

Version 4.3	Revision Date: 03/23/2020		OS Number: 153-00015	Date of last issue: 09/13/2019 Date of first issue: 01/23/2015				
SECTION	1. IDENTIFICATION							
	Product name : Other means of identification :		Mirtazapine Solid Formulation No data available					
Manu	facturer or supplier's	deta	nils					
Addre Telep Emer	Address		Organon & Co. 30 Hudson Street, 33nd floor Jersey City, New Jersey, U.S.A 07302 551-430-6000 215-631-6999 EHSSTEWARD@organon.com					
Reco	mmended use of the c	hen	nical and restricti	ons on use				
Reco	mmended use	:	Pharmaceutical					
SECTION	2. HAZARDS IDENTIFI		ΓΙΟΝ					
GHS	classification in accor	dan	ce with the Hazar	dous Products Regulations				
	oductive toxicity	:	Category 2					
	ific target organ toxicity eated exposure (Oral)	:	Category 2 (Nerv	vous system)				
GHS	label elements							
Haza	rd pictograms	:						
Signa	al Word	:	Warning					
Haza	rd Statements	:	the unborn child. H373 May cause	ed of damaging fertility. Suspected of damaging damage to organs (Nervous system) through eated exposure if swallowed.				
Preca	autionary Statements	:	Prevention:					
			P201 Obtain spe P202 Do not han and understood. P260 Do not brea	cial instructions before use. dle until all safety precautions have been read athe dust. ctive gloves/ protective clothing/ eye protection/				
			Response:	exposed or concerned: Get medical advice/				
			Storage: P405 Store locke	ed up.				



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Disposal:

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

Other hazards

Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin. May form explosive dust-air mixture during processing, handling or other means.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

CAS-No.	Concentration (% w/w)
85650-52-8	>= 10 - < 30
9005-25-8	>= 10 - < 30
	85650-52-8

Actual concentration or concentration range is withheld as a trade secret

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	:	If in eyes, rinse well with water. 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 delayed	:	
		the skin.
Protection of first-aiders	:	Dust contact with the eyes can lead to mechanical irritation. 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).
Notes to physician	:	Treat symptomatically and supportively.

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SEC	CTION 5	. FIRE-FIGHTING ME	ASU	IRES	
Suitable extinguishing media		:	Water spray Alcohol-resistant f Carbon dioxide (C Dry chemical		
	Unsuitable extinguishing media		:	None known.	
	Specific hazards during fire fighting		:	concentrations, ar potential dust exp	dust; fine dust dispersed in air in sufficient nd in the presence of an ignition source is a losion hazard. pustion products may be a hazard to health.
	Hazardous combustion prod- ucts		:	Carbon oxides Silicon oxides	
	Specifie ods	c 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
		l protective equipment fighters	:	In the event of fire Use personal prot	e, wear self-contained breathing apparatus. ective 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. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. 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
- : Static electricity may accumulate and ignite suspended dust



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Advice	Total ventilation e on safe handling	and bonding, or Use only with ac Do not breathe of Do not swallow. Avoid contact wi Avoid prolonged Handle in accord practice, based assessment Minimize dust ge Keep container of Keep away from Take precaution Take care to pre environment.	te precautions, such as electrical grounding inert atmospheres. dequate ventilation. dust. I or repeated contact with skin. dance with good industrial hygiene and safety on the results of the workplace exposure eneration and accumulation. closed when not in use. I heat and sources of ignition. ary measures against static discharges. event spills, waste and minimize release to the
Condi	tions for safe storage	Store locked up.	v labeled containers. ance with the particular national regulations.
Mater	ials to avoid		h the following product types:

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
(+/-)-1,2,3,4,10,14b- Hexahydro-2- methylpyrazino[2,1- a]pyrido[2,3-c][2]benzazepine	85650-52-8	TWA	25 μg/m³	Internal
		Wipe limit	250 µg/100 cm ²	Internal
Starch	9005-25-8	TWA	10 mg/m ³	CA AB OEL
		TWAEV (to- tal dust)	10 mg/m ³	CA QC OEL
		TWA (Total dust)	10 mg/m ³	CA BC OEL
		TWA (respir- able dust fraction)	3 mg/m ³	CA BC OEL
		TWA	10 mg/m ³	ACGIH

Engineering measures

 Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations. Apply measures to prevent dust explosions. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Dust formation may be relevant in the processing of this



