SAFETY DATA SHEET

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

1.1 Product identifier

- Datasheet Number: IPS158 Version 1.0.0
- Product Name: Abobotulinumtoxin A for Injection, Formulated Drug Product Liquid (100 to 600U)
- Trade Name: Alluzience™
- Product Description: (IPN52120) Botulinum Toxin Type A, Formulated Drug Product Liquid for Injection
- Synonyms: Clostridium botulinum-derived Botulinum Toxin A for Injection; CNT52120 for Injection; Clostridium BTX-A-haemagglutinin complex; Clostridium botulinum type A toxin-haemagglutinin complex
- Chemical family: Neurotoxic polypeptide complexed with hemagglutinin
- Pharmacological mechanism: Muscle relaxant, peripherally acting
- ATC code: M03AX01 (botulinum toxin A); D11AX (botulinum toxin A)

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/mixture: Formulated pharmaceutical product packaged in final form for patient use; See product information for specific uses of this product.
- Use advised against: No information available

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Ipsen SA
- Address of Supplier: 65 quai Georges Gorse
92650 Boulogne Billancourt Cedex
France
- Telephone: +33 1 58 33 50 00
- Email: contact.web@ipsen.com

1.4 Emergency telephone number

- Emergency Telephone: Carechem 24-hour emergency telephone numbers
+44 (0) 1273-289-451 (Europe)
+1 866-928-0789 (USA, Toll free)

Other information

This SDS is written to address potential worker health and safety issues associated with the handling of the formulated product/mixture. Workers manufacturing this product/mixture should consult the SDS for each ingredient for hazard information and handling recommendations.

SECTION 2: Hazards identification

Exempt from the requirements of CLP and HCS 2012 as product is regulated as a medicinal product. Information is provided to inform users of the hazards associated with the use of the product.

HCS 2012 and 1910.1200 include the coverage of drugs and pharmaceuticals in the non-manufacturing sector. Hazard communication is required for any drug posing a health hazard (with the exception of those in solid, final form for direct administration to the patient, i.e., tablets or pills).

2.1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Not Classified
- Classification (29 CFR 1910.1200) [HCS 2012]: Not Classified
- Additional information: For full text of Hazard- and EU Hazard-statements: see section 16

2.2 Label elements

SECTION 2: Hazards identification (....)

- Hazard pictograms: None
- Signal Word: None
- Hazard statements
  None
- Precautionary statements
  None
- Supplemental Hazard information (EU)
  None

2.3 Other hazards

Although this is not classified under CLP/GHS/HCS it contains a potent active pharmaceutical ingredient- a very small amount of botulinum toxin A - which may be fatal if swallowed or inhaled and which may cause neurological damage.
To the best of our knowledge, the ecological properties of this material have not been fully evaluated.

SECTION 3: Composition/information on ingredients

3.1 Substances

- Not applicable

3.2 Mixtures

Chemical Name	Conc.	CAS No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	Classification (29 CFR 1910.1200) [HCS 2012]	SCL/ M-Factor/ ATE	WEL/ OEL
Clostridium botulinum toxin type A – Haemagglutinin complex	0.00000054 % w/w (600U)	953397-35-8	Acute Tox. 1, H300 Acute Tox. 1, H310 Acute Tox. 1, H330	Acute Tox. 1, H300 Acute Tox. 1, H310 Acute Tox. 1, H330	-	Yes

SECTION 4: First aid measures

4.1 Description of first aid measures

- Get immediate medical advice/attention.
- Rescuers should take suitable precautions to avoid becoming casualties themselves
- Rescuers should put on approved personal protective equipment (PPE) before administering first aid

- Contact with eyes
  If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes
  Remove contact lenses, if present and easy to do. Continue rinsing.
  Irrigate eyes thoroughly whilst lifting eyelids
  Get immediate medical advice/attention.

- Contact with skin
  Wash affected area with plenty of soap and water
  Get immediate medical advice/attention.

- Ingestion
  Rinse mouth with water (do not swallow)
  Never give anything by mouth to an unconscious person
  Do NOT induce vomiting.
  Consult medical personnel immediately and perform gastric lavage in a hospital emergency room.
  Handle stomach contents with care using appropriate protection.

- Inhalation
  Remove person to fresh air and keep comfortable for breathing.
  If breathing is difficult, oxygen should be given by a trained person

SECTION 4: First aid measures (....)

