

Version 2.0	Revision Date: 10.10.2020		S Number: 59291-00003	Date of last issue: 30.07.2019 Date of first issue: 11.07.2019		
1. PRODU	1. PRODUCT AND COMPANY IDENTIFICATION					
Produ	Product name		Betamethasone	(0.05%) Liquid Formulation		
Manu	facturer or supplier's c	deta	ils			
Comp	any	:	: Organon & Co.			
Address		:	30 Hudson Street, 33nd floor Jersey City, New Jersey, U.S.A 07302			
Telepl	Telephone		551-430-6000			
Emergency telephone number		r :	215-631-6999			
E-mai	l address	:	: EHSSTEWARD@organon.com			
Reco	mmended use of the cl	hem	ical and restriction	ons on use		
Recor	mmended use	:	Pharmaceutical			

### 2. HAZARDS IDENTIFICATION

### Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

### Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification Reproductive toxicity	:	Category 1B
Specific target organ toxicity - repeated exposure	:	Category 1 (Pituitary gland, Immune system, muscle, thymus gland, Blood, Adrenal gland)
Long-term (chronic) aquatic hazard	:	Category 1
GHS label elements		
Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H360D May damage the unborn child. H372 Causes damage to organs (Pituitary gland, Immune sys- tem, muscle, thymus gland, Blood, Adrenal gland) through pro- longed or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	Prevention:



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		P203 Obtain, read and follow all safety instructions before u P260 Do not breathe mist or vapours. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.				
		Response:				
		P318 IF exposed or concerned, get medical advice. P391 Collect spillage.				
		Storage:				
		P405 Store locked up.				
		Disposal:				
		P501 Dispose of disposal plant.	f contents/ container to an approved waste			

### Other hazards which do not result in classification

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
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Components

Chemical name	CAS-No.	Concentration (% w/w)
Ethanol#	64-17-5	>= 0.1 - < 1
betamethasone	378-44-9	>= 0.025 - < 0.1
#: Voluntarily_disclosed non_bazardous substance	-	÷

#: Voluntarily-disclosed non-hazardous substance

### 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical ad- vice 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.
Most important symptoms and effects, both acute and	:	May damage the unborn child. Causes damage to organs through prolonged or repeated



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delayed Protection of first-aiders Notes to physician		:	<ul> <li>exposure.</li> <li>First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).</li> <li>Treat symptomatically and supportively.</li> </ul>		
	GHTING MEASURES			, , , ,	
Suita	ble extinguishing media		Water spray Alcohol-resistant Carbon dioxide (C Dry chemical		
Unsu medi	iitable extinguishing a		None known.		
Spec fighti	ific hazards during fire-	:	Exposure to combustion products may be a hazard to health.		
	ardous combustion prod-	od- : Carbon oxides			
Spec ods	ific extinguishing meth-		cumstances and t Use water spray t	measures that are appropriate to local cir- he surrounding environment. o cool unopened containers. ged containers from fire area if it is safe to do	
	cial protective equipment refighters	:	In the event of fire	e, wear self-contained breathing apparatus. ective equipment.	

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	<ul> <li>Use personal protective equipment.</li> <li>Follow safe handling advice (see section 7) and personal pro- tective equipment recommendations (see section 8).</li> </ul>
Environmental precautions	<ul> <li>Avoid release to the environment. 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.</li> </ul>
Methods and materials for containment and cleaning up	<ul> <li>Soak up with inert absorbent material.</li> <li>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.</li> <li>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.</li> <li>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.</li> </ul>



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7. HANDL	ING AND STORAGE		
Technical measures		CONTROLS/PEF	measures under EXPOSURE RSONAL PROTECTION section.
Local	/Total ventilation	: If sufficient ventil	ation is unavailable, use with local exhaust
Advice on safe handling		Handle in accord practice, based o sessment Keep container ti Do not eat, drink	hist or vapours. h eyes. Ighly after handling. ance with good industrial hygiene and safety in the results of the workplace exposure as-
Conditions for safe storage		Store locked up. Keep tightly close	labelled containers. ed. nce with the particular national regulations.
Materials to avoid			the following product types:

