Support/Technical Services Phone: 1-800-366-5288

Zoetis Belgium S.A.
Mercuriusstraat 20
1930 Zaventem
Belgium

Emergency telephone number:
CHEMTREC (24 hours): 1-800-424-9300
Contact E-Mail: VMIPSrecords@zoetis.com

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

2. HAZARDS IDENTIFICATION

Appearance: Brown liquid

Classification of the Substance or Mixture

Acute Oral Toxicity: Category 4
Acute Dermal Toxicity: Category 5
Acute Toxicity - Dusts and Mists: Category 5
Serious Eye Damage/Eye Irritation: Category 1
Specific target organ systemic toxicity (repeated exposure): Category 1
Flammable liquids- Category 3

EU Classification:

EU Indication of danger: T - Toxic
Xn - Harmful
Xi - Irritant

EU Symbol: T
R23 - Toxic by inhalation.
R22 - Harmful if swallowed.
R41 - Risk of serious damage to eyes.
R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Label Elements

Signal Word: Danger

ZT00287

HIGH-D 2X

#020160

5/28/14

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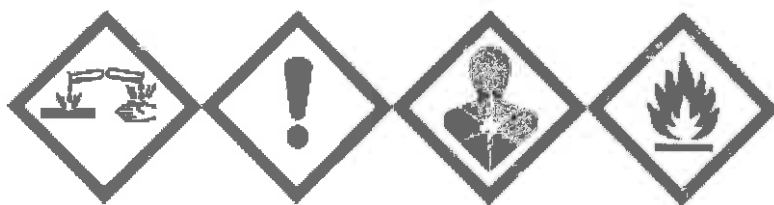
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2. HAZARDS IDENTIFICATION

Hazard Statements:	H226 - Flammable liquid and vapor H318 - Causes serious eye damage H302 - Harmful if swallowed H313 - May be harmful in contact with skin H333 - May be harmful if inhaled H372 - Causes damage to organs through prolonged or repeated exposure
Precautionary Statements:	P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P240 - Ground/Bond container and receiving equipment P241 - Use explosion-proof electrical/ventilating/lighting/equipment P242 - Use only non-sparking tools P243 - Take precautionary measures against static discharge P233 - Keep container tightly closed P280 - Wear protective gloves/protective clothing/eye protection/face protection P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash hands thoroughly after handling P270 - Do not eat, drink or smoke when using this product P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower P314 - Get medical attention/advice if you feel unwell P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTRE or doctor/physician P301+ P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell P330 - Rinse mouth P304 + P312 - IF INHALED: Call a POISON CENTRE or doctor/physician if you feel unwell P370 + P378 - In case of fire: Use alcohol-resistant foam or dry chemical for extinction P403 + P235 - Store in a well-ventilated place. Keep cool P501 - Dispose of contents/container in accordance with all local and national regulations



Other Hazards

Short Term:

May cause skin irritation. May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.

Long Term:

may have the potential to produce effects on the developing fetus.

Australian Hazard Classification (NOHSC):

Hazardous Substance. Dangerous Goods.

Note:

This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Polyethylene glycol 400	25322-68-3	Not Listed	Not Listed	Not Listed	50 - 70
Propanol	71-23-8	200-746-9	F; R11 Xi; R41 R67	STOT SE 3 (H336) Flam. Liq. 2 (H225) Eye Dam. 1 (H318)	5 - 10
Butylated hydroxytoluene	128-37-0	204-881-4	Not Listed	Not Listed	3
Cholecalciferol (Vitamin D3)	67-97-0	200-673-2	T; R24/25-48/25 T+; R26	Acute Tox. 3 (H301) Acute Tox. 3 (H311) STOT RE 1 (H372) Acute Tox. 2 (H330)	< 2

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Polysorbate 80	9005-65-6	Not Listed	Not Listed	Not Listed	20

Additional Information: Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.

