

# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

#### **SECTION 1. IDENTIFICATION**

Product name : Belzutifan Formulation

Manufacturer or supplier's details

Company : MSD

Address : 855 Leandro N. Alem St., 8 Floor

Buenos Aires, Argentina C1001AFB

Telephone : 908-740-4000

Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Pharmaceutical Restrictions on use : Not applicable

#### **SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification** 

Reproductive toxicity : Category 2

Long-term (chronic) aquatic

hazard

Category 3

**GHS** label elements

Hazard pictograms

Signal Word : Warning

Hazard Statements : H361fd Suspected of damaging fertility. Suspected of damag-

ing the unborn child.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.



## **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

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

Dust contact with the eyes can lead to mechanical irritation.

Contact with dust can cause mechanical irritation or drying of the skin.

May form combustible dust concentrations in air during processing, handling or other means.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)	
Cellulose	9004-34-6	>= 30 -< 50	
Belzutifan	1672668-24-4	>= 5 -< 10	

### **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. Suspected of damaging fertility. Suspected of damaging the

Most important symptoms and effects, both acute and

delayed

unborn child.

Contact with dust can cause mechanical irritation or drying of

the skin.

Dust contact with the eyes can lead to mechanical irritation.

Protection of first-aiders : 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).



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Notes to physician : Treat symptomatically and supportively.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

 Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a

potential dust explosion hazard.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-

ucts

Carbon oxides

Metal oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

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.

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**



## **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Technical measures : Static electricity may accumulate and ignite suspended dust

causing an explosion.

Provide adequate precautions, such as electrical grounding

and bonding, or inert atmospheres.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not breathe dust.

Do not swallow.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure

assessment

Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Store locked up.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Cellulose	9004-34-6	CMP	10 mg/m <sup>3</sup>	AR OEL
		TWA	10 mg/m <sup>3</sup>	ACGIH
Belzutifan	1672668-24- 4	TWA	70 μg/m3 (OEB 3)	Internal
		Wipe limit	70 μg/100 cm2	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.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face

containment devices).

Minimize open handling.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or

exposure assessment demonstrates exposures outside the

recommended guidelines, use respiratory protection.

Filter type
Hand protection

Particulates type

Material : Chemical-resistant gloves



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Remarks : Consider double gloving.

Eye 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.

Skin and body protection : Work uniform or laboratory coat.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets,

disposable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

Hygiene measures : If exposure to chemical is likely during typical use, provide

eye flushing systems and safety showers close to the

working place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : powder

Color : No data available

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : May form combustible dust concentrations in air during proce-

ssing, handling or other means.

Flammability (liquids) : Not applicable

Burning number : 5

Upper explosion limit / Upper

flammability limit

: No data available



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Minimum ignition energy : 3 - 10 mJ

Method: With inductance

10 - 30 mJ

Method: Without inductance

Particle size : 26,13 µm

# **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 combustible dust concentrations in air during

processing, handling or other means. Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Avoid dust formation. Oxidizing agents

Incompatible materials

Hazardous decomposition

products

: No hazardous decomposition products are known.



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of : Inhalation

exposure Skin contact

Ingestion Eye contact

**Acute toxicity** 

Not classified based on available information.

**Components:** 

Cellulose:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,8 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

Belzutifan:

Acute oral toxicity : LD0 (Rat): 200 mg/kg

LD0 (Dog): 30 mg/kg

#### Skin corrosion/irritation

Not classified based on available information.

Components:

Belzutifan:

Species : human skin Method : EpiDerm

Result : No skin irritation

Remarks : Not classified due to lack of data.

#### Serious eye damage/eye irritation

Not classified based on available information.

**Components:** 

Belzutifan:

Result : No eye irritation

Method : Bovine cornea (BCOP)

Remarks : Not classified due to lack of data.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.



## **Belzutifan Formulation**

Version Revision Date: SDS Number: Date of last issue: 27.04.2023 4.2 30.09.2023 5276382-00013 Date of first issue: 14.11.2019

#### **Components:**

Belzutifan:

Test Type : Local lymph node assay (LLNA)

Routes of exposure : Dermal Species : Mouse

Result : Not a skin sensitizer.

Remarks : Not classified due to lack of data.

Germ cell mutagenicity

Not classified based on available information.

**Components:** 

Cellulose:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Ingestion

Result: negative

Belzutifan:

Genotoxicity in vitro : Test Type: Ames test

Result: negative

Test Type: Micronucleus test Test system: mammalian cells

Result: negative

Genotoxicity in vivo : Remarks: Not classified due to lack of data.

Carcinogenicity

Not classified based on available information.

**Components:** 

Cellulose:

Species : Rat
Application Route : Ingestion
Exposure time : 72 weeks
Result : negative

Belzutifan:

Remarks : Not classified due to lack of data.



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

### Reproductive toxicity

Suspected of damaging fertility. Suspected of damaging the unborn child.

