

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name	: Cream whipper cartridges, max. 7,8gr N ₂ O cartridges
Synonyms	588208 Cream whipper cartridges 10pcs box 588215 Cream whipper cartridges 24pcs box 586907 Cream whipper cartridges 50pcs box
Chemical name	: Nitrous Oxide, N ₂ O
CAS number	: 10024-97-2
EC number	: 233-032-0
Registration number (REACH)	: Not applicable

As food additive, Nitrous Oxide is conformed to the following regulations and fulfils their requirements. Therefore, Nitrous Oxide is exempted from registration under REACH:

- (1). ECHA's Guidance on Registration, Version 2.0, May 2012, in paragraph 2.2.3.1
- (2). EC 1907-2006, REACH Regulation, page 29 Article 2 (5) (b) (i)
- (3). FAO JECFA at the 74th meeting of the JECFA, page 77 "Nitrous Oxide".
- (4). Directive 2008/84/EC, page 157 "E942 Nitrous Oxide".
- (5). IGC Doc 126/11/E, Appendix 1

1.2 Relevant identified uses and uses advised against

Relevant identified uses	: Cartridges are specially made only for making whipped cream, mousses and other sauces in cream whippers. Use cream whipper cartridges only in accordance with the instructions.
Uses advised against	: Do not use for any other purpose.

1.3 Details of the supplier of the safety data sheet

Supplier	: Hendi b.v., steenoven 21, 3911 TX Rhenen, The Netherlands tel: 0031 317 681040 www.hendi.eu
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1.4 Emergency telephone number : NL NVIC Poison Centre: +31 (0)30- 2748888 (only for medical personnel in case of acute or unintentional poisoning).

UK National Poisons Information Service: In an emergency, members of the public should always contact their general practitioners, NHS 24 (Scotland) or NHS 111 (England and Wales) or local A&E department. Members of the public seeking specific information on poisons in the Republic of Ireland can contact the National Poisons Information Centre on 01 809 2166.

SECTION 2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

CLP Classification is not needed for cream whipper cartridges (CLP Art 1.5 (e)).

2.2 Label elements

A CLP Label is not needed for cream whipper cartridges (CLP Art 1.5 (e)).

2.3 Other hazards

Pressurized container. Keep out of sun and heat. The chargers (cartridges) are under pressure, the temperature should not exceed 50°C (122°F). Keep cool and dry. Store in a well-ventilated place. Contains gas under pressure; may explode if heated. Not even after use puncture or burn the empty charger. Do not refill. Never dispose of full chargers. Dispose of box in empty conditions only. The chargers are in accordance to the norm EN 16509. When replacing / discharging the cartridge, keep the cream maker away from the body and face. Keep out the reach of children. Nitrous Oxide chargers may not be sold to persons under 18. Do not inhale! Misuse can be physically harmful and dangerous for your health. Oxygen levels below 19.0% may cause asphyxia. Nitrous oxide exposure can cause nausea and respiratory problems. High concentrations may cause vasodilation leading to circulatory collapse.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Product definition of substance : Substance and article (ECHA Guidance substances for articles)

Chemical name	CAS number	EC number	% (v/v)	Hazard statements (CLP 1272/2008)
Nitrous Oxide (N ₂ O)	10024-97-2	233-032-0	99%	H270-H280

SECTION 4. FIRST AID MEASURES
4.1 Description of first aid measures

Inhalation	: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, if needed given assisted resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.
Contact with skin	: Flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if the cryogenic "burn" has resulted in blistering of the dermal surface or deep tissue freezing
Contact with eyes	: Persons with potential exposure to liquid nitrous oxide should not wear contact lenses.
Ingestion	: None

SECTION 5. FIREFIGHTING MEASURES
5.1 Extinguishing media

Suitable extinguishing media	: Carbon dioxide, water, water fog, dry chemical, chemical foam.
Unsuitable extinguishing media	: -

5.2 Special hazards arising from the substance or mixture

: Product is not flammable or combustible. Contents under pressure. Closed chargers can explode due to buildup of pressure when exposed to extreme heat.