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		imitations of workplaces assessmen Particulates dust, 5 mg/ Particles (ir	addition to substance-specific OELs, general of concentrations of particulates in the air at have to be considered in workplace risk t. Relevant limits include: OSHA PEL for s Not Otherwise Regulated of 15 mg/m3 - total m3 - respirable fraction; and ACGIH TWA for isoluble or poorly soluble) Not Otherwise f 3 mg/m3 - respirable particles, 10 mg/m3 - articles.
Pers	onal protective equipr	nent	
Fi	iratory protection Iter type protection	exposure a	local exhaust ventilation is not available or ssessment demonstrates exposures outside the ded guidelines, use respiratory protection. s type
M	aterial	: Chemical-re	esistant gloves
R	emarks	on the cond time is not For special resistance gloves with	ves to protect hands against chemicals depending centration specific to place of work. Breakthrough determined for the product. Change gloves often! applications, we recommend clarifying the to chemicals of the aforementioned protective the glove manufacturer. Wash hands before at the end of workday.
Eye p	protection	: Wear the fo	llowing personal protective equipment:
Skin a	and body protection	resistance potential. Skin contac	opriate protective clothing based on chemical data and an assessment of the local exposure at must be avoided by using impervious protective byes, aprons, boots, etc).
Hygie	ene measures	: If exposure eye flushing working pla When using	to chemical is likely during typical use, provide g systems and safety showers close to the

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	No data available
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available

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Flash	point	:	Not applicable	
Evapo	pration rate	:	No data available	9
Flamn	nability (solid, gas)	:	May form explosing handling or other	ve dust-air mixture during processing, means.
Flamn	nability (liquids)	:	No data available)
Upper explosion limit / Upper flammability limit		:	No data available	
	explosion limit / Lower ability limit	:	No data available	
Vapor	pressure	:	No data available	2
Relati	ve vapor density	:	No data available	9
Relati	ve density	:	No data available	9
Densit	ty	:	No data available	9
	ility(ies) ater solubility	:	No data available	9
	on coefficient: n-	:	No data available)
	ol/water Inition temperature	:	No data available	9
Decor	mposition temperature	:	No data available	9
Viscos Vis	sity scosity, dynamic	:	No data available)
Vis	scosity, kinematic	:	No data available)
Explo	sive properties	:	Not explosive	
Oxidiz	ring properties	:	The substance o	r mixture is not classified as oxidizing.
Molec	ular weight	:	No data available)
Partic	le 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	:	May form explosive dust-air mixture during processing, handling or other means. Can react with strong oxidizing agents.



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Conditions to avoid Incompatible materials Hazardous decomposition		Avoid dust : Oxidizing a				
produ		. No hazaru	: No hazardous decomposition products are known.			
ECTION	11. TOXICOLOGICA	L INFORMATION				
Inhala Skin o Inges	contact	es of exposure				
	e toxicity lassified based on ava	ilable information				
		mable mormation.				
Product: Acute oral toxicity : Acute toxicity estimate: 3,200 mg/kg Method: Calculation method						
<u>Com</u>	ponents:					
	1,2,3,4,10,14b-Hexah e oral toxicity		azino[2,1-a]pyrido[2,3-c][2]benzazepine: : 320 - 490 mg/kg			
Starc	:h:					
Acute	e oral toxicity	: LD50 (Rat)	: > 5,000 mg/kg			
Acute	e dermal toxicity	: LD50 (Rab	bit): > 2,000 mg/kg			
	corrosion/irritation lassified based on ava	ilable information.				
	ous eye damage/eye lassified based on ava					
Com	ponents:					
Starc	:h:					
Speci Resul		: Rabbit : No eye irrit	ation			
Resp	iratory or skin sensi	tization				
Skin	sensitization					
Not c	lassified based on ava	ailable information.				

Respiratory sensitization

Not classified based on available information.



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<u>Com</u>	oonents:		
Starc	h:		
Test 1		: Maximization	Test
Route Speci	es of exposure	: Skin contact : Guinea pig	
Resul		: negative	
	cell mutagenicity		
Not cl	assified based on ava	lable information.	
<u>Comp</u>	oonents:		
(+/-)- 1	,2,3,4,10,14b-Hexahy	dro-2-methylpyraz	zino[2,1-a]pyrido[2,3-c][2]benzazepine:
Geno	toxicity in vitro	: Test Type: B Result: negat	acterial reverse mutation assay (AMES) tive
			vitro mammalian cell gene mutation test Chinese hamster lung cells tive
			nscheduled DNA synthesis assay mammalian cells tive
			ster chromatid exchange assay mammalian cells tive
Geno	toxicity in vivo	: Test Type: M Species: Rat Cell type: Bo Application R Result: negation	ne marrow coute: Oral
	h:		
Starc			

Carcinogenicity

Not classified based on available information.

Components:

(+/-)-1,2,3,4,10,14b-Hexahydro-2-methylpyrazino[2,1-a]pyrido[2,3-c][2]benzazepine:
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Species	: Mouse
Application Route	: Oral
Exposure time	: 18 month(s)
LOAEL	: 200 mg/kg body weight
Result	: equivocal
Target Organs	: Liver
Species	: Rat
Application Route	: Oral



