

Safety Data Sheet (UK REACH) (UK)
BTTR4®Mirror antifog s+s

n-tec GmbH
84051 Essenbach - Altheim



Date printed 13.11.2024, Revision 13.11.2024

Version 1.0

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

1.1 Product identifier

BTTR4®Mirror antifog s+s

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

1.2.1 Relevant uses

Coating agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

n-tec GmbH
Siemensstraße 13
84051 Essenbach - Altheim / GERMANY
Phone +49 - (0)87 03 - 98 97-64
Fax +49 - (0)87 03 - 98 97-65
Homepage www.n-tec.de
E-mail info@n-tec.de

Address enquiries to

Technical information

info@n-tec.de

Safety Data Sheet

sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Advisory body

Call NHS 111 or a doctor

Company

+49 - (0)87 03 - 98 97-64

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Flam. Liq. 3: H226 Flammable liquid and vapour.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No. 1272/2008 (CLP).

Hazard pictograms



Signal word

WARNING

Hazard statements

H226 Flammable liquid and vapour.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe vapours.
P312 Call a POISON CENTER / doctor if you feel unwell.
P280 Wear protective gloves / eye protection.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Human health dangers

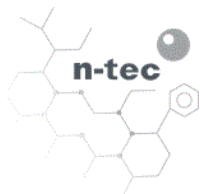
Contains no ingredients with endocrine-disrupting properties.

Environmental hazards

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.

Other hazards

Further hazards were not determined with the current level of knowledge.



SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
20 - < 30	Ethanol CAS: 64-17-5, EINECS/ELINCS: 200-578-6, EU-INDEX: 603-002-00-5, Reg-No.: 01-2119457610-43-XXXX GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 SCL [%]: >= 50: Eye Irrit. 2: H319
1 - < 4	(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value) CAS: 34590-94-8, EINECS/ELINCS: 252-104-2, Reg-No.: 01-2119450011-60-XXXX

Comment on component parts

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Change soaked clothing.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Dizziness
Drowsiness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

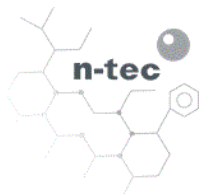
Foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)



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5.3 Advice for firefighters

Use self-contained breathing apparatus.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

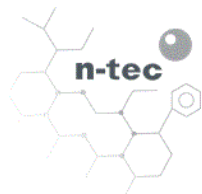
Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Keep away from all sources of ignition - Refrain from smoking.
Ignitable mixtures can be formed in the empty container.
Take precautionary measures against static discharges.
Vapours can form an explosive mixture with air.
Ground/bond container and receiving equipment.
Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Provide solvent-resistant and impermeable floor.
Do not store with oxidizing or self-igniting materials.
Protect from heat/overheating.
Keep container in a well-ventilated place.
Keep container tightly closed.
Recommended storage temperature: 5°C - 25°C

7.3 Specific end use(s)

See product use, SECTION 1.2



SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (UK)

Substance
Ethanol
CAS: 64-17-5, EINECS/ELINCS: 200-578-6, EU-INDEX: 603-002-00-5, Reg-No.: 01-2119457610-43-XXXX
Long-term exposure: 1000 ppm, 1920 mg/m ³
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value)
CAS: 34590-94-8, EINECS/ELINCS: 252-104-2, Reg-No.: 01-2119450011-60-XXXX
Long-term exposure: 50 ppm, 308 mg/m ³ , Sk

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

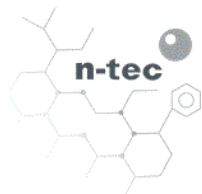
Substance / EC LIMIT VALUES
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value)
CAS: 34590-94-8, EINECS/ELINCS: 252-104-2, Reg-No.: 01-2119450011-60-XXXX
Eight hours: 50 ppm, 308 mg/m ³ , H

