

according to Regulation (EC) No. 1907/2006

## Sitagliptin / Metformin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
3.0	04.04.2023	27108-00023	Date of first issue: 31.10.2014

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1	Product identifier Trade name	:	Sitagliptin / Metformin Formulation
1.2	Relevant identified uses of th	ne s	ubstance or mixture and uses advised against
	Use of the Sub- stance/Mixture	:	Pharmaceutical
	Recommended restrictions on use	:	Not applicable
1.3	Details of the supplier of the	saf	ety data sheet
	Company	:	MSD Innishannon County Cork - Ireland
	Telephone	:	353 214329300
	E-mail address of person responsible for the SDS	:	EHSDATASTEWARD@msd.com

### **1.4 Emergency telephone number**

1-908-423-6000

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

### 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H302 Harmful if swallowed.
Precautionary statements	:	<ul><li>Prevention:</li><li>P264 Wash skin thoroughly after handling.</li><li>P270 Do not eat, drink or smoke when using this product.</li></ul>



according to Regulation (EC) No. 1907/2006

## Sitagliptin / Metformin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
3.0	04.04.2023	27108-00023	Date of first issue: 31.10.2014

#### **Response:**

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

#### Hazardous components which must be listed on the label:

metformin hydrochloride

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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**

### 3.2 Mixtures

#### Components

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		. ,
	Registration number		
metformin hydrochloride	1115-70-4	Acute Tox. 4; H302	>= 70 - < 90
	214-230-6		
Sitagliptin	654671-77-9	Eye Irrit. 2; H319	>= 1 - < 10
For surlageting of all has detailed			

For explanation of abbreviations see section 16.

### **SECTION 4: First aid measures**

#### 4.1 Description of 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.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment



Versior 3.0	Revision Date: 04.04.2023		0S Number: 108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014	
			when the potentia	al for exposure exists (see section 8).	
lf i	nhaled	:	If inhaled, remove Get medical atter	e to fresh air. htion if symptoms occur.	
In	case of skin contact	:	Wash with water Get medical atter	and soap. ntion if symptoms occur.	
In	case of eye contact	:	If in eyes, rinse w Get medical atter	ell with water. htion if irritation develops and persists.	
If swallowed		:	If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.		
4.2 Mo	st important symptoms a	nd e	effects, both acute	e and delayed	
Risks		:	the skin.	the eyes can lead to mechanical irritation or drying of	
			Harmful if swallov	wed.	
4 3 Ind	ication of any immediate	med	dical attention and	d special treatment needed	
	eatment	:		ically and supportively.	
SECTI	ON 5: Firefighting mea	sur	es		
5.1 Ext	inguishing media				
	itable extinguishing media	:	Water spray Alcohol-resistant Carbon dioxide (( Dry chemical		
	suitable extinguishing edia	:	None known.		
5.2 Spe	ecial hazards arising from	n the	e substance or mi	xture	
Sp	ecific hazards during fire- hting	:	Avoid generating concentrations, a potential dust exp	dust; fine dust dispersed in air in sufficient nd in the presence of an ignition source is a	
Ha uc	zardous combustion prod- ts	:	Carbon oxides Nitrogen oxides ( Metal oxides	NOx)	



# Sitagliptin / Metformin Formulation

Version 3.0	Revision Date: 04.04.2023		DS Number: 108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014
Specia	<b>for firefighters</b> al protective equipment fighters	:		e, wear self-contained breathing apparatus. tective equipment.
Specif ods	ic extinguishing meth-	:	cumstances and t Use water spray t	measures that are appropriate to local cir- the surrounding environment. to cool unopened containers. ged containers from fire area if it is safe to do

### **SECTION 6:** Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	: Use personal protective equipment.
	Follow safe handling advice (see section 7) and personal pro- tective equipment recommendations (see section 8).

