according to the Globally Harmonized System



# Recombinant Follicle Stimulating Hormone Formulation

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#### **1. PRODUCT AND COMPANY IDENTIFICATION**

Product name	:	Recombinant Follicle Stimulating Hormone Formulation		
Manufacturer or supplier's de	eta	ils		
Company	:	Organon & Co.		
Address	:	30 Hudson Street, 33nd floor Jersey City, New Jersey, U.S.A 07302		
Telephone	:	+1-551-430-6000		
Emergency telephone number	:	+1-215-631-6999		
E-mail address	:	EHSSTEWARD@organon.com		
Recommended use of the chemical and restrictions on use				
Recommended use Restrictions on use	:	Pharmaceutical Not applicable		

#### 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 (male reproductive organs, female reproductive organs)
GHS label elements		
Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H360FD May damage fertility. May damage the unborn child. H372 Causes damage to organs (male reproductive organs, female reproductive organs) through prolonged or repeated

exposure.

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Precautionary statements

#### Prevention:

P203 Obtain, read and follow all safety instructions before use.
P260 Do not breathe mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response:

P318 IF exposed or concerned, get medical advice.

#### Storage:

P405 Store locked up.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards which do not result in classification

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (%
		w/w)
Sucrose	57-50-1	>= 5 - < 10
Benzyl alcohol	100-51-6	>= 1 - < 5
Recombinant Follicle Stimulating Hormone	146479-72-3	>= 0.1 - < 0.3

#### 4. FIRST AID MEASURES

General advice	<ul> <li>In the case of accident or if you feel unwell, seek medical advice immediately.</li> <li>When symptoms persist or in all cases of doubt seek medical advice.</li> </ul>
If inhaled	: If inhaled, remove to fresh air. Get medical attention.
In case of skin contact	<ul> <li>In case of contact, immediately flush skin with soap and plenty of water.</li> <li>Remove contaminated clothing and shoes.</li> <li>Get medical attention.</li> <li>Wash clothing before reuse.</li> <li>Thoroughly clean shoes before reuse.</li> </ul>
In case of eye contact	: Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	<ul> <li>If swallowed, DO NOT induce vomiting.</li> <li>Get medical attention.</li> <li>Rinse mouth thoroughly with water.</li> </ul>

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Most important symptoms and effects, both acute and delayed Protection of first-aiders		:	May damage fertility. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. 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).		
		o physician	:	Treat symptomation	cally and supportively.
5. FI	REFIGI	HTING MEASURES			
	Suitabl	e extinguishing media	:	Water spray Alcohol-resistant f Carbon dioxide (C Dry chemical	
	Unsuita media	able extinguishing	:	None known.	
	Specific fighting	c hazards during fire-	:	Exposure to comb	oustion products may be a hazard to health.
		ous combustion prod-	:	Carbon oxides Metal oxides	
	Specifi ods	c extinguishing meth-	:	<ul> <li>Use extinguishing measures that are appropriate to local of cumstances and the surrounding environment.</li> <li>Use water spray to cool unopened containers.</li> <li>Remove undamaged containers from fire area if it is safe to so.</li> </ul>	
	Special protective equipment for firefighters		:	Evacuate area. In the event of fire Use personal prot	e, wear self-contained breathing apparatus. ective equipment.
6. A0	CCIDE	NTAL RELEASE MEAS	SUF	RES	
	tive equ	al precautions, protec- uipment and emer- procedures	:		ective equipment. ing advice (see section 7) and personal pro- recommendations (see section 8).
	Enviror	nmental precautions	:	Prevent spreading barriers). Retain and dispos	akage or spillage if safe to do so. g over a wide area (e.g. by containment or oil se of contaminated wash water. should be advised if significant spillages
		ls and materials for ment and cleaning up	:	For large spills, pr ment to keep mate be pumped, store Clean up remaining bent. Local or national r posal of this mate	absorbent material. ovide dyking or other appropriate contain- erial from spreading. If dyked material can recovered material in appropriate container. In materials from spill with suitable absor- regulations may apply to releases and dis- rial, as well as those materials and items leanup of releases. You will need to deter-

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		Sections 13 an	gulations are applicable. Ind 15 of this SDS provide information regarding r national requirements.		
7. HANDL	ING AND STORAGE				
Tech	nical measures		ng measures under EXPOSURE ERSONAL PROTECTION section.		
Local/Total ventilation			If sufficient ventilation is unavailable, use with local exhaust		
Advid	ce on safe handling	: Do not get on s Do not breathe Do not swallow Avoid contact w Wash skin tho Handle in acco practice, based sessment Keep containe Do not eat, driv			
	litions for safe storage	Store locked u Keep tightly clo Store in accord	bsed. dance with the particular national regulations.		
Materials to avoid		: Do not store w Strong oxidizin	ith the following product types: g agents		