Apply artificial respiration only if patient is not breathing
Get immediate medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

- Onset of symptoms is typically 18-36 hours after exposure
- Botulinum toxin is a highly potent neurotoxin. Exposure to low doses can cause acute, descending paralysis which frequently presents as difficulty seeing, speaking, and/or swallowing. Other effects include loss of head control, diminished muscle tone or reflexes, dizziness, incoordination, generalized weakness, and respiratory paralysis (which may be fatal).
- See Section 11 - Toxicological Information
- Short-term: neuromuscular paralysis, death
- Long-term: neuromuscular paralysis

4.3 Indication of any immediate medical attention and special treatment needed

- Symptoms of poisoning may occur even after several hours; therefore provide medical observation for at least 48 hours after the accident.
- Treat as early as possible with slow intravenous infusion of antisera appropriate for the toxin serotype, followed by continuous drip infusion as needed.
- Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media: In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide
- Unsuitable extinguishing media: No information available

5.2 Special hazards arising from the substance or mixture

- Decomposition products may include oxides of nitrogen, sulphur and carbon

5.3 Advice for firefighters

- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.
- Decontaminate all surfaces and equipment with dilute hypochlorite solution (1% available chlorine).

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- No action shall be taken involving any personal risk or without suitable training
- Only trained and authorised personnel should carry out emergency response
- Personal precautions for non-emergency personnel: Evacuate the area; Do not breathe dust/fume/ gas/mist/vapours/spray.; Avoid contact with skin and eyes; Wear protective clothing as per section 8; Remove contaminated clothing; Wash thoroughly after dealing with spillage
- Personal precautions for emergency responders: Wear chemical protection suit; Wear self-contained breathing apparatus (SCBA)

6.2 Environmental precautions

- Do not allow to enter public sewers and watercourses
- Do not flush spilt material into any public water system

6.3 Methods and material for containment and cleaning up

- Seek expert advice for removal and disposal of all contaminated materials and wastes
- If vials are broken: DO NOT CAUSE MATERIAL TO BECOME AIRBORNE.
- Wear protective clothing as per section 8
- Small spills
  Spillages should be wiped up with an absorbent cloth soaked in dilute hypochlorite solution

SECTION 6: Accidental release measures (....)

- Large spills
  Place absorbent paper towel (or similar) over spillage, pour over a dilute hypochlorite solution (1% available chlorine) and leave for 30 minutes, remove towel and dispose by incineration.
  Decontaminate all surfaces and equipment with dilute hypochlorite solution (1% available chlorine).
  This substance may also be inactivated by autoclaving; minimum temperature 121 °C.
  Wash thoroughly after dealing with spillage

6.4 Reference to other sections

- See section(s): 7, 8 & 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Wear protective clothing as per section 8
- Take off contaminated clothing and wash it before reuse.
- Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Store locked up.
- Store at 2 - 8 °C
- Keep away from heat and sources of ignition
- Protect from moisture.
- Protect from light
- Keep container tightly closed.
- Incompatible with strong acids
- Incompatible with strong oxidizing substances

7.3 Specific end use(s)

- Pharmaceutical

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
  Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

- Botulinum toxin type A
  OEL (Ipsen) 0.2 ng/m³

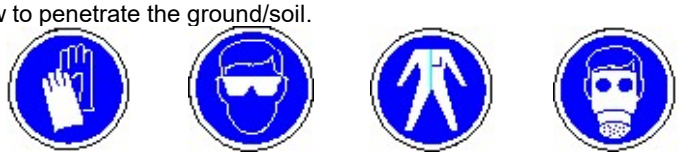
8.2 Exposure controls

- Selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential

- Engineering controls
  Engineering controls are not required for handling of individual vials.
  In an emergency situation e.g. exposure arising from mutiple crushed/broken vials: If practicable, engineering controls should be provided where airborne concentrations exceed exposure limits

SECTION 8: Exposure controls/personal protection (....)

- Respiratory protection
  None required for normal handling of product
  In an emergency situation e.g. exposure arising from mutiple crushed/broken vials: Respiratory protection may be required under exceptional circumstances when excessive air contamination exists; Where an air-purifying respirator is required, use appropriate HEPA filters or combination filters to provide ancillary protection based on the known or foreseeable limitations of existing engineering controls. Use a powered air-purifying respirator equipped with HEPA filters or combination filters or a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, when exposure levels are not known, or in any other circumstances where a lower level of respiratory protection may not provide adequate protection.
- Skin protection
  Wear lab coat
  Wear disposable gloves
  In an emergency situation e.g. exposure arising from mutiple crushed/broken vials: Wear suitable protective clothing; Wear impervious gloves e.g. nitrile (double layer may be worn); The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.; The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.
- Eye/face protection
  Wear safety glasses approved to standard EN 166 and ANSI Z87.1
  In an emergency situation e.g. exposure arising from mutiple crushed/broken vials: Wear goggles giving complete eye protection approved to standard EN 166.
- Hygiene measures
  Do not eat, drink or smoke when using this product.
  Contaminated clothing should be laundered before reuse
  Wash thoroughly after handling.
  Eyewash bottles should be available
- Environmental exposure controls
  Do not empty into drains
  Do not allow to penetrate the ground/soil.