#### **6.2 Environmental precautions**

Environmental precautions :	Avoid release to the environment. 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.
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### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up	<ul> <li>Sweep up or vacuum up spillage and collect in suitable con- tainer for disposal.</li> <li>Avoid dispersal of dust in the air (i.e., clearing dust surfaces</li> </ul>
	with compressed air).
	Dust deposits should not be allowed to accumulate on surfac- es, as these may form an explosive mixture if they are re- leased into the atmosphere in sufficient concentration. Local or national regulations may apply to releases and dis- posal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter- mine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

### **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Technical measures	<ul> <li>Static electricity may accumulate and ignite suspended dust causing an explosion.</li> <li>Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.</li> </ul>
	and bonding, or inert atmospheres.

according to Regulation (EC) No. 1907/2006



# Sitagliptin / Metformin Formulation

Version 3.0	Revision Date: 04.04.2023	SDS Number: 27108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014
Adv	al/Total ventilation rice on safe handling jiene measures	<ul> <li>Do not breath Do not swallo Avoid contact Avoid prolong Wash skin the Handle in acc practice, base sessment Minimize dust Keep containe Keep away fre Take precauti Do not eat, dr Take care to p environment.</li> <li>If exposure to flushing syste place. When the nated clothing The effective engineering c appropriate de industrial hygi</li> </ul>	w.
Red	ditions for safe storage quirements for storage	: Keep in prope	erly labelled containers. Store in accordance with
area	as and containers	the particular	national regulations.
Adv	vice on common storage	: Do not store v Strong oxidizi	with the following product types: ing agents
7.3 Specific end use(s) Specific use(s)		: No data availa	able

### **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

Occupational Exposure Limits							
dusts non-specific	4 mg/m3 Value type (Form of exposure): OELV - 8 hrs (TWA) (Respirable dust) Basis: IE OEL						
	10 mg/m3 Value type (Form of exposure): OELV - 8 hrs (TWA) (inhalable dust) Basis: IE OEL						
Components CAS-No.	Value type (Form Control parameters Basis						

according to Regulation (EC) No. 1907/2006



# Sitagliptin / Metformin Formulation

Ver 3.0		sion Date 4.2023		Number: 8-00023	 te of last issue: 01.10.2022 te of first issue: 31.10.2014	
				of exposure)		
	metformin hy chloride	dro- ´	1115-70-4	TWA	1 mg/m3 (OEB 1)	Internal
	Sitagliptin	-	654671-77- 9	TWA	0.5 mg/m3 (OEB 2)	Internal
	Cellulose	Q	9004-34-6	OELV - 8 hrs (TWA)	10 mg/m3	IE OEL

### 8.2 Exposure controls

#### **Engineering measures**

Use feasible engineering controls to minimize exposure to compound. All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

### Personal protective equipment

Eye/face 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.
Hand protection Material	:	Chemical-resistant gloves
Skin and body protection	:	Work uniform or laboratory coat.
Respiratory protection	:	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Equipment should conform to I.S. EN 143
Filter type	:	Particulates type (P)

### **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

Physical state Colour Odour Odour Threshold	:	powder No data available No data available No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling	:	No data available
range Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, han- dling or other means.
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower	:	No data available

according to Regulation (EC) No. 1907/2006



# Sitagliptin / Metformin Formulation

Ver 3.0	sion	Revision Date: 04.04.2023		9S Number: 108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014
flammability limit					
Flash point		:	Not applicable		
	Auto-iç	gnition temperature	:	No data available	e
	Decom	position temperature	:	No data available	e
	рН		:	No data available	e
	Viscos Vis	ity cosity, kinematic	:	Not applicable	
		lity(ies) ter solubility	:	No data availabl	e
		on coefficient: n- I/water	:	Not applicable	
		r pressure	:	Not applicable	
	Relativ	ve density	:	No data available	e
	Densit	у	:	No data available	e
	Relativ	ve vapour density	:	Not applicable	
		e characteristics ticle size	:	No data availabl	e
9.2		nformation			
	Explos	sives	:	Not explosive	
	Oxidizi	ing properties	:	The substance of	r mixture is not classified as oxidizing.
	Evapo	ration rate	:	Not applicable	
	Molecu	ular weight	:	No data availabl	e

### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Not classified as a reactivity hazard.

#### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	: May form explosive dust-air mixture during processing, han-
	dling or other means.
	Can react with strong oxidizing agents.

### 10.4 Conditions to avoid

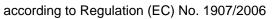


according to Regulation (EC) No. 1907/2006

Version 3.0	Revision Date: 04.04.2023		9S Number: 108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014
Condi	itions to avoid	:	Heat, flames an Avoid dust form	
	npatible materials ials to avoid	:	Oxidizing agents	5
	rdous decomposition	•		
	I 11: Toxicological ii			
				gulation (EC) No 1272/2008
	nation on likely routes o		Inhalation Skin contact Ingestion Eye contact	galalien ( <b></b> ) ne 1 <u>_</u>
	<b>e toxicity</b> ful if swallowed.			
<u>Produ</u> Acute	uct: oral toxicity	:	Acute toxicity est Method: Calculat	timate: 1,380 mg/kg tion method
<u>Com</u>	oonents:			
	ormin hydrochloride:		LDE0 (Pot): 1.00	0 mg/kg
Acule		:	LD50 (Rat): 1,00	
				,450 - 3,500 mg/kg
			LD50 (Monkey):	
			LD50 (Rabbit): 3	
			LD50 (Guinea pi	g): 500 mg/kg
	liptin: oral toxicity		I D50 (Pat) > 2 (	
Acule		•	LD50 (Rat): > 3,0	
			LD50 (Mouse): 3	,000 mg/kg
Not cl	corrosion/irritation assified based on availa conents:	able	information.	
<b>metfc</b> Speci	ormin hydrochloride: es	:	Rabbit	
Resu	t	:	Mild skin irritatior	1

Version

3.0



Revision Date:

04.04.2023



Date of last issue: 01.10.2022

Date of first issue: 31.10.2014

# Sitagliptin / Metformin Formulation

SDS Number:

27108-00023

Sitagliptin: Species Method Result	<ul><li>Rabbit</li><li>Draize Test</li><li>No skin irritation</li></ul>
Serious eye damage/eye	
Components:	
metformin hydrochloride	a:
Species Result	: Rabbit : Mild eye irritation
Sitagliptin:	
Species	: Rabbit
Method Result	: Draize Test : Irritating to eyes.
Result	. Initaling to eyes.
Respiratory or skin sens	sitisation
Skin sensitisation	vailable information.
Respiratory sensitisation	
Components:	
Sitagliptin:	
Test Type	: Local lymph node assay (LLNA)
Species	: Mouse
Method Result	<ul><li>: OECD Test Guideline 429</li><li>: Not a skin sensitizer.</li></ul>
Germ cell mutagenicity Not classified based on av	vailable information.
Components:	
metformin hydrochloride	2.
Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AME) Result: negative
	Test Type: in vitro assay
	Test system: mouse lymphoma cells Result: negative
	Test Type: Chromosomal aberration
	Test system: Human lymphocytes Result: negative
Genotoxicity in vivo	: Test Type: Micronucleus test
,	

according to Regulation (EC) No. 1907/2006



rsion	Revision Date: 04.04.2023	SDS Number: 27108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014			
		Species: Mou Application Ro Result: negati	oute: Oral			
Sitag	liptin:					
Genotoxicity in vitro		: Test Type: Ames test Result: negative				
			nromosome aberration test in vitro Chinese hamster ovary cells ive			
		thesis in mam	NA damage and repair, unscheduled DNA syn- imalian cells (in vitro) rat hepatocytes ive			
Genotoxicity in vivo		<ul> <li>Result: negative</li> <li>Test Type: Micronucleus test Species: Mouse Application Route: Oral Result: negative</li> </ul>				
		i tootaati i togaa				
Carci	nogenicity					
	<b>nogenicity</b> assified based on av					
Not cl <u>Comp</u>	assified based on av	vailable information.				
Not cl <u>Comp</u> metfo	assified based on av ponents: prmin hydrochloride	vailable information.				
Not cl Comp metfo	assified based on av ponents: prmin hydrochloride es	vailable information.				
Not cl Comp metfo Speci Expos	assified based on av ponents: prmin hydrochloride	vailable information. e: : Mouse : 91 weeks				
Not cl Comp metfo	assified based on av ponents: prmin hydrochloride es sure time	vailable information.				
Not cl Comp metfo Speci Expos Dose	assified based on av ponents: prmin hydrochloride es sure time t	vailable information. : : Mouse : 91 weeks : 1500 mg/kg b				
Not cl Comp metfo Speci Expos Dose Resul Speci Applic	assified based on av <u>conents:</u> ormin hydrochloride es sure time t es cation Route	vailable information. : : Mouse : 91 weeks : 1500 mg/kg b : negative : Rat, male : Oral				
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos	assified based on av <u>conents:</u> ormin hydrochloride es sure time t es	vailable information. : : Mouse : 91 weeks : 1500 mg/kg b : negative : Rat, male : Oral : 104 weeks	ody weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose	assified based on av <u>conents:</u> prmin hydrochloride es sure time t es cation Route sure time	vailable information. : : Mouse : 91 weeks : 1500 mg/kg b : negative : Rat, male : Oral : 104 weeks : 900 mg/kg bo	ody weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos	assified based on av <u>conents:</u> prmin hydrochloride es sure time t es cation Route sure time	vailable information. : : Mouse : 91 weeks : 1500 mg/kg b : negative : Rat, male : Oral : 104 weeks	ody weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose	assified based on av <u>conents:</u> ormin hydrochloride es sure time t es cation Route sure time t	vailable information. : : Mouse : 91 weeks : 1500 mg/kg b : negative : Rat, male : Oral : 104 weeks : 900 mg/kg bo	ody weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul	assified based on av <u>conents:</u> prmin hydrochloride es sure time t es cation Route sure time t es cation Route	vailable information.	ody weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul	assified based on av <u>conents:</u> prmin hydrochloride es sure time t es cation Route sure time t es cation Route sure time	vailable information. Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo negative Rat, female Oral 104 weeks 104 weeks 104 weeks	ody weight dy weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Resul	assified based on av <u>ponents:</u> prmin hydrochloride es sure time t es cation Route sure time t es cation Route sure time cation Route sure time	vailable information. Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo negative Rat, female Oral 104 weeks 900 mg/kg bo 200 mg/kg bo	ody weight dy weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul Speci Applic Expos Dose Resul	assified based on av <u>conents:</u> prmin hydrochloride es sure time t es cation Route sure time t es cation Route sure time t t t	vailable information. Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo negative Rat, female Oral 104 weeks 900 mg/kg bo negative Rat, female 000 mg/kg bo 104 weeks 000 mg/kg bo 104 weeks 000 mg/kg bo 104 weeks 000 mg/kg bo 000 mg/kg bo	ody weight dy weight dy weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul Speci Applic Expos Dose Resul	assified based on av <u>conents:</u> <b>prmin hydrochloride</b> es sure time t es cation Route sure time t es cation Route sure time t t cation Route sure time t t t t t t t t t t t t t	ailable information. Mouse Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo Rat, female Oral 104 weeks 900 mg/kg bo negative Uterus (includ	ody weight dy weight dy weight ling cervix)			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul Speci Applic Expos LOAE Resul Targe Rema	assified based on av <u>conents:</u> <b>prmin hydrochloride</b> es sure time t es cation Route sure time t es cation Route sure time t t cation Route sure time t t t t t t t t t t t t t	vailable information. A mouse Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo negative Rat, female Oral 104 weeks 900 mg/kg bo negative Uterus (includ The mechanis	ody weight dy weight dy weight ling cervix)			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul Speci Applic Expos LOAE Resul Targe Rema	assified based on av <u>ponents:</u> prmin hydrochloride es sure time t es cation Route sure time t t es cation Route sure time iL t t t Organs irks	vailable information. A mouse Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo negative Rat, female Oral 104 weeks 900 mg/kg bo negative Uterus (includ The mechanis	ody weight dy weight dy weight			
Not cl Comp metfo Speci Expos Dose Resul Speci Applic Expos Dose Resul Speci Applic Expos LOAE Resul Targe Rema Sitag	assified based on av <u>ponents:</u> prmin hydrochloride es sure time t es cation Route sure time t t es cation Route sure time iL t t t Organs irks	vailable information. Mouse 91 weeks 1500 mg/kg b negative Rat, male Oral 104 weeks 900 mg/kg bo negative Rat, female Oral 104 weeks 900 mg/kg bo negative Uterus (includ The mechanis mans.	ody weight dy weight dy weight ling cervix)			