DNEL

Substance
Ethanol, CAS: 64-17-5
Industrial, inhalative (vapor), Long-term - systemic effects, 380 mg/m ³
Industrial, dermal, Long-term - systemic effects, 8238 mg/kg bw/day
general population, inhalative (vapor), Long-term - systemic effects, 114 mg/m ³
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
Industrial, dermal, Long-term - systemic effects, 283 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 308 mg/m ³
general population, inhalative, Long-term - systemic effects, 37,2 mg/m ³
general population, oral, Long-term - systemic effects, 36 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 121 mg/kg bw/day

PNEC

Substance
Ethanol, CAS: 64-17-5
freshwater, 0,96 mg/l
seawater, 0,79 mg/l
sediment (freshwater), 3,6 mg/kg sediment dw
soil, 0,63 mg/kg soil dw
sediment (seawater), 2,9 mg/kg sediment dw
sewage treatment plants (STP), 580 mg/L
oral (food), 0,38 g/kg
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
freshwater, 19 mg/l
seawater, 1,9 mg/l
sewage treatment plants (STP), 4168 mg/l
sediment (freshwater), 70,2 mg/kg
sediment (seawater), 7,02 mg/kg
soil, 2,74 mg/kg



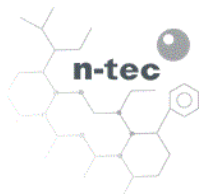
8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	> 0,7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Long-sleeved work clothes.
Other	Do not inhale vapours. Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Respiratory protection mask in the event of high concentrations. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	clear
Odor	alcoholic
Odour threshold	not determined
pH-value	5,5
pH-value [1%]	not determined
Boiling point or initial boiling point and boiling range [°C]	> 35
Flash point [°C]	> 23
Flammability	not applicable
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/cm³]	0,967
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not determined
Kinematic viscosity	not determined
Relative vapour density	not determined
Melting point [°C]	not determined
Auto-ignition temperature [°C]	not determined
Decomposition temperature [°C]	not determined
Particle characteristics	not applicable



9.2 Other information

Version

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.
Uncleaned empty vessels may contain product gases which can form explosive mixtures with air.

10.4 Conditions to avoid

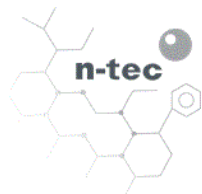
Strong heating.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition products

Flammable gases/vapours.



SECTION 11: Toxicological information

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

Acute oral toxicity

Product
oral, Based on the available information, the classification criteria are not fulfilled.
Substance
Ethanol, CAS: 64-17-5
LD50, oral, Rat, 10470 mg/kg (OECD 401)
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
LD50, oral, Rat, 5135 mg/kg

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.
Substance
Ethanol, CAS: 64-17-5
LD50, dermal, Rabbit, > 2000 mg/kg (OECD 402)
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
LD50, dermal, Rabbit, 13000 - 14000 mg/kg

Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.
Substance
Ethanol, CAS: 64-17-5
LC50, inhalative, Rat, 117-125 mg/l/4h (OECD 403)
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
LC50, inhalative, Rat, > 500 mg/l (7 h)

Serious eye damage/irritation

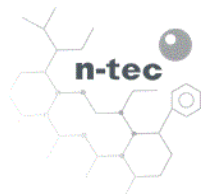
Non-irritant.
Classification was carried out based on substance-specific concentration limits.

Substance
Ethanol, CAS: 64-17-5
Eye, irritant
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
Eye, non-irritating

Skin corrosion/irritation

Based on the available information, the classification criteria are not fulfilled.

Substance
Ethanol, CAS: 64-17-5
dermal, non-irritating
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
dermal, non-irritating



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Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethanol, CAS: 64-17-5
dermal, non-sensitizing
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
dermal, non-sensitizing

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Substance
Ethanol, CAS: 64-17-5
NOAEL, oral, mouse, 9400 mg/kg bw/day (subchronic), no adverse effect observed
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
NOAEL, dermal, Rabbit, 2850 mg/kg bw/day (subchronic), no adverse effect observed
NOAEL, oral, Rat, 1000 mg/kg bw/day (subacute), no adverse effect observed
NOAEC, inhalative, Rat, 1232 mg/m ³ (subchronic), no adverse effect observed

Mutagenicity Based on the available information, the classification criteria are not fulfilled.
Based on the available information, the classification criteria are not fulfilled.