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state: Liquid (packaged in vials or syringes)
- Colour: Clear and colourless
- Odour: Odourless
- Melting point/freezing point: No information available
- Boiling point or initial boiling point and boiling range: No information available
- Flammability: Not flammable
- Lower and upper explosion limit: Not applicable
- Flash point: Not applicable
- Auto-ignition temperature: Not applicable
- Decomposition temperature: No information available
- pH: 5.5 - 6.2
- Kinematic viscosity: No information available
- Solubility: Soluble in water
- Partition coefficient n-octanol/water (log value): No information available

SECTION 9: Physical and chemical properties (....)

- Vapor pressure: No information available
- Density and/or relative density: No information available
- Relative vapour density: No information available
- Particle characteristics: Not applicable

9.2 Other information

- Molecular weight: N/A. Mixture
- Molecular formula: N/A. Mixture

SECTION 10: Stability and reactivity

10.1 Reactivity

- No information available

10.2 Chemical stability

- Stable under normal conditions
- Pharmacological stability not guaranteed beyond expiration date imprinted on package.

10.3 Possibility of hazardous reactions

- No information available

10.4 Conditions to avoid

- Keep away from food, drink and animal feedingstuffs
- Avoid freezing
- Keep away from heat and sources of ignition
- Avoid contact with moisture

10.5 Incompatible materials

- Incompatible with strong acids
- Incompatible with strong oxidizing substances

10.6 Hazardous decomposition products

- Decomposition products may include oxides of nitrogen, sulphur and carbon

SECTION 11: Toxicological information

No nonclinical toxicology data are available on the product formulation. The hazards of Abootulinum A Powder for Injection are attributable to effects caused by its constituent ingredient, Botulinum Toxin A. This section includes data for Botulinum Toxin A.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

- Acute Toxicity
  Botulinum toxin is a highly potent neurotoxin. Exposure to low doses can cause acute, descending paralysis which frequently presents as difficulty seeing, speaking, and/or swallowing. Other effects include loss of head control, diminished muscle tone or reflexes, dizziness, incoordination, generalized weakness, and respiratory paralysis (which may be fatal). The estimated lethal dose in humans (based on primate studies and extrapolated with a 70-kg human) is 70 µg by ingestion, 0.09 -0.15 µg intravenously or intramuscularly and 0.7-0.9 µg by inhalation.

  IV = Intravenous, IM = Intramuscular

Chemical Name	LD50 (IV, mouse)	LD50 (IM, mouse)	LD50 (IM, rat)
Botulinum Toxin A	10 ng/kg	4 ng/kg	70 ng/kg

- Skin corrosion/irritation
  Based on available data, the classification criteria are not met

SECTION 11: Toxicological information (....)

- Serious eye damage/irritation
  Based on available data, the classification criteria are not met
- Respiratory or skin sensitisation
  No information available
- Germ cell mutagenicity
  No genotoxicity tests have been performed with this product since its mechanism of action does not suggest that it interacts directly with deoxyribonucleic acid (DNA) or any other chromosomal material, and hence this biological product is not considered to have any genotoxic potential.
- Carcinogenicity
  No studies have been performed to investigate the carcinogenicity
  As this product is not expected to be genotoxic, it is similarly not expected to be carcinogenic. None of the components of the product/ mixture present at levels greater than or equal to 0.1% are listed by NTP, IARC, ACGIH or OSHA as a carcinogen.
- Reproductive toxicity
  Decreased mating occurred in intramuscular rat studies but was attributed to hind limb weakness in treated males
- Developmental toxicity
  Reduced fetal body weight and increased pre-/postimplantation losses were seen in IM studies with rats and rabbits. These effects were considered secondary to maternal toxicity, which occurred at lower doses. NOAELs for fetal toxicity were 1.5 and 10 Units/day
- Specific target organ toxicity (STOT) - single exposure
  Single-dose intranasal administration to mice (dose not specified) caused mortality and central nervous system toxicity consistent with botulism, including respiratory impairment. Necropsy of surviving animals revealed severe lung lesions
- Specific target organ toxicity (STOT) - repeated exposure
  In repeat-dose (intermittent) IM toxicity studies with rats, the target organ of toxicity was the central nervous system. The primary observed effect was decreased size of the injected muscle. The NOAEL was <0.1 Units given once every 4 weeks (study duration not specified)
- Aspiration hazard
  No information available
- Human Health Effects
  Short-term: neuromuscular paralysis, death
  Long-term: neuromuscular paralysis

11.2 Information on other hazards

- No information available

SECTION 12: Ecological information

To the best of our knowledge, the ecological properties of this material have not been fully evaluated.