according to Regulation (EC) No. 1907/2006

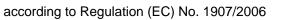


Version 3.0	Revision Date: 04.04.2023	SDS Number: 27108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014			
Resu	lt	: negative				
Expos Resu	cation Route sure time It et Organs	: 2 Years : positive : Liver	oral (drinking water) 2 Years positive			
Carci ment	nogenicity - Assess-	: Weight of evic cinogen	dence does not support classification as a car-			
-	oductive toxicity lassified based on avail	able information.				
Com	oonents:					
metfo	ormin hydrochloride:					
Effect	ts on fertility					
Effect ment	ts on foetal develop-					
		Species: Rab Application R Embryo-foeta				
	liptin:					
	ts on fertility	Species: Rat Application R Fertility: NOA	ertility/early embryonic development oute: Oral EL Parent: 1,000 mg/kg body weight al testing did not show any effects on fertility.			
Effect ment	ts on foetal develop-	Species: Rat Application R Teratogenicity Result: Embr	nbryo-foetal development oute: Oral y: LOAEL: 250 mg/kg body weight yotoxic effects and adverse effects on the off- etected., No teratogenic effects			
		Species: Rab	nbryo-foetal development bit y: NOAEL: 125 mg/kg body weight			

according to Regulation (EC) No. 1907/2006



Version 3.0	Revision Date: 04.04.2023	SDS Number: 27108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014					
		Result: No t	teratogenic effects					
Not c	<b>F - single exposure</b> lassified based on ava							
	<b>STOT - repeated exposure</b> Not classified based on available information.							
Repe	Repeated dose toxicity							
	ponents:							
Speci NOAI Applie	EL cation Route sure time	: Rat : 125 mg/kg : Oral : 1 year	nt adverse effects were reported					
	EL cation Route sure time	: Rabbit : 100 mg/kg : Oral : 1 Year : No significa	nt adverse effects were reported					
	EL cation Route sure time	: Dog : 50 mg/kg : Subcutanec : 2 year : No significa	ous nt adverse effects were reported					
Spec NOAI LOAE Appli Expo	EL	: Mouse : 500 mg/kg : 1,000 mg/kg : Oral : > 2 yr : Kidney	g					
Expo	EL	: Rat : 500 mg/kg : 1,000 mg/kg : Oral : 14 Weeks : Liver, Kidne	g ey, Heart, Teeth					
Expo	EL EL cation Route sure time et Organs	: Dog : 10 mg/kg : 50 mg/kg : Oral : 53 Weeks : Central nen : Loss of bala	vous system ance					