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	IN OEL
		STEL	1,000 ppm	ACGIH
betamethasone	378-44-9	TWA	1 µg/m3 (OEB 4)	Internal
	Further information: Skin			
		Wipe limit	10 µg/100 cm <sup>2</sup>	Internal

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	:	If adequate local exhaust ventilation is not available or expo-
		sure assessment demonstrates exposures outside the rec-
		ommended guidelines, use respiratory protection.



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Filter type Hand protection		: Combined particulates and organic vapour type				
Ma	aterial	: Chemical-res	istant gloves			
Remarks Eye protection		<ul> <li>Consider double gloving.</li> <li>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.</li> </ul>				
Skin and body protection		<ul> <li>Work uniform or laboratory coat.</li> <li>Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.</li> <li>Use appropriate degowning techniques to remove potentially contaminated clothing.</li> </ul>				
Hygiene measures		: If exposure to flushing syste place. When using of Wash contan The effective engineering of appropriate of industrial hyg	If exposure to chemical is likely during typical use, provide ey flushing systems and safety showers close to the working			

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	No data available
Odour	:	No data available
Odour Threshold	:	No data available
рН	:	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 / Upper	:	No data available



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	flamma	bility limit			
		explosion limit / Lower bility limit	:	No data available	9
	Vapour	pressure	:	No data available	9
	Relative	e vapour density	:	No data available	9
	Relative	e density	:	No data available	9
	Density		:	No data available	9
	Solubili Wat	ty(ies) er solubility	:	No data available	9
		n coefficient: n-	:	No data available	2
	octanol Auto-igi	nition temperature	:	No data available	2
	Decom	position temperature	:	No data available	9
	Viscosi Visc	ty osity, kinematic	:	No data available	
	Explosi	ve properties	:	Not explosive	
	Oxidizir	ng properties	:	The substance o	r mixture is not classified as oxidizing.
	Molecu	lar weight	:	No data available	9
	Particle	size	:	Not applicable	

### **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.

### 11. TOXICOLOGICAL INFORMATION

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

#### Acute toxicity

Not classified based on available information.



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<u>Com</u>	ponents:						
Ethar	nol:						
	e oral toxicity	: LD50 (Rat): Method: OE	> 5,000 mg/kg CD Test Guideline 401				
Acute	inhalation toxicity	Exposure tir	LC50 (Rat): 124.7 mg/l Exposure time: 4 h Test atmosphere: vapour				
Übetar	nethasone:						
LL.	e oral toxicity	: LD50 (Rat):	> 5,000 mg/kg				
		LD50 (Mous	e): > 4,500 mg/kg				
Acute	inhalation toxicity	: LC50 (Rat): Exposure tir					
Skin	corrosion/irritation						
Not c	lassified based on ava	ilable information.					
<u>Com</u>	ponents:						
Ethar	nol:						
Speci		: Rabbit					
Metho			Guideline 404				
Resu	IL	: No skin irrita					
betar	nethasone:						
Speci		: Rabbit					
Resu	lt	: Mild skin irri	: Mild skin irritation				
	<b>ous eye damage/eye</b> i lassified based on ava						
Com	ponents:						
Ethar	nol:						
Speci		: Rabbit					
Metho			Guideline 405				
Resu	π	: irritation to e	eyes, reversing within 21 days				
betar	nethasone:						
Speci		: Rabbit					
Resu		: No eye irrita	tion				
Resp	iratory or skin sensi	isation					
-	sensitisation						
	lassified based on ava	ilable information					