Substance
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
in vitro, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- Fertility

Substance
Ethanol, CAS: 64-17-5
NOAEL, oral, mouse, 20700 mg/kg bw/day (subchronic), no adverse effect observed

- Development

Substance
Ethanol, CAS: 64-17-5
NOAEC, inhalative, Rat, 30400 mg/m ³ (subchronic), no adverse effect observed

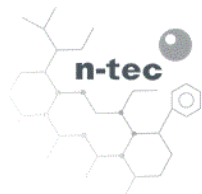
Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Substance
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
NOAEC, inhalative, Rat, 18184,05 mg/m ³ (chronic), no adverse effect observed

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.



11.2 Information on other hazards

- 11.2.1 Endocrine disrupting properties** Contains no ingredients with endocrine-disrupting properties.
- 11.2.2 Other information** none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Ethanol, CAS: 64-17-5
LC50, (48h), Daphnia magna, 12340 mg/l
LC50, (96h), Oncorhynchus mykiss, 13000 mg/l (OECD 203)
EC50, (48h), Selenastrum capricornutum, 12900 mg/l (OECD 201)
EC50, (72h), Algae, 275 mg/l (OECD 201)
(2-Methoxymethylethoxy)propanol (EU occupational exposure limit value), CAS: 34590-94-8
LC50, (96h), Pimephales promelas, > 10000 mg/l
EC50, (96h), Selenastrum capricornutum, > 969 mg/l
EC50, (48h), Daphnia magna, 1919 mg/l

12.2 Persistence and degradability

- Behaviour in environment compartments** No information available.
- Behaviour in sewage plant** No information available.
- Biological degradability** No information available.

Substance
Ethanol, CAS: 64-17-5
94%, The product is readily biodegradable.

12.3 Bioaccumulative potential

No information available.

Substance
Ethanol, CAS: 64-17-5
log Pow, -0,31

12.4 Mobility in soil

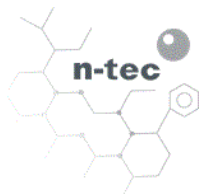
Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.



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12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.
Ecological data of complete product are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended)

070604*

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended)

150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

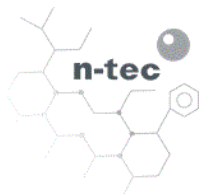
14.1 UN number or ID number

Transport by land according to ADR/RID 1170

Inland navigation (ADN) 1170

Marine transport in accordance with IMDG 1170

Air transport in accordance with IATA 1170



14.2 UN proper shipping name

Transport by land according to
ADR/RID

Ethanol solution

- Classification Code

F1

- Label



- ADR LQ

5 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 3 (D/E)

Inland navigation (ADN)

Ethanol solution

- Classification Code

F1

- Label



Marine transport in accordance with
IMDG

Ethanol solution

- EMS

F-E, S-D

- Label



- IMDG LQ

5 I

Air transport in accordance with IATA

Ethanol solution

- Label



14.3 Transport hazard class(es)

Transport by land according to
ADR/RID

3

Inland navigation (ADN)

3

Marine transport in accordance with
IMDG

3

Air transport in accordance with IATA

3

14.4 Packing group

Transport by land according to
ADR/RID

III

Inland navigation (ADN)

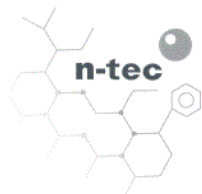
III

Marine transport in accordance with
IMDG

III

Air transport in accordance with IATA

III



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14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains $\geq 0.1\%$ of substances with the following restrictions. 40, 75 According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-REGULATIONS	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2024)
NATIONAL REGULATIONS (UK):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	33 %

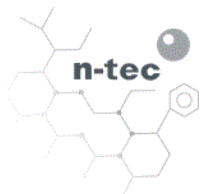
15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.



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16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCILID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Flam. Liq. 3: H226 Flammable liquid and vapour. (Calculation method)

Modified position

none

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