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

4. FIRST AID MEASURES

Description of First Aid Measures

- Eye Contact:** Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
- Skin Contact:** Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.
- Ingestion:** Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.
- Inhalation:** Remove to fresh air and keep patient at rest. Seek medical attention immediately.

Most Important Symptoms and Effects, Both Acute and Delayed

- Symptoms and Effects of Exposure:** For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.
- Medical Conditions Aggravated by Exposure:** None known

Indication of the Immediate Medical Attention and Special Treatment Needed

- Notes to Physician:** None

5. FIRE-FIGHTING MEASURES

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

Special Hazards Arising from the Substance or Mixture

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Hazardous Combustion Products: Formation of toxic gases is possible during heating or fire.

Fire / Explosion Hazards: Flammable liquid. May generate flammable vapors. Fine particles (such as mists) may fuel fires/explosions.

Advice for Fire-Fighters

In use, may form flammable/explosive vapour-air mixture. During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus. Use spark-proof tools and explosion-proof equipment

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure. Eliminate all sources of ignition and ventilate area using explosion-proof equipment. Ground and bond containers when transferring material.

Environmental Precautions

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

Methods and Material for Containment and Cleaning Up

Measures for Cleaning / Collecting: Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding procedures. Contain the source of the spill if it is safe to do so. Absorb spills with non-combustible absorbent material and transfer into a labeled container for disposal. Clean contaminated surface thoroughly.

Additional Consideration for Large Spills: Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Flammable liquid and vapor- keep away from ignition sources and clean up spills promptly. Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding and bonding procedures. Avoid contact with eyes, skin, and clothing. Use appropriate personal protective equipment. Wash thoroughly after handling. Take precautionary measures against static discharges.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat, sparks, flame, and other sources of ignition.

Storage Temperature:

45 - 60 F

Specific end use(s):

No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

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

Polyethylene glycol 400

Austria OEL - MAKs	1000 mg/m ³
Germany - TRGS 900 - TWAs	1000 mg/m ³
Germany (DFG) - MAK	1000 mg/m ³ average molecular weight 200-600
Slovakia OEL - TWA	1000 mg/m ³
Slovenia OEL - TWA	1000 mg/m ³
Switzerland OEL - TWAs	1000 ppm

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Propanol

ACGIH Threshold Limit Value (TWA)	100 ppm
Australia STEL	250 ppm
	614 mg/m ³
Australia TWA	200 ppm
	492 mg/m ³
Austria OEL - MAKs	200 ppm
	500 mg/m ³
Belgium OEL - TWA	100 ppm
	250 mg/m ³
Bulgaria OEL - TWA	300.0 mg/m ³
Czech Republic OEL - TWA	500 mg/m ³
Denmark OEL - TWA	200 ppm
	500 mg/m ³
Estonia OEL - TWA	150 ppm
	350 mg/m ³
Finland OEL - TWA	200 ppm
	500 mg/m ³
France OEL - TWA	200 ppm
	500 mg/m ³
Greece OEL - TWA	200 ppm
	500 mg/m ³
Ireland OEL - TWAs	100 ppm
Latvia OEL - TWA	10 mg/m ³
Vietnam OEL - TWAs	350 mg/m ³
OSHA - Final PELs - TWAs:	200 ppm
	500 mg/m ³
Poland OEL - TWA	200 mg/m ³
Portugal OEL - TWA	200 ppm
Romania OEL - TWA	81 ppm
	200 mg/m ³
Spain OEL - TWA	200 ppm
	500 mg/m ³
Sweden OEL - TWAs	150 ppm
	350 mg/m ³
Switzerland OEL - TWAs	200 ppm
	500 mg/m ³

