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1 Identification of the substance or mixture and name of the company

Product name	Botulinum Neurotoxin C1, purified P-BoNT/C1
Product number	#3301
MSDS number	MF511-038
Company	mipro lab GmbH Marie-Curie-Str. 7 37079 Göttingen Germany
Telephone	+49 (0)551 495668-0
Fax	+49 (0)551 495668-11
Emergency telephone	+49 (0)551 495668-0
Email	info@mipro lab.com

2 Composition/information on ingredients


Product description	Botulinum Neurotoxin Type C1 (BoNT/C1), purified from viable Clostridium botulinum cultures, 150 kD
Product formulation	Liquid, in anorganic buffer solution, contains no other chemicals, which could have an impact on the classification of the substance

3 Hazards identification

Hazard	May be fatal by inhalation, swallowing, and skin contact
Target organ	Cholinergic nerve endings

4 First aid measures

After inhalation	Move person into fresh air. If breathing stops, give artificial respiration, call in physician.
After swallowing	If person is not unconscious, rinse with water, call in physician.

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After eye contact	Rinse with plenty of water for 15 min, call in physician.
After skin contact	Rinse with plenty of water for 15 min, remove contaminated clothing, call in physician.
Futher information	Specific immune serum for Botulinum toxins is usually available in emergency units. Contact your nearest hospital or public health authorities.

5 Fire-fighting measures


Suitable extinguishing media	CO ₂ , powder, foam, water
Protective equipment	Wear self contained breathing apparatus and protective clothing to avoid direct contact with skin and eyes.

6 Accidental release measures

Personal precautions	Evacuate area, use protective clothing, wear self contained breathing apparatus, if risk of aerosolization.
Environmental protection measures	Do not allow to enter the sewerage system.
Decontamination	Cover with paper towels. Flood the towels with 0.1 N NaOH- or 5 % NaClO-solution. If a larger volume was spilled, take up the towels and dispose of them properly (see below). Cover the area with paper towels again, and then flood with the decontaminating solutions. Leave the decontaminating agents for 1 h. Then wipe the area and autoclave the paper towels at 121 °C for 15 min. Ensure supply of fresh air in rooms and clean the surfaces.

7 Handling and storage

Handling	It is recommended to handle the toxins in biosafety class II or III cabinets, only. Highly diluted solutions may be used outside the cabinets if protective equipment is used.
Storage	recommended –80 °C, possible at –20 °C, ready-to-use dilutions at +4 °C temperature sensitive

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8 Exposure control and personal protection

General measures	<p>It is recommended to handle the toxins in biosafety class II or III cabinets, only. Highly diluted solutions may be used outside the cabinets if protective equipment is used.</p> <p>Aerosolization must be avoided, handle in accordance with applicable laws and laboratory guidelines, avoid skin and eye contact.</p>
Personal protective equipment	Protective clothing, gloves, suitable eye protection equipment

9 Physical and chemical properties


Form at + 20 °C	Liquid
Colour	Colourless
Odour	Odourless
Molecular mass	150.000

10 Stability and reactivity

Hazardous decomposition products	No information available
Hazardous polymerization	No information available
To be avoided	Higher temperatures/heat, direct sun light

11 Toxicological data

Acute toxicity	LD ₅₀ parenteral/ 1 ng kg ⁻¹ LD ₅₀ oral 1 µg kg ⁻¹
Clinical signs after exposition	Botulinum neurotoxins are extremely potent. After uptake, the toxins reach the cholinergic synapses at the neuro-muscular junction. There they inhibit the transmitter release, leading to a flaccid muscular paralysis, which can affect the respiratory muscles. Clinical signs can usually be seen within several hours and include nausea, dizziness, blurred vision, difficulty swallowing, constipation/diarrhea, muscle weakness and difficulty breathing.

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12 Ecological data

No information available

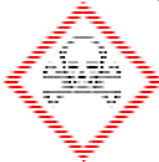
13 Disposal


Product	Dispose of product by autoclaving (121 °C, > 15 min)
Materials in contact with the product	All materials in contact with the product like glassware and pipettes must be autoclaved (121 °C, > 15 min). If this is not possible, e.g. lab surfaces, decontaminate with NaOH or NaClO (see paragraph 6).

14 Transport information

UN number	3172
ARD/RID/IATA class	6.1
Packaging group	I
Proper shipping name	Toxin obtained from living organism

15 Regulatory information

GHS classification	not listed in appendix VI of guideline EU/1272/2008
Hazard symbol	
Classification	Very toxic
H-phrases	H300, H 310, H 330 May be fatal if swallowed, inhaled or by skin contact.
P-phrases	P 280 Wear gloves, protective clothing, safety glasses, face protection equipment. P 301, P 302, P 304, P 305, P 313 If swallowed, inhaled or after contact with skin or eyes, call in physician.

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16 Other information

All handling and storage of Botulinum neurotoxins must comply with national/local guidelines and law.

The above information is believed to be accurate to the best of our knowledge. However, miprolab cannot be held liable for accuracy and completeness of the data as well as for any damage that might occur from using or handling the product.

The product is intended for research use by the designated end-user, only. It must not be used in man and animal.