# Sitagliptin / Metformin Formulation

Version 3.0	Revision Date: 04.04.2023	SDS Number: 27108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014		
Rema	rks	: The mechanisr mans.	n or mode of action may not be relevant in hu-		
Expos	EL L cation Route sure time t Organs toms	: Loss of balance	e, Central nervous system e n or mode of action may not be relevant in hu-		
	EL cation Route sure time	: Monkey : 100 mg/kg : Oral : 14 Weeks : No significant a	adverse effects were reported		
Aspiration toxicity Not classified based on available information. 11.2 Information on other hazards					
Endo	crine disrupting prop	erties			
<u>Produ</u> Asses	<u>ıct:</u> sment	ered to have er REACH Article	/mixture does not contain components consid- ndocrine disrupting properties according to 57(f) or Commission Delegated regulation 0 or Commission Regulation (EU) 2018/605 at or higher.		
Expe	Experience with human exposure				

### Components:

Skin contact Eye contact Ingestion	<ul> <li>Remarks: May irritate skin.</li> <li>Remarks: May irritate eyes.</li> <li>Symptoms: Diarrhoea, Nausea, Vomiting, Gastrointestinal discomfort, flatulence, asthenia, Fatigue, Headache</li> </ul>
Sitagliptin:	
Inhalation	: Symptoms: upper respiratory tract infection, pharyngitis, Headache
Ingestion	: Symptoms: upper respiratory tract infection, nasopharyngitis, Headache, Nausea, Abdominal pain, Diarrhoea





# Sitagliptin / Metformin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
3.0	04.04.2023	27108-00023	Date of first issue: 31.10.2014

### **SECTION 12: Ecological information**

### 12.1 Toxicity

Components:		
metformin hydrochloride: Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
		NOEC (Pseudokirchneriella subcapitata (green algae)): 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 : > 1,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209
Toxicity to fish (Chronic tox- icity)	:	NOEC: 10 mg/l Exposure time: 33 d Species: Pimephales promelas (fathead minnow) Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)		NOEC: 40 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211
Sitagliptin:		
Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 60 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 39 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
		NOEC (Pseudokirchneriella subcapitata (green algae)): 2.2 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 : > 150 mg/l Exposure time: 3 h

according to Regulation (EC) No. 1907/2006



# Sitagliptin / Metformin Formulation

Versic 3.0	on Revision Date: 04.04.2023		DS Number: 108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014
			Test Type: Respir Method: OECD T	ration inhibition est Guideline 209
			NOEC : 150 mg/l Exposure time: 3 Test Type: Respir	
	oxicity to fish (Chronic tox- city)	:		3 d ales promelas (fathead minnow) est Guideline 210
a	oxicity to daphnia and other quatic invertebrates (Chron- toxicity)		NOEC: 9.8 mg/l Exposure time: 2' Species: Daphnia Method: OECD T	a magna (Water flea)
12.2 F	Persistence and degradabi	lity		
<u>c</u>	components:			
n	netformin hydrochloride:			
B	liodegradability	:	Result: rapidly de Biodegradation: 4 Exposure time: 2	50 %
S	Sitagliptin:			
B	liodegradability	:	Result: not rapidly Biodegradation: 3 Exposure time: 28 Method: OECD T	39.7 %
	tability in water		nЦ· 7	

Stability in water	: pH: 7
	Hydrolysis: 50 %(401 d)
	Method: OECD Test Guideline 111

### 12.3 Bioaccumulative potential

#### Components:

metformin hydrochloride:	
Partition coefficient: n-	

Partition coefficient: n- octanol/water	: log Pow: -2
Sitagliptin:	
Partition coefficient: n- octanol/water	: log Pow: -0.03

### 12.4 Mobility in soil

### **Components:**

### metformin hydrochloride:

Distribution among environ- : log Koc: 4.3



according to Regulation (EC) No. 1907/2006

# Sitagliptin / Metformin Formulation

Version 3.0	Revision Date: 04.04.2023		DS Number: 108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014	
mental compartments			Method: OECD T	est Guideline 106	
Sitagli	iptin:				
Distribution among environ- mental compartments		:	log Koc: 4.37		
12.5 Resul	ts of PBT and vPvB a	sse	ssment		
Produ	ct:				
Assessment		:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.		
12.6 Endocrine disrupting properties					
Produ	<u>ct:</u>				
Assess	sment	:	ered to have endo REACH Article 57	ixture does not contain components consid- ocrine disrupting properties according to 7(f) or Commission Delegated regulation or Commission Regulation (EU) 2018/605 at higher.	