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-	iratory sensitisation assified based on ava	ilable inform	ation		
	oonents:				
Ethar					
Test 1	Гуре sure routes es		e contact	assay (LLNA)	
betan	nethasone:				
Expos Speci Resul		: Derma : Guine : Weak			
	cell mutagenicity assified based on ava	ilabla inform	ation		
	onents:		allon.		
Ethar					
UL.	toxicity in vitro		Гуре: In vitro t: negative	mammalian cell gene mutation test	
			Type: Bacteria It: negative	al reverse mutation assay (AMES)	
Genot	toxicity in vivo	Speci Applic	: Test Type: Rodent dominant lethal test (germ ce Species: Mouse Application Route: Ingestion Result: equivocal		
	nethasone:				
	toxicity in vitro		Гуре: Bacteria t: negative	al reverse mutation assay (AMES)	
			Гуре: In vitro t: negative	mammalian cell gene mutation test	
			Type: Chromo t: positive	osome aberration test in vitro	
Genot	toxicity in vivo	cytogo Speci Applic	: Test Type: Mammalian erythrocyte micronucleus test (in viv cytogenetic assay) Species: Mouse Application Route: Oral Result: equivocal		
	cell mutagenicity -		nt of evidence lutagen.	e does not support classification as a germ	



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	nogenicity lassified based on avail	lable	information.	
-	oductive toxicity damage the unborn chil	ld.		
<u>Com</u>	oonents:			
Ethar	nol:			
Effect	ts on fertility	:	Test Type: Two- Species: Mouse Application Route Result: negative	generation reproduction toxicity study e: Ingestion
betan	nethasone:			
Effects on foetal develop- : ment		:		e: Intramuscular oxicity: LOAEL: 0.05 mg/kg body weight ity, Malformations were observed.
			Developmental T	e: Subcutaneous oxicity: LOAEL: 0.42 mg/kg body weight ations were observed.
				e: Intramuscular oxicity: LOAEL: 1 mg/kg body weight ations were observed.
Repro sessn	oductive toxicity - As- nent	:	Clear evidence o animal experime	of adverse effects on development, based on the section of the sec
STOT	- single exposure			
Not cl	lassified based on avai	lable	information.	
Cause	<ul> <li>repeated exposure</li> <li>es damage to organs (I gland) through prolong</li> </ul>			e system, muscle, thymus gland, Blood, Ad

### **Components:**

betan	nethasone:	
Targe	t Organs :	Pituitary gland, Immune system, muscle, thymus gland, Blood, Adrenal gland
Asses	ssment :	Causes damage to organs through prolonged or repeated exposure.

### Repeated dose toxicity

Ethanol:	
Species	

: Rat



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		: 1,280 mg/kg : 3,156 mg/kg : Ingestion : 90 Days	
п		ý	
<b></b>	nethasone:	<b>D</b> 11 %	
Spec LOAE		: Rabbit : 0.05 %	
	cation Route	: Skin contact	
	sure time	: 10 - 30 d	
	et Organs		Immune system, muscle
Spec		: Rat	
LOAE		: 0.05 %	
	cation Route	: Skin contact : 8 Weeks	
Targe	sure time et Organs	thymus gland	
Spec	ies	: Mouse	
LOAE		: 0.1 %	
Appli	cation Route	: Skin contact	
	sure time	: 8 Weeks	
Targe	et Organs	: thymus gland	
Spec		: Dog	
LOAE		: 0.05 mg/kg	
	cation Route	: Oral : 28 d	
	sure time et Organs		gland, Adrenal gland
Not c	ration toxicity lassified based on ava		
Expe	rience with human e	xposure	
<u>Com</u>	ponents:		
betar	methasone:		
Inhala		: Target Organs:	
Skin	contact	: Symptoms: Rec	Iness, pruritis, Irritation
12. ECOL	OGICAL INFORMAT	ON	
Ecote	oxicity		
Com	ponents:		
Etha	nol:		
Toxic	ity to fish	: LC50 (Pimepha Exposure time:	les promelas (fathead minnow)): > 1,000 mg/l 96 h

