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

1.1 Product identifier

Mirapont A
Article number: 203008, 203010, 203011

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

1.2.1 Relevant uses

Special plastic for stumps and models

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Hager & Werken GmbH & Co. KG
Ackerstr. 1
47269 Duisburg / GERMANY
Phone +49(0)203-99269-0
Fax +49 (0)203 29 92 83
Homepage www.hagerwerken.de
E-mail info@hagerwerken.de

Address enquiries to

Technical information info@hagerwerken.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0) 551-19240 Giftinformationszentrum-Nord

SECTION 2: Hazards identification

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

Eye Irrit. 2: H319 Causes serious eye irritation.
Aquatic Chronic 2: H411 Toxic 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 WARNING

Hazard statements

H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P280 Wear eye 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.
P337+P313 If eye irritation persists: Get medical advice / attention.
P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Environmental hazards

Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

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
5 - <10	Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
	GHS/CLP: Asp. Tox. 1: H304 - EUH066
5 - <10	Ethylenediamine, propoxylated
	CAS: 25214-63-5
	GHS/CLP: Eye Irrit. 2: H319
5 - <10	Bis(isopropyl)naphthalene
	CAS: 38640-62-9
	GHS/CLP: Asp. Tox. 1: H304 - Aquatic Chronic 1: H410
1 - <2,5	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
	GHS/CLP: Asp. Tox. 1: H304 - EUH066
1 - <2,5	Reaction mass of 2-ethylpropane-1,3-diol and 5-ethyl-1,3-dioxane-5-methanol and propylidynetrimethanol
	GHS/CLP: Repr. 2: H361d - Eye Irrit. 2: H319

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
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 In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion Seek medical advice immediately.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

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), not combusted hydrocarbons

5.3 Advice for firefighters

Use self-contained breathing apparatus.

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

High risk of slipping due to leakage/spillage of product.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, 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

No special measures necessary if used correctly.

Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Keep container tightly closed.
Protect from heat/overheating and 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
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
Long-term exposure: 1200 mg/m³
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Long-term exposure: 1200 mg/m³, RCP-TWA, 171 ppm (Manufacturer)

DNEL

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
Industrial, dermal, Long-term - systemic effects, 2,38 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 8,4 mg/m³
general population, oral, Long-term - systemic effects, 850 µg/kg bw/day
general population, dermal, Long-term - systemic effects, 850 µg/kg bw/day
general population, inhalative, Long-term - systemic effects, 1,48 mg/m³
Ethylenediamine, propoxylated, CAS: 25214-63-5
Industrial, inhalative, Long-term - systemic effects, 98 mg/m³
Industrial, dermal, Long-term - systemic effects, 13,9 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 29 mg/m³
general population, oral, Long-term - systemic effects, 8,3 mg/kg bw/d
general population, dermal, Long-term - systemic effects, 8,3 mg/kg bw/d
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
There are no DNEL values established for the substance.
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
There are no DNEL values established for the substance.
Reaction mass of 2-ethylpropane-1,3-diol and 5-ethyl-1,3-dioxane-5-methanol and propylidynetrimethanol
Industrial, dermal, Long-term - systemic effects, 4,2 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 14,6 mg/m³
general population, dermal, Long-term - systemic effects, 2,5 mg/kg bw/day
general population, oral, Long-term - systemic effects, 2,5 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 4,4 mg/m³

PNEC

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
soil, 171 µg/kg soil dw
sediment (seawater), 85.3 µg/kg sediment dw
sediment (freshwater), 853 µg/kg sediment dw
sewage treatment plants (STP), 150 µg/L
seawater, 23,6 ng/L
freshwater, 236 ng/L
Ethylenediamine, propoxylated, CAS: 25214-63-5
freshwater, 0,0085 mg/l
freshwater, 0,085 mg/l

sewage treatment plants (STP), 70 mg/l
soil, 0,0162 mg/kg dw
sediment (seawater), 0,0074 mg/kg dw
sediment (freshwater), 0,074 mg/kg dw
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
There are no PNEC values established for the substance.
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
There are no PNEC values established for the substance.
Reaction mass of 2-ethylpropane-1,3-diol and 5-ethyl-1,3-dioxane-5-methanol and propylidynetrimethanol
sewage treatment plants (STP), 100 mg/L
seawater, 74.3 µg/L
freshwater, 743 µg/L

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
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
Not required under normal conditions.

Other
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
In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards
No information available.

Delimitation and monitoring of the environmental exposition
not determined

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	various
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not determined
Boiling point [°C]	not determined
Flash point [°C]	>110
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	0,06
Density [g/cm³]	1,58
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	>20,5 mm²/s
Relative vapour density	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Auto-ignition temperature	not determined
Decomposition temperature [°C]	not applicable
Particle characteristics	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

No hazardous reactions known.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity Based on available data, the classification criteria are not met.