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis		
Sucrose	57-50-1	TWA	10 mg/m3	ACGIH		
Recombinant Follicle Stimulat- ing Hormone	146479-72-3	TWA	5 µg/m3 (OEB 4)	Internal		
		Wipe limit	50 µg/100 cm²	Internal		

### Components with workplace control parameters

Engineering measures :	Minimize workplace exposure concentrations. If sufficient ventilation is unavailable, use with local exhaust ventilation.
Personal protective equipment	t

Respiratory protection	:	If adequate local exhaust ventilation is not available or expo-
		sure assessment demonstrates exposures outside the rec-
		ommended guidelines, use respiratory protection.
Filter type	:	Combined particulates and organic vapour type
Hand protection		

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М	aterial	: Chemical-res	istant gloves		
Remarks		on the concer stance and sp determined for applications, chemicals of	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous sub- stance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.		
Eye protection		: Wear the follo	Wear the following personal protective equipment: Safety glasses		
Skin and body protection		: Select approp sistance data tial. Skin contact r	Select appropriate protective clothing based on chemical re- sistance data and an assessment of the local exposure poten- tial. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).		
Hygie	ene measures	: If exposure to flushing syste place. When using o	chemical is likely during typical use, provide eye ms and safety showers close to the working lo not eat, drink or smoke. inated clothing before re-use.		

### 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 flammability limit	:	No data available
Lower explosion limit / Lower	:	No data available

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flammability limit		
Vapour pressure	: No data available	
Relative vapour density	: No data available	
Density	: No data available	
Solubility(ies) Water solubility	: No data available	
Partition coefficient: n-	: No data available	
octanol/water Auto-ignition temperature	: No data available	
Decomposition temperature	: No data available	
Viscosity Viscosity, dynamic	: No data available	
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	

### **10. STABILITY AND REACTIVITY**

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reac-	:	Can react with strong oxidizing agents.
tions		
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition	:	No hazardous decomposition products are known.
products		

#### **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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Produ	uct:			
_	oral toxicity	:	Acute toxicity e Method: Calcu	estimate: > 5,000 mg/kg lation method
Acute	inhalation toxicity	:	Acute toxicity e Exposure time: Test atmosphe Method: Calcu	re: dust/mist
<u>Com</u>	oonents:			
Sucro	ose:			
Acute	oral toxicity	:	LD50 (Rat): 29	,700 mg/kg
Benz	yl alcohol:			
Acute	oral toxicity	:	LD50 (Rat): 1,6	620 mg/kg
Acute	inhalation toxicity	:	LC50 (Rat): > 4 Exposure time: Test atmosphe Method: OECE	:4 h
Reco	mbinant Follicle Stin	nulati	ng Hormone:	
	toxicity (other routes histration)	of :		0.290 mg/kg ute: Intravenous
				): > 0.290 mg/kg ute: Intravenous
-	corrosion/irritation assified based on ava	ailable	information.	
<u>Com</u>	oonents:			
Benz	yl alcohol:			
Speci		-	Rabbit	
Metho Resul		-	OECD Test Gu No skin irritatio	

### Serious eye damage/eye irritation

Not classified based on available information.

### Components:

#### **Benzyl alcohol:**

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irritation to eyes, reversing within 21 days

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#### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

#### **Components:**

#### Benzyl alcohol:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

#### Germ cell mutagenicity

Not classified based on available information.

#### Components:

#### Sucrose:

Suci 036.		
Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Result: negative
Benzyl alcohol:		
Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection

Result: negative

#### **Recombinant Follicle Stimulating Hormone:**

Genotoxicity in vitro	:	Test Type: Ames test Result: negative
		Test Type: In vitro mammalian cell gene mutation test Test system: mammalian cells Result: negative
		Test Type: Chromosomal aberration Test system: Human lymphocytes Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Result: negative

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### Carcinogenicity

Not classified based on available information.

#### Components:

#### Benzyl alcohol:

Species	:	Mouse
Application Route	:	Ingestion
Exposure time	:	103 weeks
Method	:	OECD Test Guideline 451
Result	:	negative

#### Reproductive toxicity

May damage fertility. May damage the unborn child.