### SAFETY DATA SHEET



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Toxicit plants	ty to algae/aquatic	:	ErC50 ( Chlorella Exposure time: 72	vulgaris (Fresh water algae)): 275 mg/l 2 h	
			EC10 ( Chlorella ) Exposure time: 72	vulgaris (Fresh water algae)): 11.5 mg/l 2 h	
Toxicit	ty to microorganisms	:	EC50 (Pseudomo Exposure time: 16	nas putida): 6,500 mg/l S h	
	ty to daphnia and other c invertebrates (Chron- city)	:	NOEC: 9.6 mg/l Exposure time: 9 d Species: Daphnia magna (Water flea)		
II	ethasone:				
Toxici	ty to daphnia and other c invertebrates	:	EC50 (Americamy Exposure time: 96		
Toxicit plants	ty to algae/aquatic	:	mg/l Exposure time: 72 Method: OECD Te		
			mg/l Exposure time: 72 Method: OECD Te		
Toxicit icity)	ty to fish (Chronic tox-	:	NOEC: 0.052 mg/ Exposure time: 32 Species: Pimepha Method: OECD Te	2 d ales promelas (fathead minnow)	
			NOEC: 0.07 µg/l Exposure time: 21 Species: Oryzias Method: OECD Te	latipes (Japanese medaka)	
	ty to daphnia and other c invertebrates (Chron- city)	:	Exposure time: 21	magna (Water flea)	
M-Fac toxicity	tor (Chronic aquatic γ)	:	1,000		
Persis	stence and degradabilities	ity			
<u>Comp</u>	onents:				
Ethan	ol:				
<b>4.4</b> .	gradability	:	Result: Readily bi Biodegradation: 8		



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I			Exposure time: 2	0 d
Bioa	ccumulative potential			
Com	ponents:			
Ethai	nol:			
	ion coefficient: n- ol/water	:	log Pow: -0.35	
betar	nethasone:			
	ion coefficient: n- ol/water	:	log Pow: 2.11	
	<b>lity in soil</b> ata available			
	r adverse effects ata available			
13. DISPC	SAL CONSIDERATION	<b>IS</b>		
-	osal methods			
	e from residues aminated packaging	:	Empty containers dling site for recy	ordance with local regulations. should be taken to an approved waste han- cling or disposal. pecified: Dispose of as unused product.
14. TRAN	SPORT INFORMATION			
Interi	national Regulations			
UNR				
	umber er shipping name	:	UN 3082 ENVIRONMENT N.O.S. (betamethasone	ALLY HAZARDOUS SUBSTANCE, LIQUID,
Class	5	:	9	)
	ing group	:	III 9	
	-DGR			
-	er shipping name	:	UN 3082 Environmentally I (betamethasone	nazardous substance, liquid, n.o.s. )
Class		:	9	
Label	ing group	:	III Miscellaneous	
Packi aircra	ing instruction (cargo ift)	:	964	
	ing instruction (passen- ircraft)	:	964	
	onmentally hazardous	:	yes	



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<b>IMDG-</b> UN nui Proper		:	UN 3082 ENVIRONMENT N.O.S. (betamethasone)	ALLY HAZARDOUS SUBSTANCE, LIQUID,
Class Packing group Labels EmS Code Marine pollutant		:	9 III 9 F-A, S-F yes	

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### **15. REGULATORY INFORMATION**

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

The components of this product are reported in the following inventories:						
AICS	:	not determined				
DSL	:	not determined				
AICS	:	not determined				

### **16. OTHER INFORMATION**

#### Further information

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

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

Date format	:	dd.mm.yyyy		
Full text of other abbreviations				
ACGIH IN OEL	:	USA. ACGIH Threshold Limit Values (TLV) India. Permissible levels of certain chemical substances in work environment.		
ACGIH / STEL IN OEL / TWA		Short-term exposure limit Time-Weighted Average Concentration (TWA) (8 hrs.)		



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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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

IN / EN