Butylated hydroxytoluene

ACGIH Threshold Limit Value (TWA)	2 mg/m ³
Australia TWA	10 mg/m ³
Austria OEL - MAKs	10 mg/m ³
Belgium OEL - TWA	2 mg/m ³
Bulgaria OEL - TWA	10.0 mg/m ³
Denmark OEL - TWA	10 mg/m ³
Finland OEL - TWA	10 mg/m ³
France OEL - TWA	10 mg/m ³
Germany - TRGS 900 - TWAs	10 mg/m ³
Germany (DFG) - MAK	10 mg/m ³
Greece OEL - TWA	10 mg/m ³
Ireland OEL - TWAs	10 mg/m ³
Portugal OEL - TWA	2 mg/m ³

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Slovenia OEL - TWA 10 mg/m³
Switzerland OEL -TWAs 10 mg/m³

Cholecalciferol (Vitamin D3)
Zoetis OEB OEB 5 (control exposure to <1ug/m³)

Exposure Controls

Engineering Controls:

Engineering controls should be used as the primary means to control exposures. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits or within the OEB range.

Personal Protective Equipment:

Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE).

Hands:

Wear impervious gloves if skin contact is possible.

Eyes:

Safety glasses or goggles

Skin:

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

Respiratory protection:

If airborne exposures are within or exceed the OEB, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEB range. Respiratory protection should be worn to supplement engineering controls when handling this compound.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	Color:	Brown
Odor:	No data available.	Odor Threshold:	No data available.
Molecular Formula:	Mixture	Molecular Weight:	Mixture

Solvent Solubility:	No data available
Water Solubility:	Miscible:
pH:	No data available.
Melting/Freezing Point (°C):	No data available
Boiling Point (°C):	No data available.
Partition Coefficient: (Method, pH, Endpoint, Value)	
No data available	
Decomposition Temperature (°C):	No data available.

Evaporation Rate (Gram/s):	No data available
Vapor Pressure (kPa):	No data available
Vapor Density (g/ml):	No data available
Relative Density:	No data available
Specific Gravity:	0.97
Viscosity:	No data available

Flammability:

Autoignition Temperature (Solid) (°C):	No data available
Flammability (Solids):	No data available
Flash Point (Liquid) (°C):	56.1 C / 133 F
Upper Explosive Limits (Liquid) (% by Vol.):	No data available
Lower Explosive Limits (Liquid) (% by Vol.):	No data available

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10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions of use.
Possibility of Hazardous Reactions	
Oxidizing Properties:	No data available
Conditions to Avoid:	Keep away from heat and other sources of ignition, including electrostatic discharge.
Incompatible Materials:	As a precautionary measure, keep away from strong oxidizers
Hazardous Decomposition Products:	Thermal decomposition products may include carbon monoxide, carbon dioxide and other toxic vapors.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

General Information: Toxicological properties of the formulation have not been investigated. The following information is available for the individual ingredients.

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

Propanol

Rat Oral LD50 1.87 g/kg
Rat IV LD50 590

Butylated hydroxytoluene

Rat Oral LD50 1700 mg/kg
Mouse Oral LD50 650 mg/kg
Rat Oral LD50 890 mg/kg
Mouse Intraperitoneal LD 50 138 mg/kg

Polysorbate 80

Rat Oral LD50 25 g/kg

Cholecalciferol (Vitamin D3)

Rat Oral LD50 42 mg/kg
Mouse Sub-tenon injection (eye) LD 50 136 mg/kg
Rat Inhalation LC50/4h 0.13-0.38mg/L
Rat Dermal LD50 61-185mg/kg

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

Propanol

Eye Irritation Rabbit Severe

Butylated hydroxytoluene

Eye Irritation Rabbit Moderate
Skin Irritation Rabbit Moderate

Polyethylene glycol 400

Eye Irritation Rabbit Mild
Skin Irritation Rabbit Mild

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11. TOXICOLOGICAL INFORMATION

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

Butylated hydroxytoluene

4 Week(s)	Rat	Oral	5185 mg/kg	LOAEL	Liver
4 Day(s)	Mouse	Oral	2000 mg/kg	LOAEL	Liver, Kidney, Ureter, Bladder

Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))

Butylated hydroxytoluene

Embryo / Fetal Development	Rat	Oral	6 g/kg	LOEL	Teratogenic
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Cholecalciferol (Vitamin D3)

Embryo / Fetal Development	Rat	Subcutaneous	90 mg/kg/day	LOEL	Teratogenic
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Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

Cholecalciferol (Vitamin D3)

<i>In Vitro</i> Bacterial Mutagenicity (Ames)	<i>Salmonella</i>	Negative
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Carcinogen Status:

None of the other components of this mixture are listed as a carcinogen by IARC, NTP or OSHA.