12.1 Toxicity

- No information available

12.2 Persistence and degradability

- No information available

12.3 Bioaccumulative potential

- No information available

12.4 Mobility in soil

- No information available

12.5 Results of PBT and vPvB assessment

SECTION 12: Ecological information (....)

- No information available

12.6 Endocrine disrupting properties

- No information available

12.7 Other adverse effects

- No information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Do not flush spilt material into any public water system
- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- Can be inactivated with dilute hypochlorite solution (1% available chlorine)
- This substance may also be inactivated by autoclaving; minimum temperature 121 °C.
- Incinerate waste
- Disposal should be in accordance with local, state or national legislation

13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)

SECTION 14: Transport information

Not classified as hazardous for transport

14.1 UN number or ID number

- UN No.: Not applicable

14.2 UN proper shipping name

- Proper Shipping Name: Not applicable

14.3 Transport hazard class(es)

- Hazard Class: Not applicable

14.4 Packing group

- Packing Group: Not applicable

14.5 Environmental hazards

- Not Classified

14.6 Special precautions for user

- Avoid release to the environment.

14.7 Maritime transport in bulk according to IMO instruments

- Not applicable

14.8 Road/Rail (ADR/RID)

- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.9 Sea (IMDG)

- Proper Shipping Name: Not applicable

SECTION 14: Transport information (....)

- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Pack Group.: Not applicable

14.10 Air (ICAO/IATA)

- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

14.11 DOT / CFR (US Department of Transportation)

- DOT Proper Shipping Name: Not applicable
- DOT UN No.: Not applicable
- DOT Hazard Class: Not applicable
- DOT Packing Group: Not applicable

SECTION 15: Regulatory information

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

- This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 (as amended by Regulation (EU) 2020/878) and UK REACH
- The GB Classification, Labelling and Packaging Regulation (GB CLP) applies in Great Britain
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
- OSHA Hazardous: Contains a very small amount of botulinum toxin A, which may be fatal if swallowed or inhaled and which may cause neurological damage.
- WHMIS classification: Drugs are not subject to WHMIS. This substance has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all of the information required by those regulations.
- TSCA Inventory: Drugs are exempt from TSCA
- EPCRA (SARA Title III) Section 313 Table II chemical list: Not listed
- California Proposition 65: Not listed

15.2 Chemical safety assessment

- A REACH chemical safety assessment has not been carried out

SECTION 16: Other information

The above information is believed to be correct but does not purport to be all inclusive and shall only be used as a guide. The company will not be held liable for any damage resulting from handling or from contact with this product.

No representation, warranty, or guarantee, express or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the materials, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material because it may be or contain a potent pharmaceutical product. The above information is offered in good faith and with the belief that it is accurate. As of the date of issuance, we are providing all information relevant to the foreseeable handling of the material. However, in the event of an adverse incident associated with this product, this Safety Data Sheet is not, and is not intended to be, a substitute for consultation with appropriately trained personnel.

Sources of data: Information from published literature and company data

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

SECTION 16: Other information (....)

- Not classified based on calculation and concentration thresholds

Classification and procedure used to derive the classification for mixtures according to (29 CFR 1910.1200) [HCS 2012]:

- Not classified based on calculation and concentration thresholds

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- H300: Fatal if swallowed
- H310: Fatal in contact with skin
- H330: Fatal if inhaled.

Acronyms

- ATE: Acute Toxicity Estimate
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC_{50}: Effective Concentration, 50%
- GHS: Globally Harmonised System
- IARC: International Agency for Research on Cancer
- LC_{50}: Lethal Concentration, 50%
- LD_{50}: Lethal Dose, 50%
- NIOSH: The National Institute for Occupational Safety and Health
- NOAEL: No observed adverse effect level
- NOEC: No observed effect concentration
- NTP: National Toxicology Program
- OEL: Occupational Exposure Limit
- OSHA: Occupational Safety and Health Administration
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- SCL: Specific Concentration Limit
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

--- end of safety datasheet ---