#### **Components:**

### Benzyl alcohol:

Effects on fertility	:	Test Type: Fertility/early embryonic development Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials
Effects on foetal develop- ment	:	Test Type: Embryo-foetal development Species: Mouse Application Route: Ingestion Result: negative

#### **Recombinant Follicle Stimulating Hormone:**

Effects on fertility	:	Test Type: Fertility Species: Rat Application Route: Subcutaneous Fertility: LOAEL: 0.11 Symptoms: Effect on estrous cycle, Increase of early resorp- tions, Reduced fertility Result: positive Test Type: Fertility Species: Rabbit Application Route: Subcutaneous Fertility: LOAEL: 0.027 Symptoms: Reduced fertility, Reduced embryonic survival Result: positive
Effects on foetal develop- ment	:	Test Type: Development Species: Rat Application Route: Subcutaneous Dose: 2.9 μg/kg Result: positive, No teratogenic effects
Reproductive toxicity - As-	:	Clear evidence of adverse effects on sexual function and fertil-

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sessment

ity, based on animal experiments., Clear evidence of adverse effects on development, based on animal experiments.

#### STOT - single exposure

Not classified based on available information.

#### STOT - repeated exposure

Causes damage to organs (male reproductive organs, female reproductive organs) through prolonged or repeated exposure.

#### **Components:**

#### **Recombinant Follicle Stimulating Hormone:**

Target Organs Assessment male reproductive organs, female reproductive organs
Causes damage to organs through prolonged or repeated exposure.

#### **Repeated dose toxicity**

#### **Components:**

#### Benzyl alcohol:

Species NOAEL Application Route Exposure time	:	Rat 1.072 mg/l inhalation (dust/mist/fume) 28 Days OECD Test Guideline 412
Method	:	OECD Test Guideline 412

#### **Recombinant Follicle Stimulating Hormone:**

Species NOAEL LOAEL Application Route Exposure time Number of exposures Target Organs Remarks		Monkey 0.17 mg/kg 0.86 mg/kg Subcutaneous 13 Weeks daily Reproductive organs No significant adverse effects were reported
Species LOAEL Exposure time Target Organs Remarks	:	Rat 0.14 mg/kg 13 Weeks Endocrine system No significant adverse effects were reported
Species LOAEL Exposure time Target Organs Remarks	:	Dog 0.14 mg/kg 13 Weeks Testis No significant adverse effects were reported
Species NOAEL	:	Rat 0.028 mg/kg

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Formu	lation			
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Expo	EL cation Route sure time et Organs	:	0.28 mg/kg Subcutaneous 1 year Testis	
LÖAE Expo	Species:LOAEL:Exposure time:Target Organs:		Monkey, male 0.028 mg/kg 1 year Testis	
Not c	ration toxicity lassified based on availa rience with human exp			
-	ponents:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Reco	mbinant Follicle Stimu	ulati	ng Hormone:	
Inhala		:	-	ecomastia, Skin disorders, Headache, Nau- iarrhoea
12. ECOL	OGICAL INFORMATIO	N		
Ecot	oxicity			
<u>Com</u>	ponents:			
Benz	yl alcohol:			
	ity to fish	:	LC50 (Pimephal Exposure time: S	es promelas (fathead minnow)): 460 mg/l 96 h
	ity to daphnia and other tic invertebrates	·:	Exposure time: 4	magna (Water flea)): 230 mg/l 48 h Test Guideline 202

Toxicity to algae/aquatic plants	:	EC50 ( Pseudokirchneriella subcapitata (green algae)): 770 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
		NOEC (Pseudokirchneriella subcapitata (green algae)): 310 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)	:	NOEC: 51 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

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Persi	stence and degrada	bility		
Com	oonents:			
	<b>yl alcohol:</b> gradability	:	Result: Readil Biodegradatio Exposure time	
Bioad	cumulative potentia	al		
Com	oonents:			
	<b>ose:</b> ion coefficient: n- ol/water	:	Pow: < 1	
Partiti	<b>yl alcohol:</b> ion coefficient: n- ol/water	:	log Pow: 1.05	
	<b>lity in soil</b> ata available			
	r <b>adverse effects</b> ata available			
3. DISPC	SAL CONSIDERATI	ONS		
Dispo	osal methods			

Biopodal modificad		
Waste from residues	:	Do not dispose of waste into sewer.
		Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste han-
		dling site for recycling or disposal.
		If not otherwise specified: Dispose of as unused product.

### **14. TRANSPORT INFORMATION**

#### **International Regulations**

#### UNRTDG

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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Special precautions for user

Not applicable

#### 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
IECSC	:	not determined

#### **16. OTHER INFORMATION**

Revision Date	:	29.09.2023	
Further information			
Sources of key data used to compile the 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/	
Date format	:	dd.mm.yyyy	
Full text of other abbreviations			
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)	
ACGIH / TWA	:	8-hour, time-weighted average	

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 Develop-

### SAFETY DATA SHEET according to the Globally Harmonized System



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ment; 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; TECI - Thailand Existing Chemicals 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; 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