## **Components:**

Cellulose:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Effects on fetal development : Test Type: Fertility/early embryonic development

Species: Rat

Application Route: Ingestion

Result: negative

Belzutifan:

Effects on fertility : Remarks: Information taken from reference works and the

literature.

Effects on fetal development : Remarks: Information taken from reference works and the

literature.

Reproductive toxicity - As-

sessment

Suspected of damaging fertility. Suspected of damaging the

unborn child.

#### STOT-single exposure

Not classified based on available information.

## STOT-repeated exposure

Not classified based on available information.

### Components:

## Belzutifan:

Routes of exposure : Ingestion

Target Organs : Blood, epididymis, Testis

Assessment : Shown to produce significant health effects in animals at con-

centrations of >10 to 100 mg/kg bw.

Routes of exposure : Oral

Target Organs : Blood, epididymis, Testis

Assessment : May cause damage to organs through prolonged or repeated

exposure.

## Repeated dose toxicity

#### **Components:**

#### Cellulose:

Species : Rat

NOAEL : >= 9.000 mg/kg

Application Route : Ingestion Exposure time : 90 Days



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Belzutifan:

Species : Rat
LOAEL : 6 mg/kg
Application Route : Oral
Exposure time : 28 d

Target Organs : Blood, Testis, epididymis

Species : Rat, male
NOAEL : 2 mg/kg
LOAEL : 6 mg/kg
Application Route : Oral
Exposure time : 13 Weeks

Target Organs : Blood, Central nervous system, epididymis, Liver, Testis

Species : Rat, female LOAEL : 200 mg/kg Application Route : Oral Exposure time : 13 Weeks

Target Organs : Blood, Central nervous system, Liver

Species : Dog
LOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 28 d
Target Organs : Blood

Species : Dog
LOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 13 Weeks
Target Organs : Blood

### **Aspiration toxicity**

Not classified based on available information.

#### **Components:**

#### Belzutifan:

Not applicable

### **Experience with human exposure**

#### Components:

Belzutifan:

General Information : Symptoms: Fatigue, flu-like symptoms, fluid retention, Head-

ache, musculoskeletal pain, Nausea

Ingestion : Target Organs: Blood

Symptoms: anemia, Changes in the blood count



# **Belzutifan Formulation**

Version Revision Date: SDS Number: Date of last issue: 27.04.2023 4.2 30.09.2023 5276382-00013 Date of first issue: 14.11.2019

#### **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 

**Components:** 

Cellulose:

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l

Exposure time: 48 h

Remarks: Based on data from similar materials

Belzutifan:

Toxicity to algae/aquatic

plants

EC50 (Raphidocelis subcapitata (freshwater green alga)): >

10 mg/l

End point: Growth rate Exposure time: 72 h

Method: OECD Test Guideline 201

EC10 (Raphidocelis subcapitata (freshwater green alga)): >

10 mg/l

End point: Growth rate Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 0,52 mg/l

Exposure time: 32 d

Method: OECD Test Guideline 210

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

EC10 (Daphnia magna (Water flea)): 3,9 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: > 1.000 mg/l

Exposure time: 3 h

Test Type: Respiration inhibition of activated sludge

Method: OECD Test Guideline 209

NOEC: 1.000 mg/l Exposure time: 3 h

Test Type: Respiration inhibition of activated sludge

Method: OECD Test Guideline 209

Persistence and degradability

Components:

Cellulose:

Biodegradability : Result: Readily biodegradable.

Belzutifan:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 50 % Exposure time: 18,1 d



## **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

Method: OECD Test Guideline 314

Bioaccumulative potential

**Components:** 

Belzutifan:

Partition coefficient: n- : log Pow: 1,11

octanol/water pH: 7

Mobility in soil

**Components:** 

Belzutifan:

Distribution among environ: log Koc: 2,52

mental compartments Method: OECD Test Guideline 106

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

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

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.

Special precautions for user

Not applicable

**SECTION 15. REGULATORY INFORMATION** 

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

mixture

Argentina. Carcinogenic Substances and Agents : Not applicable



## **Belzutifan Formulation**

Version Revision Date: SDS Number: Date of last issue: 27.04.2023 4.2 30.09.2023 5276382-00013 Date of first issue: 14.11.2019

Registry.

Control of precursors and essential chemicals for the : Not applicable

preparation of drugs.

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

CEPA : not determined

AICS : not determined

IECSC : not determined

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

Revision Date : 30.09.2023 Date format : dd.mm.yyyy

**Further information** 

Sources of key data used to compile the Material Safety

ed to : Internal technical data, data from raw material SDSs, OECD fety eChem Portal search results and European Chemicals Agen-

Data Sheet

cy, http://echa.europa.eu/

## Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AR OEL : Argentina. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average AR OEL / CMP : TLV (Threshold Limit Value)

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 Substanc-



# **Belzutifan Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 27.04.2023

 4.2
 30.09.2023
 5276382-00013
 Date of first issue: 14.11.2019

es; (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.

AR / Z8