Butylated hydroxytoluene

IARC:

Group 3 (Not Classifiable)

Product Level Toxicity Data

Acute Toxicity Estimate (ATE), oral	ca. 1800 mg/kg
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Acute Toxicity Estimate (ATE), dermal	ca. 3049 mg/kg
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Acute Toxicity Estimate (ATE), Inhalation (dust/mist)	ca. 6.5 mg/l
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12. ECOLOGICAL INFORMATION

Environmental Overview: Environmental properties have not been investigated.

Toxicity: No data available

Persistence and Degradability: No data available

Bio-accumulative Potential: No data available

Mobility in Soil: No data available

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13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

This product may qualify as a RCRA Hazardous Waste. Status should be confirmed by testing for RCRA hazardous characteristics (i.e. corrosivity, toxicity, reactivity, or ignitability). Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

14. TRANSPORT INFORMATION

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

Transport according to the requirements of the appropriate regulatory body.

UN number:	UN 1274
UN proper shipping name:	n-Propanol Solution
Transport hazard class(es):	3
Packing group:	III

15. REGULATORY INFORMATION

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

Canada - WHMIS: Classifications

WHMIS hazard class:

Class D, Division 2, Subdivision A

Class D, Division 2, Subdivision B

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



Polyethylene glycol 400

CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
Standard for the Uniform Scheduling for Drugs and Poisons:	Schedule 3
EU EINECS/ELINCS List	Not Listed

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15. REGULATORY INFORMATION

Propanol

CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	200-746-9

Butylated hydroxytoluene

CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	204-881-4

Cholecalciferol (Vitamin D3)

CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
Standard for the Uniform Scheduling for Drugs and Poisons:	Schedule 7
EU EINECS/ELINCS List	200-673-2
EU Export and Import Restrictions (EC No. 689/2008):	Banned as a pesticide in the group of plant protection products

Polysorbate 80

CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Inventory - United States TSCA - Sect. 8(b)	Present
Australia (AICS):	Present
EU EINECS/ELINCS List	Not Listed

16. OTHER INFORMATION

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

Specific target organ toxicity, single exposure; Narcotic effects-Cat.3; H336 - May cause drowsiness and dizziness
Flammable liquids-Cat.2; H225 - Highly flammable liquid and vapor
Serious eye damage/eye irritation-Cat.1; H318 - Causes serious eye damage
Acute toxicity, oral-Cat.3; H301 - Toxic if swallowed
Acute toxicity, dermal-Cat.3; H311 - Toxic in contact with skin
Acute toxicity, inhalation-Cat.2; H330 - Fatal if inhaled
Specific target organ toxicity, repeated exposure-Cat.1; H372 - Causes damage to organs through prolonged or repeated exposure

F - Highly flammable
Xi - Irritant
T - Toxic
T+ - Very toxic

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R11 - Highly flammable.
R41 - Risk of serious damage to eyes.
R67 - Vapors may cause drowsiness and dizziness.
R26 - Very toxic by inhalation.
R24/25 - Toxic in contact with skin and if swallowed.
R48/25 - Toxic: danger of serious damage to health by prolonged exposure if swallowed.

Data Sources: The data contained in this MSDS may have been gathered from confidential internal sources, raw material suppliers, or from the published literature.

Reasons for Revision: New data sheet.

Prepared by: Toxicology and Hazard Communication
Zoetis Global Risk Management

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

End of Safety Data Sheet