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

1.1 Product identifier

Sparbeize Sorte NFS
Article number: 17 00 14

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

1.2.1 Relevant uses

Pickling agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

ITW Test & Measurement GmbH
Boschstraße 10
73734 Esslingen a. Neckar / GERMANY
Phone +49(0)711 4904690-0
Homepage www.buehler-met.de/ www.buehler.fr/ www.buehler.co.uk
E-mail lab.eu@buehler.com

Address enquiries to

Technical information lab.eu@buehler.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Company

Global Access Code: 334545
Americas: +1 760 476 3962
Middle East/Africa: +1 760 476 3959
UK: +44 8 08 189 0979
Europe: +1 760 476 3961
Asia Pacific: +1 760 476 3960

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Flam. Liq. 3: H226 Flammable liquid and vapour.
Carc. 2: H351 Suspected of causing cancer.
Repr. 2: H361d Suspected of damaging the unborn child.
Eye Dam. 1: H318 Causes serious eye damage.
STOT SE 3: H336 May cause drowsiness or dizziness.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms

Signal word DANGER

Contains: 1-methoxy-2-propanol

Isotridecan-1-ol

Thiourea

Hazard statements

H226 Flammable liquid and vapour.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P308+P313 IF exposed or concerned: Get medical advice / attention.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours / spray.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER / doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Physico-chemical hazards Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

Environmental hazards Does not contain any PBT or vPvB substances.

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

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
24 - 40	1-methoxy-2-propanol
	CAS: 107-98-2, EINECS/ELINCS: 203-539-1, EU-INDEX: 603-064-00-3, Reg-No.: 01-2119457435-35-XXXX
	GHS/CLP: Flam. Liq. 3: H226 - STOT SE 3: H336
3 - 5	Isotridecan-1-ol
	CAS: 27458-92-0, EINECS/ELINCS: 248-469-2
	GHS/CLP: Acute Tox. 4: H302 - Eye Dam. 1: H318
1 - 3	Thiourea
	CAS: 62-56-6, EINECS/ELINCS: 200-543-5, EU-INDEX: 612-082-00-0, Reg-No.: 01-2119977062-37-XXXX
	GHS/CLP: Carc. 2: H351 - Repr. 2: H361d - Acute Tox. 4: H302 - Aquatic Chronic 2: H411

Comment on component parts

For full text of H-statements: see SECTION 16.
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Take off contaminated clothing and wash before reuse.

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

Skin contact
In case of contact with skin wash off immediately 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.
Consult a doctor immediately.

Ingestion
Consult a doctor immediately.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Drowsiness
Vertigo

4.3 Indication of any immediate medical attention and special treatment needed

If swallowed or in the event of vomiting, risk of product entering the lungs.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Dry powder.
Water spray jet.
Alcohol-resistant foam.
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.
Sulphur oxides (SOx).
Nitrogen oxides (NOx).

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance within 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.
High risk of slipping due to leakage/spillage of product.
Wear suitable protective equipment. For personal protection see SECTION 8.

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.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
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.
Provide suitable vacuuming at the processing machines.
Use solvent-resistant equipment.
Avoid spilling or spraying in enclosed areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Place the container in an upright position and protect it against falling over.
Open and handle container with care.

Take precautionary measures against static discharges.
Keep away from open flames, hot surfaces and sources of ignition.
Use explosion-proofed equipment/fittings and non-sparkling tools.
Vapours can form an explosive mixture with air.
Ignitable mixtures can be formed in the empty container.

Do not eat, drink, smoke or take drugs at work.
Keep away from food and drink.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.
Keep only in original container.

Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.

Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating.
Protect from sun.

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 (GB)

Substance
1-methoxy-2-propanol
CAS: 107-98-2, EINECS/ELINCS: 203-539-1, EU-INDEX: 603-064-00-3
Long-term exposure: 100 ppm, 375 mg/m³, Sk
Short-term exposure (15-minute): 150 ppm, 560 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
1-methoxy-2-propanol
CAS: 107-98-2, EINECS/ELINCS: 203-539-1, EU-INDEX: 603-064-00-3
Eight hours: 100 ppm, 375 mg/m³, H
Short-term (15-minute): 150 ppm, 563 mg/m³

DNEL

Substance
1-methoxy-2-propanol, CAS: 107-98-2
Industrial, dermal, Long-term - systemic effects: 183 mg/kg bw/day.
Industrial, inhalative (vapor), Acute - local effects: 553,5 mg/m³.
Industrial, inhalative (vapor), Acute - systemic effects: 553,5 mg/m³.
Industrial, inhalative (vapor), Long-term - systemic effects: 369 mg/m³.
general population, oral, Long-term - systemic effects: 33 mg/kg bw/day.
general population, dermal, Long-term - systemic effects: 78 mg/kg bw/day.
general population, inhalative (vapor), Long-term - systemic effects: 43,9 mg/m³.
Thiourea, CAS: 62-56-6
Industrial, dermal, Long-term - systemic effects: 3,4 mg/kg bw/d.
Industrial, inhalative, Long-term - systemic effects: 1 mg/m³.
general population, oral, Long-term - systemic effects: 0,1 mg/kg bw/d.
general population, dermal, Long-term - systemic effects: 1,7 mg/kg bw/d.
general population, inhalative, Long-term - systemic effects: 0,2 mg/m³.