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LD50, oral, Rat, 4130 - 4320 mg/kg bw
Ethylenediamine, propoxylated, CAS: 25214-63-5
LD50, oral, Rat, > 2000 mg/kg bw
NOAEL, oral, Rat, 1000 mg/kg bw/4w
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LD50, oral, Rat, 5000 - 15000 mg/kg bw
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
LD50, oral, Rat, > 5000 mg/kg (OECD 401)
Reaction mass of 2-ethylpropane-1,3-diol and 5-ethyl-1,3-dioxane-5-methanol and propylidynetrimethanol
LC50, oral, Rat, 2000 mg/kg bw

Acute dermal toxicity Based on available data, the classification criteria are not met.

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LD50, dermal, Rat, 4500 mg/kg bw
Ethylenediamine, propoxylated, CAS: 25214-63-5
LD50, dermal, Rat, > 2000 mg/kg bw
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LD50, dermal, Rabbit, 2200 - 2500 mg/kg bw
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
LD50, dermal, Rabbit, > 5000 mg/kg (OECD 402)
Reaction mass of 2-ethylpropane-1,3-diol and 5-ethyl-1,3-dioxane-5-methanol and propylidynetrimethanol
LD50, dermal, Rabbit, 10000 mg/kg bw

Acute inhalational toxicity Based on available data, the classification criteria are not met.

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LC50, oral, Rat, 5,64 mg/L, 4h
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LC50, inhalative, Rat, 4.951 - 9.3 mg/L air, 4h
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
LC50, inhalative, Rat, 5,9 - 6,1 mg/L/4h

Serious eye damage/irritation Irritant

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Rabbit, in vivo, OECD 405, non-irritating
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
Rabbit, OECD 405, non-irritating

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Substance

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Rabbit, in vivo, OECD 404, non-irritating
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
dermal, Guinea pig, OECD 406, non-sensitizing
inhalative, non-sensitizing
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
Guinea pig, OECD 406, non-sensitizing

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

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
no adverse effect observed
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
inhalative, no adverse effect observed

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

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
OECD 413, no adverse effect observed
OECD 408, no adverse effect observed
NOAEL, oral, Rat, 1000 mg/kg bw/day
NOAEC, inhalative, Rat, 10.4 mg/L air

Mutagenicity Does not contain a relevant substance that meets the classification criteria.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
OECD 479, no adverse effect observed
OECD 478, no adverse effect observed
OECD 476, no adverse effect observed
OECD 474, no adverse effect observed
OECD 473, no adverse effect observed
OECD 471, no adverse effect observed
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
mouse, in vivo mammalian somatic cell study, OECD 474, negativ
in vitro gene mutation study in bacteria, OECD 471, negativ

Reproduction toxicity This product contains one or more substances of categorie Repr. 2 (CLP).

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
OECD 415, no adverse effect observed
OECD 414, no adverse effect observed

OECD 413, no adverse effect observed
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
NOAEL, oral, Rat, 1000 mg/kg bw/d (Effect on developmental toxicity), no adverse effect observed
NOAEC, inhalative, Rat, 5220 mg/m³ (Effect on developmental toxicity), no adverse effect observed
NOAEC, oral, Rat, 750 mg/kg bw/d (Effect on fertility), no adverse effect observed

Carcinogenicity Does not contain a relevant substance that meets the classification criteria.

Substance
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
OECD 453, no adverse effect observed
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
no adverse effect observed

Aspiration hazard Based on available data, the classification criteria are not met.

General remarks

Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LC50, (96h), fish, 500 µg/L
EC50, (48h), Invertebrates, 160 µg/L
LC0, (96h), fish, 240 µg/L
NOEC, (72h), Algae, 150 µg/L
NOELR, (48h), Invertebrates, 1 mg/L
Ethylenediamine, propoxylated, CAS: 25214-63-5
LC50, (96h), Leuciscus idus, 4600 mg/l
EC50, (48h), Daphnia magna, > 100 mg/l
ErC50, (72h), Desmodesmus subspicatus, 150,67 mg/l
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
EL50, (72h), Algae, 1 mg/L
NOELR, (28d), fish, 217 µg/L
NOELR, (21d), Invertebrates, 1 mg/L
LL50, (96h), fish, 1 g/L
LL0, (96h), Invertebrates, 1 g/L
Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics
EL0, (72h), Pseudokirchneriella subcapitata, 1000 mg/l
EL0, (48h), Daphnia magna, 1000 mg/l
NOELR, (21d), Daphnia magna, 1 mg/l
NOELR, (72h), Pseudokirchneriella subcapitata, 1000 mg/l
LL0, (96h), Oncorhynchus mykiss, 1000 mg/l
Reaction mass of 2-ethylpropane-1,3-diol and 5-ethyl-1,3-dioxane-5-methanol and propylidynetrimethanol
LC50, (96h), fish, 1,25 g/L
EC50, (48h), Invertebrates, 1,09 g/L
EC50, (72h), Algae, 44 - 743 mg/L
NOEC, (96h), fish, 500 mg/L
NOEC, (48h), Invertebrates, 500 mg/L
NOEC, (72h), Algae, 2 mg/L

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

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.

12.7 Other adverse effects

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 national regulations.

Product

For recycling, consult manufacturer.