5.3 Advice for fire fighters

: Cool chargers to prevent pressure buildup and possible explosion, when exposed to extreme heat.

SECTION 6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment & emergency procedures:

Collect unbroken and undamaged cream whipper cartridges and recycle if possible. Ventilate area in case of damaged cartridges. Remove damaged cartridges

6.2 Environmental precautions

: Not applicable.

6.3 Methods and material for containment and cleaning up

: See 6.1

SECTION 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling** : Keep charger closed when not in use; protect chargers from abuse; protect from extreme temperatures, keep away from sources of heat. Do not puncture charger. Do not attempt to refill charger. Keep away from direct sunlight and heat. Never dispose of full chargers. Never force open. Keep out of reach of children and minors. If charger is punctured, gas will escape and freeze charger, obviate direct contact with charger to avoid cold-burns
- 7.2 Conditions for safe storage** : Do not heat. Maximum environmental temperature in use not to exceed 50°C (122°F). Store in a cool and dry location
- 7.3 Specific end use(s)** : Use original, undamaged cartridges which are specially made only for making whipped cream, mousses and other sauces in cream whippers. Use cream whipper cartridges only in accordance with the instructions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 Control parameters

- Occupational exposure limit values : Nitrous Oxide (CAS 10024-97-2)
 - OEL 8 hour TGG = 180 mg/m³, 100 ppm (Finland 2007; United Kingdom 2007)
 - OEL 8 hour TGG = 180 mg/m³, 100 ppm; 15 min TGG = 360 mg/m³, 200 ppm (Germany-DFG 2009)
 - OEL 8 hour TGG = 180 mg/m³, 100 ppm; 15 min TGG = 720 mg/m³, 400 ppm (Austria 2007)
 - OEL 8 hour TGG = 180 mg/m³, 100 ppm; 15 min TGG = 900 mg/m³, 500 ppm (Sweden 2005)
 - OEL 8 hour TGG = 92 mg/m³, 50 ppm (Belgium 2009; Spain 2010)
- DNEL / PNEC values : Nitrous Oxide (CAS 10024-97-2)
 - DNEL (inhalation, long-term, systemic) = 183 mg / m³
 - PNEC's = no hazard identified

8.2 Exposure controls

- Engineering controls : Nitrous oxide is noncorrosive and may be used with any common structural material. Nitrous oxide oxidizes some metals at elevated temperatures. See Liquid Air's Gas Encyclopedia

Individual protection measures, such as personal protective equipment

- a) Eye/face protection : Keep away from head or body during discharge or replacement.
 b) Skin / hand protection : During discharge or replacement only work with dry hands to protect the fingers from freezing to the charger holder during filling.
 c) Respiratory protection : None required. Contains only maximum 10cm³ per loading.
 d) Other : Do not inhale!

- Environmental exposure controls : Not applicable

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
9.1 Information on basic physical and chemical properties of N₂O (E942--99% N₂O)

- Odour and appearance : A colorless, odorless gas.
 Melting point (N₂O Sublimes) : - 90.81° C (- 131.5° F)
 Boiling point : - 88.48° C (- 127.3° F)
 Evaporation point : Not Available

Vapour pressure at 20°C : 52.7 kg/cm²
 Vapour density at 20°C (Air = 1) : 1.53
 Solubility H₂O : 2.2 mg/l at 15 °C, 100 kPa

9.2 Other information : Pressure/temperature characteristics at filling density of 0.75 kg/liter:
 57 bar at 20°C; 170 bar at 50°C; 245 bar at 70°C; 365 bar at 100°C;
 400 bar at 110°C

<u>Parameter of N₂O cartridges</u>	<u>Metric units</u>
Overall Length (approx.)	: 65mm
Body Diameter	: 18mm
Neck Diameter	: 8.7mm
Internal Volume (approx.)	: 10.4 ml min.
Net weight of N ₂ O (approx.)	: 7.8 gr
Tare wt. of cartridges (approx.)	: 21 gr
Gross wt. of cartridges (approx.)	: 28.8 gr
Bursting pressure	: >500 bar
TUV test report cartridges on request available.	