PNEC

Substance
1-methoxy-2-propanol, CAS: 107-98-2
seawater, 1 mg/L.
sediment (seaater), 5,2 mg/kg.
sediment (freshwater), 52,3 mg/kg.
freshwater, 10 mg/L.
soil, 4,59 mg/kg.
sewage treatment plants (STP), 100 mg/L.
Thiourea, CAS: 62-56-6
soil, 2,725 mg/kg dw (AF=50).
seawater, 0,007 mg/kg sediment dw.
sediment (freshwater), 0,072 mg/kg sediment dw.
sewage treatment plants (STP), 0,38 mg/l (AF= 1).
seawater, 0,001 mg/l (AF= 100).
freshwater, 0,01 mg/l (AF= 10).

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Tightly fitting goggles. (EN 166:2001)
Hand protection	> 0,4 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	Protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the 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	not applicable
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

Form	liquid
Color	brown
Odor	characteristic
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	No information available.
Boiling point [°C]	54 - 55 (1013 mbar)
Flash point [°C]	45 (DIN EN 22719)
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Partition coefficient [n-octanol/water]	No information available.
Viscosity	not applicable
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

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.
Reactions with oxidizing agents.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition products

No dangerous reactions known if used as directed.
In the event of fire: See SECTION 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, oral, > 2000 mg/kg.

Substance
1-methoxy-2-propanol, CAS: 107-98-2
LD50, dermal, Rabbit: 13500 mg/kg bq.
LD50, oral, Rat: 5000 mg/kg bw.
LC50, inhalative, Rat: 6 mg/L (4h).
Thiourea, CAS: 62-56-6
LD50, dermal, Rabbit: 2800 mg/kg bw.
LD50, oral, Rat: 1750 mg/kg bw.
NOAEL, dermal, 172 mg/kg bw/d.
NOAEC, inhalative, 12,13 mg/m³.
Isotridecan-1-ol, CAS: 27458-92-0
LD50, dermal, Rabbit: > 2000 mg/kg.
LD50, oral, Rat: > 300 - 2000 mg/kg.

Serious eye damage/irritation
Risk of serious damage to eyes.
Calculation method

Skin corrosion/irritation
Based on the available information, the classification criteria are not fulfilled.

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

Specific target organ toxicity — single exposure
Vapours may cause drowsiness and dizziness.
Calculation method

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

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

Reproduction toxicity
Suspected of damaging the unborn child.
Calculation method

Carcinogenicity
Suspected of causing cancer.
Calculation method

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

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
1-methoxy-2-propanol, CAS: 107-98-2
LC50, (96h), Leuciscus idus: >4000 mg/L.
EC50, (48h), Daphnia magna: 23300 mg/L.
Thiourea, CAS: 62-56-6
LC50, (48h), Leuciscus idus: > 10 mg/l.
EC50, (24h), Daphnia magna: 110 mg/l.
EC50, (96h), Scenedesmus subspicatus: 6,8 mg/l.
Isotridecan-1-ol, CAS: 27458-92-0
LC50, (96h), Cyprinus carpio: 1 - 10 mg/l.
EC50, (72h), Desmodesmus subspicatus: 1 - 10 mg/l.
EC50, (48h), Daphnia magna: 1 - 10 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.

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Other adverse effects

Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material c 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

Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 070704*

Contaminated packaging

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

Waste no. (recommended) 150110*

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	1263
Inland navigation (ADN)	1263
Marine transport in accordance with IMDG	1263
Air transport in accordance with IATA	1263

14.2 UN proper shipping name

Transport by land according to ADR/RID	Paint
- Classification Code	F1
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (D/E)
Inland navigation (ADN)	Paint
- Classification Code	F1
- Label	
Marine transport in accordance with IMDG	Paint
- EMS	F-E, S-E
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Paint
- 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

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 Transport in bulk according to Annex II of MARPOL and the IBC Code

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS	1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2018).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people. SEVESO III (Directive 2012/18/EU), Hazard categories in accordance with Regulation (EC) No 1272/2008: P5c FLAMMABLE LIQUIDS
- VOC (2010/75/CE)	ca. 40 %

15.2 Chemical safety assessment

No information available.

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H411 Toxic to aquatic life with long lasting effects.
H361d Suspected of damaging the unborn child.
H351 Suspected of causing cancer.
H318 Causes serious eye damage.
H302 Harmful if swallowed.
H336 May cause drowsiness or dizziness.
H226 Flammable liquid and vapour.

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
ELINCS = European List of Notified Chemical Substances
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
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
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. (On basis of test data)
Carc. 2: H351 Suspected of causing cancer. (Calculation method)
Repr. 2: H361d Suspected of damaging the unborn child. (Calculation method)
Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

SECTION 4 been added: Consult a doctor immediately.

SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 4 deleted: In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

SECTION 7 been added: Open and handle container with care.

SECTION 7 been added: Place the container in an upright position and protect it against falling over.

SECTION 15 been added: P5c FLAMMABLE LIQUIDS

SECTION 15 been added: SEVESO III (Directive 2012/18/EU), Hazard categories in accordance with Regulation (EC) No 1272/2008: