

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 919250	Photometer PF-12 Plus	Page: 1/9
Printing date: 06.02.2024	Date of issue: 14.11.2022	Version: 2.2.2.2

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

1.1 Product identifier

REF 919250
 Product name Photometer PF-12 Plus

REACH Registration number(s): see SECTION 3.1/3.2 or
 A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.
 4 x Alkaline Manganese Batteries Type AA
 1 x Button cell CR2032, built-in

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

Relevant identified uses
 Product for analytical use.
 Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
 The exposure scenario is integrated into sections 1-16.
Uses advised against
 not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Valencienner Str. 11, 52355 Düren, Germany
 Phone: +49 2421 969 0
 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Information not necessary.
 You find our current versions of SDS in Internet: [<http://www.mn-net.com/SDS>](http://www.mn-net.com/SDS)

SECTION 2: Hazard identification

2.0 Classification of the complete product according to Regulation (EC) 1272/2008

Hazard identification	Hazard classes/categories
-----------------------	---------------------------

2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

Button cell CR2032, built-in
 Do not need labelling as hazardous
 Signal word -
 No hazard class

Alkaline Manganese Batteries Type AA
 Do not need labelling as hazardous
 Signal word -
 No hazard class

List of H phrases: see section 16.2

2.2 Label elements according regulation (EC) 1272/2008



Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 919250

Photometer PF-12 Plus

Page: 2/9

Printing date: 06.02.2024

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Version: 2.2.2.2

Button cell CR2032, built-in

Do not need labelling as hazardous
Signal word: -

Alkaline Manganese Batteries Type AA

Do not need labelling as hazardous
Signal word: -

Label elements of the complete product

Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential.

Information pertaining to particular risks to human and possible symptoms

Information pertaining to particular risks to the environment

PBT: not applicable
vPvB: not applicable

Possible endocrine disrupting effects

no data available

Other hazards

This SDS contains information on shipping and transport safety.

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

Button cell CR2032, built-in

Substance name: *Button cell on circuit board (lithium metal battery)*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 99 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Alkaline Manganese Batteries Type AA

Substance name: *alkaline manganese battery*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 99 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of H and P phrases: see section 16.2.

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact

Not necessary.

4.1.2 After EYE Contact



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REF: 919250	Photometer PF-12 Plus	Page: 3/9
Printing date: 06.02.2024	Date of issue: 14.11.2022	Version: 2.2.2.2

- Not necessary.
- 4.1.3 After INHALATION of vapours**
Not necessary. ---
- 4.1.4 After ORAL Intake**
Not necessary.
- 4.2 Most important symptoms and effects, both acute and delayed**
There are no known delayed symptoms or effects for this product.
- 4.3 Indication of any immediate medical attention and special treatment needed**
No additionally recommendations. ---

SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
 - 5.1.1 Suitable extinguishing media**
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used. Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.
 - 5.1.2 Unsuitable extinguishing media**
no data available
- 5.2 Special hazards arising from the substance or mixture**
None.
- 5.3 Advice for firefighters**
No, for listed product. Product package burns like paper or plastic.
- 5.4 Additional information**
no data available

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Not necessary.
- 6.2 Environmental precautions**
PBT: not applicable
vPvB: not applicable
- 6.3 Methods and material for containment and cleaning up**
Clean working area with water. Flush used water into drains.
- 6.4 Reference to other sections**
no data available

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling**
Handling in accordance with the test instruction, that comes with the product.
- 7.2 Conditions for safe storage, including any incompatibilities**
Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Storage class (German chemical industry): see chapter 12.1
Storage class (VCI):
Water hazard class (DE):
- 7.2.1 Requirements for stock rooms and containers**
Keep original product packages tightly closed during handling and storage.



Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 919250	Photometer PF-12 Plus	Page: 4/9
Printing date: 06.02.2024	Date of issue: 14.11.2022	Version: 2.2.2.2

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls /personal protection

8.1 Control parameters

Alkaline Manganese Batteries Type AA
Chemical: *alkaline manganese battery*

CAS No.: -

Button cell CR2032, built-in
Chemical: *Button cell on circuit board (lithium metal battery)*

CAS No.: -

8.2 Exposure controls

Not necessary.

8.2.1 Respiratory protection

Not necessary.

8.2.2 Skin protection / Hand protection

Not necessary.

8.2.3 Eye / Face Protection

Not necessary.

8.2.4 Skin protection

Not necessary.

8.2.5 Personal hygiene

Information not necessary.

8.2.6 Thermal hazards

no data available

8.3 Limitation and monitoring of environmental exposure

Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Alkaline Manganese Batteries Type AA

a) State of aggregation:	solid
b) Colour:	black
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K _{ow}):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

Button cell CR2032, built-in

a) State of aggregation:	solid
b) Colour:	colored
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	Do not transport damaged batteries. Special instruction necessary
g) Explosive limits (lower / upper):	no data available



Safety Data Sheet

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REF: 919250

Photometer PF-12 Plus

Page: 5/9

Printing date: 06.02.2024

Date of issue: 14.11.2022

Version: 2.2.2.2

h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K _{ow}):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

9.2 Other information

9.2.1 Information on physical hazard classes

no data available

9.2.2 Other safety-related parameters

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

None

10.2 Chemical stability

no known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not known.

10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored - protected against short circuits. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11: Toxicological information

11.1 Information on the hazard classes according regulation (EC) 1272/2008

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

Alkaline Manganese Batteries Type AA

Chemical: *alkaline manganese battery*

CAS No.: -

Button cell CR2032, built-in

Chemical: *Button cell on circuit board (lithium metal battery)*

CAS No.: -

11.2 Other hazards

Possible endocrine disrupting effects

no data available



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 919250

Photometer PF-12 Plus

Page: 6/9

Printing date: 06.02.2024

Date of issue: 14.11.2022

Version: 2.2.2.2

Other information

no additional data available

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

Alkaline Manganese Batteries Type AA

Substance name: *alkaline manganese battery*

CAS-Nr.: -

Button cell CR2032, built-in

Substance name: *Button cell on circuit board (lithium metal battery)*

CAS-Nr.: -

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB 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

no data available

12.7 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Batteries must be collected separately and disposed acc. law regulations (electronic waste, WEEE). Further: Not necessary.

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains.

SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

Lithium metal batteries in equipment, not restricted, PI 970: Section II (button cell), No entry in AWB necessary

14.5 Environmental hazards

none

14.6 Special precautions for user

not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020

Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017

MN leaflet/instructions for use, also at www.mn-net.com

If necessary, observe other country-specific regulations.



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REF: 919250	Photometer PF-12 Plus	Page: 7/9
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15.2 Chemical safety assessment
no data available

SECTION 16: Other information

16.1 Changes compared to the last version
in preparation

16.2 List of H and P phrases

16.2.1 List of relevant H phrases
H in preparation

16.2.2 List of relevant P phrases

16.3 Recommended restriction on use
None

16.4 Sources of key data

- KÜHN, BIRETT, Leaflets on hazardous materials, 2021
- Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres
- SUVA .CH, limit values in the air at work 2009, revised on 01/2009
- Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)
- Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG
- Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)
- Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)
- Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)

- Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)
- Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)
- Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)
- TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019
- Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)
- Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG
- Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)
- Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)
- Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)
- Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th ATP)

revisions/updates

- Reason for revision: *2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary*
- 2014-04 adjustment according Regulation 487/2013/EU*
- 2016-03 adjustment according Regulation 1221/2015/EU*

- 2017-11 adjustment according the ECHA registration dossier*
- 2022-11 adjustment according Regulation 878/2020/EU*

16.5 Further information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. MACHEREY-NAGEL GmbH & Co. KG makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.6 Legend / Abbreviations

- acc: according
- ADR: Convention concerning the International Carriage of Dangerous Goods by Road
- Act: acute
- BAT: biological workplace tolerance value
- CAO: Cargo Aircraft Only
- Carc: carcinogen
- CAS: Chemical Abstracts Service
- CLP: Classification, Labelling and Packaging regulation
- CMR: carcinogen, mutagen, reproduction toxic
- Corr: corrosive



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COD: chemical oxygen demand
 CSCL: Chemical Substance Control Law (Jp)
 Dam: damage
 DNEL: Derived No-Effect Level (for workers)
 derm: dermal
 dog: dog
 EC10: Concentration causing a toxic effect in 10% of the test organisms
 EC: European Community
 EC-Nr: Substance number of the EC substance inventory
 EmS: Guide to accident management measures on ships
 EU: European Union
 fish: fish (not spezified)
 GHS: Global Harmonized System of Classification and Labeling of Chemicals
 gpg: guinea pig
 ICAO: International Civil Aviation Organization
 ihl: inhaled
 IMDG: International Maritime Dangerous Goods Code
 intrav: intravenous
 ipt: intraperitoneal
 ISHL: Industrial Safety and Health Law (Jp)
 LC50: letale concentration 50%
 LD50: letale dosis 50%
 leuciscus idus: fisch, ide, orfe
 MAK: maximum workplace concentration
 Met: Metall
 mus: mouse
 Muta: mutagen
 NIOSH: National Institute for Occupational Safety and Health (US)
 NRD: Non-rapidly degradable
 onchorhynchus mykiss: fisch, rainbow trout
 orl: oral
 OSHA: Occupational Safety and Health Administration
 PAX: transport on passenger planes allowed
 PBT: persistent, bioaccumulating, toxic substance
 pH: pH value
 pimephales promelas: fisch, fathead minnow
 PNEC: Predicted No Effect Concentration
 PROC 15: Process category 'for laboratory use'
 PRTR: Law for PRTR and Promotion of Chemical Management (Jp)
 PVC: polyvinyl chloride
 quail: bird, quail
 rat: rat
 rbt: rabbit
 RD: rapidly degradable
 RE: repeated
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
 REF: item number, reference number
 Reg.No.: rRegistration number
 Repr: harmful to reproduction
 Resp: respiratory
 RIP: REACH Implementations Projects
 scu: sub cutan
 SDS: safety data sheet
 Sens: sensitisation
 STEL: short term exposure limit
 STOT: Specific Target Organ Toxicity
 SVHC: Substance of Very High Concern
 t/a: tons per year
 TCCA: Toxic Chemicals Control Act (S. Korea)
 Tox: toxic
 TSCA: The Toxic Substances Control Act (US)
 TWA: time weighted average
 TRGS: technical regulations (DE)
 vPvB: very persistent, very bioaccumulating substance



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REF: 919250

Photometer PF-12 Plus

Page: 9/9

Printing date: 06.02.2024

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Version: 2.2.2.2

16.7 Training advice

Regular safety training. Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.



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