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity : Not reactive under normal conditions.
10.2 Chemical stability : The product is stable.
10.3 Possibility of hazardous reactions : Not reactive under normal conditions
10.4 Conditions to avoid : Protect from extreme temperatures. Keep away from sources of heat.
 Do not puncture charger.
10.5 Incompatible materials : Strong oxidizers, strong acids.
10.6 Hazardous decomposition products : Decomposition will not occur if handled and stored properly. In case
 of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and
 smoke may be produced.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Hazardous Ingredients	CAS #	EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Nitrous oxide	10024-97-2	233-032-0	Information not found	Inhalation-Rat 1068 mg/m ³ /4 h

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on Information from similar products, the ingredients, technical literature, and/or professional experience.

SECTION 12. ECOLOGICAL INFORMATION

Actual material: Nitrous oxide supplied in cartridges

12.1 Ecotoxicity : No data available.
12.2 Persistence and degradability : No data available.

12.3 Bioaccumulative potential : No potential for bioaccumulation

12.4. Mobility in soil : No data available.

12.5 Results of PBT & vPvB assessment: Not applicable.

12.6. Other adverse effects : Not applicable.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Packaging materials: Recyclable steel in retail boxes and/or in bulk.

Dispose of cartridges in empty conditions only. Check your local sanitation department for recycling schedule, or contact local scrap metal companies. Never dispose of full cartridges.

SECTION 14. TRANSPORT INFORMATION

14.1 Transport by road (ADR)

UN number : **1070 Special Provision 584**
 Proper shipping name : NITROUS OXIDE
 Transport hazard class(es) : 2.2 Non flammable, non toxic gas
 5.1 Oxidizing substances



Hazard symbol(s) :

This gas is not subject to the requirements of ADR (transport by road) when: A capsule contains not more than 25gr of this gas.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation (EC)

REACH (EC 1907/2006)

- a) Substance of potential concern (Art.59) : Components are not included as substance of potential concern.
 b) Authorisation (Title VII) : Components are not included on authorisation list.
 c) Restrictions (Title VIII) : Components are not included on restriction list.

Other legislation (EC) : See section 13.
 National laws : See section 8.

15.2 Chemical safety assessment : Not applicable.

SECTION 16. OTHER INFORMATION

16.1 Revision comments

A vertical line in the left margin indicates that there is a relevant amendment from the previous version.

16.2 Abbreviations and acronyms used in the safety data sheet

- Hazard statements (Section 3) : H270 = May cause or intensify fire; oxidizer.
H280 = Contains gas under pressure; may explode if heated.
- Control parameters (Section 8) : DNEL= 'Derived No-Effect Level'
OEL= 'Occupational Exposure Limit'
PNEC= 'Predicted No-Effect Concentration'
- Toxicological information (Section 11): LD50= Lethal Dose
- Ecological information (Section 12) : PBT = Persistent, Bio accumulative and Toxic Substances
vPvB = very Persistent and very Bio accumulative Substances
- Transport information (Section 14) : ADR = European Agreement concerning the international carriage of dangerous goods by road.

- 16.3 References and sources for data** : Safety data sheet manufacturer
SER limits database

16.4 Other information and disclaimerTrainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training. Persons related to the transportation of the dangerous goods in compliance with the ADR Agreement should be properly trained within the scope of performed tasks (general training, on-the-job training and training related to the safety issues).

All information given in this Safety Data Sheet is exclusively related to the product described and is provided assuming that the product will be used in a way and for the purposes as stated by the manufacturer. The information is based on our present state of knowledge and will be reviewed regularly. This Safety Data Sheet has only been set up with the intention to describe the safety aspects of the product and therefore should not be construed as guaranteeing specific properties of the product of concern or its suitability for a particular application. It is the user's own responsibility to take the precautionary measures described and also to take care that this information is complete and adequate for the use of this product. It is recommended to pass through the information in this Safety Data Sheet, whenever necessary in an adapted form, to all staff and interested parties of concern.

- *Changes, printing and typesetting errors reserved.*