### 12.7 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product	<ul> <li>Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.</li> </ul>
Contaminated packaging	<ul> <li>Empty containers should be taken to an approved waste han- dling site for recycling or disposal.</li> <li>If not otherwise specified: Dispose of as unused product.</li> </ul>

### **SECTION 14: Transport information**

### 14.1 UN number or ID number

ADN	: Not regulated as a dangerous go	bc
ADR	: Not regulated as a dangerous go	bc
RID	: Not regulated as a dangerous go	bc
IMDG	: Not regulated as a dangerous go	bc
ΙΑΤΑ	: Not regulated as a dangerous go	bc

14.2 UN proper shipping name

according to Regulation (EC) No. 1907/2006



# Sitagliptin / Metformin Formulation

ADN:Not regulated as a dangerous goodADR:Not regulated as a dangerous goodRID:Not regulated as a dangerous goodIMDG:Not regulated as a dangerous goodIATA:Not regulated as a dangerous good14.3 Transport hazard class(es):ADN:Not regulated as a dangerous goodADR:Not regulated as a dangerous goodIMDG:Not regulated as a dangerous goodIATA:Not regulated as a dangerous goodADN::ADN::ADN::ADN::IMDG::ADN::ADN::ADN::ADN::IMDG::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN::ADN:::: <t< th=""><th>.10.2014</th></t<>	.10.2014
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RID       : Not regulated as a dangerous good         IMDG       : Not regulated as a dangerous good	
IMDG : Not regulated as a dangerous good	
IATA (Cargo) . Not regulated as a dangerous good	
in the (Cargo) . Not regulated as a dangerous good	
IATA (Passenger) : Not regulated as a dangerous good	
<b>14.5 Environmental hazards</b> Not regulated as a dangerous good	
<b>14.6 Special precautions for user</b> Not applicable	
14.7 Maritime transport in bulk according to IMO instruments	
Remarks : Not applicable for product as supplied.	

### **SECTION 15: Regulatory information**

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that de-	:	Not applicable
plete the ozone layer Regulation (EU) 2019/1021 on persistent organic pollu-	:	Not applicable
tants (recast) Regulation (EC) No 649/2012 of the European Parlia- ment and the Council concerning the export and import	:	Not applicable



according to Regulation (EC) No. 1907/2006

# Sitagliptin / Metformin Formulation

Version 3.0	Revision Date: 04.04.2023	SDS Number: 27108-00023	Date of last issue: 01.10.2022 Date of first issue: 31.10.2014
of dangerous chemicals REACH - List of substances subject to authorisation : Not applicable (Annex XIV) Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable			
The c	omponents of this pro	oduct are reported ir	n the following inventories:
AICS		: not determined	
DSL		: not determined	
IECS	C	: not determined	

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### **SECTION 16: Other information**

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
Full text of H-Statements H302 H319	:	Harmful if swallowed. Causes serious eye irritation.
Full text of other abbreviation	ns	
Acute Tox. Eye Irrit. IE OEL	:	Acute toxicity Eye irritation Ireland. List of Chemical Agents and Occupational Exposure

Limit Values - Schedule 1 IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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 - Interna-



## Sitagliptin / Metformin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.10.2022
3.0	04.04.2023	27108-00023	Date of first issue: 31.10.2014

tional Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

#### 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/

#### **Classification of the mixture:**

Acute Tox. 4

#### **Classification procedure:**

Calculation method

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

H302

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.

IE / EN