rsion B	Revision Date: 03/23/2020		S Number: 53-00015	Date of last issue: 09/13/2019 Date of first issue: 01/23/2015	
Exposure time LOAEL Result Target Organs		:	2 Years 20 mg/kg body weight equivocal Liver, Thyroid		
-	oductive toxicity ected of damaging ferti	lity. Si	uspected of da	maging the unborn child.	
Comp	oonents:				
(+/-)-1	,2,3,4,10,14b-Hexahy	dro-2	-methylpyrazi	no[2,1-a]pyrido[2,3-c][2]benzazepine:	
Effect	s on fertility	:	Species: Rat Application Ro Fertility: LOAE Symptoms: Ef tions. Result: Anima	rtility/early embryonic development oute: Oral EL: 15 mg/kg body weight fect on estrous cycle, Increase of early resorp I testing did not show any effects on fertility., effects and adverse effects on the offspring we	
Effect	s on fetal development	t :	Result: Embry offspring were Test Type: De Species: Rabl Application Ro Developmenta	oute: Oral al Toxicity: LOAEL: 100 mg/kg body weight votoxic effects and adverse effects on the e detected., No teratogenic effects. evelopment bit	
Repro sessn	oductive toxicity - As- nent	:	fertility, based	ce of adverse effects on sexual function and on animal experiments., Some evidence of is on development, based on animal	

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (Nervous system) through prolonged or repeated exposure if swallowed.

Components:

(+/-)-1,2,3,4,10,14b-Hexahydro-2-methylpyrazino[2,1-a]pyrido[2,3-c][2]benzazepine:

Routes of exposure Target Organs		Ingestion Nervous system
Assessment	:	May cause damage to organs through prolonged or repeated exposure.



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-	Repeated dose toxicity <u>Components:</u>						
		vdro-2-methylpyraz	ino[2,1-a]pyrido[2,3-c][2]benzazepine:				
Spec LOAE Appli Expo	ies	: Rat : 120 mg/kg : Oral : 13 Weeks : Nervous syste					
Expo Targe		: Dog : 15 mg/kg : Oral : 52 Weeks : Nervous syste : Tremors	em				
Expo Targe		: Dog : 20 mg/kg : Oral : 13 Weeks : Nervous syste : Tremors	em, Testis				
	ies EL cation Route sure time	: Rat : >= 2,000 mg/ : Skin contact : 28 Days : OECD Test G					

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

(+/-)-1,2,3,4,10,14b-Hexahydro-2-methylpyrazino[2,1-a]pyrido[2,3-c][2]benzazepine:

Ingestion

: Symptoms: Drowsiness, constipation, dry mouth, asthenia, Dizziness, Disorientation

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

(+/-)-1,2,3,4,10,14b-Hexahydro-2-methylpyrazino[2,1-a]pyrido[2,3-c][2]benzazepine:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): 6.92 mg/l Exposure time: 96 h Method: FDA 4.11



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Toxicity to daphnia and other aquatic invertebrates		:	EC50 (Daphnia magna (Water flea)): 19.5 mg/l Exposure time: 48 h	
Toxicity to algae/aquatic plants		:	EC50 (Pseudokiro mg/l Exposure time: 72 Method: OECD Te	
			NOEC (Pseudokir mg/l Exposure time: 72 Method: OECD Te	
Toxicity icity)	/ to fish (Chronic tox-	:	: NOEC (Pimephales promelas (fathead minnow)): 3.6 mg/l Exposure time: 31 d Method: OECD Test Guideline 210	
	/ to daphnia and other invertebrates (Chron- ity)	:	NOEC (Daphnia r Exposure time: 21 Method: OECD Te	
Toxicity	Toxicity to microorganisms		EC50 (Natural mid Exposure time: 3 Test Type: Respir Method: OECD Te	ation inhibition
			NOEC (Natural m Exposure time: 3 Test Type: Respir Method: OECD Te	ation inhibition
	t ence and degradabil i a available	ity		
Bioaco	Bioaccumulative potential			
Compo	onents:			
	2,3,4,10,14b-Hexahyd umulation	ro-2 :		
Partitio octanol	n coefficient: n- /water	:	log Pow: 2.78	
Mobilit	y in soil			
Compo	onents:			
Distribu	2,3,4,10,14b-Hexahyd ution among environ- compartments	ro-2 :	2-methylpyrazino[log Koc: 4.48	2,1-a]pyrido[2,3-c][2]benzazepine:
Other adverse effects No data available				



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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging : Empty containers should		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

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 Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied.

Domestic regulation

TDG Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

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

AICS	:	not determined
DSL	:	not determined
IECSC	:	not determined

SECTION 16. OTHER INFORMATION

Full text of other abbreviations				
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)		
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)		
CA BC OEL	:	Canada. British Columbia OEL		
CA QC OEL	:	Québec. Regulation respecting occupational health and safe- ty, Schedule 1, Part 1: Permissible exposure values for air- borne contaminants		
ACGIH / TWA		8-hour, time-weighted average		
CA AB OEL / TWA	:	8-hour Occupational exposure limit		
CA BC OEL / TWA	:	8-hour time weighted average		
CA QC OEL / TWAEV	:	Time-weighted average exposure value		



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AICS - Australian Inventory of Chemical Substances; 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

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 Agency, http://echa.europa.eu/
Data Sneet		cy, nπp://ecna.europa.eu/

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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.

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