Contaminated packaging

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

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	3082
Inland navigation (ADN)	3082
Marine transport in accordance with IMDG	3082
Air transport in accordance with IATA	3082

14.2 UN proper shipping name

Transport by land according to ADR/RID	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- Classification Code	M6
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (-)
Inland navigation (ADN)	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- Classification Code	M6
- Label	
Marine transport in accordance with IMDG	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- EMS	F-A, S-F
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9 (N)
Inland navigation (ADN)	9 (N)
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

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	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

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

TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	7,79 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 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
IUCLID = 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

16.2 Other information

Classification procedure

Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none

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

1.1 Product identifier

Mirapont B
Article number: 203009, 203010, 203011

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

1.2.1 Relevant uses

Special plastic for stumps and models

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Hager & Werken GmbH & Co. KG
Ackerstr. 1
47269 Duisburg / GERMANY
Phone +49(0)203-99269-0
Fax +49 (0)203 29 92 83
Homepage www.hagerwerken.de
E-mail info@hagerwerken.de

Address enquiries to

Technical information info@hagerwerken.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0) 551-19240 Giftinformationszentrum-Nord

SECTION 2: Hazards identification

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

Skin Irrit. 2: H315 Causes skin irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Eye Irrit. 2: H319 Causes serious eye irritation.
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT SE 3: H335 May cause respiratory irritation.
Carc. 2: H351 Suspected of causing cancer.
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure through inhalation.
Aquatic Chronic 2: H411 Toxic 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: Diphenylmethanediisocyanate, isomeres and homologues

Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure through inhalation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P260 Do not breathe vapours.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P284 In case of inadequate ventilation wear respiratory protection.
P302+P352 IF ON SKIN: Wash with plenty of water / soap.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 IF exposed or concerned: Call a POISON CENTER / doctor.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

Environmental hazards
Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

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 - <25	Diphenylmethanediisocyanate, isomeres and homologues
	CAS: 9016-87-9
	GHS/CLP: Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Eye Irrit. 2: H319 - Acute Tox. 4: H332 - Resp. Sens. 1: H334 - STOT SE 3: H335 - Carc. 2: H351 - STOT RE 2: H373
	SCL [%]: >= 0,1: Resp. Sens. 1: H334, >= 5: Skin Irrit. 2: H315, >= 5: Eye Irrit. 2: H319, >= 5: STOT SE 3: H335
10 - <20	Bis(isopropyl)naphthalene
	CAS: 38640-62-9
	GHS/CLP: Asp. Tox. 1: H304 - Aquatic Chronic 1: H410

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated soaked clothing immediately and dispose of safely.

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.
If eye irritation persists: Get medical advice/attention.

Ingestion
Seek medical advice 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

Allergic reactions
Irritant effects
Nausea, vomiting.
Drowsiness
Vertigo
Headache

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Alcohol-resistant foam.
Dry powder.
Carbon dioxide.
Water spray jet.

Extinguishing media that must not be used
Full water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx).
Hydrogen cyanide (HCN).
Isocyanate

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Do not inhale explosion and/or combustion gases.
Wear full protective suit.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).
High risk of slipping due to leakage/spillage of product.
Use breathing apparatus if exposed to vapours/aerosol.

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 mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, 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

Provide suitable vacuuming at the processing machines.

Do not eat, drink, smoke or take drugs at work.
Remove contaminated soaked clothing immediately and dispose of safely.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.

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

Keep container tightly closed.
Keep container in a well-ventilated place.
Store in a dry place.
Protect from heat/overheating.
Do not keep at temperatures above 50 °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 (GB)

Substance
Diphenylmethanediisocyanate, isomeres and homologues
CAS: 9016-87-9
Long-term exposure: 0,02 mg/m³, as NCO, Sen
Short-term exposure (15-minute): 0,07 mg/m³

DNEL

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
Industrial, dermal, Long-term - systemic effects, 2,38 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 8,4 mg/m³
general population, oral, Long-term - systemic effects, 850 µg/kg bw/day
general population, dermal, Long-term - systemic effects, 850 µg/kg bw/day
general population, inhalative, Long-term - systemic effects, 1,48 mg/m³

PNEC

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
soil, 171 µg/kg soil dw
sediment (seawater), 85.3 µg/kg sediment dw
sediment (freshwater), 853 µg/kg sediment dw
sewage treatment plants (STP), 150 µg/L
seawater, 23,6 ng/L
freshwater, 236 ng/L

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
safety glasses (EN 166:2001)

Hand protection
The details concerned are recommendations. Please contact the glove supplier for further information.
0,7 mm Butyl rubber, >480 min (EN 374-1/-2/-3).

Skin protection
Protective clothing (EN 340)

Other
Avoid contact with eyes and skin.
Do not inhale gases/vapours/aerosols.
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
In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards
not determined

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	pasty
Color	beige
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	190
Flash point [°C]	>200
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	0,001
Density [g/cm³]	1,68
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	reacts with water
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	>20,5 mm²/s
Relative vapour density	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Auto-ignition temperature	not applicable
Decomposition temperature [°C]	not determined
Particle characteristics	No information available.

9.2 Other information

none

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

Reactions with alkalies (lyes).
Reactions with amines.
Reactions with alcohols.
Reactions with acids.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

Water

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity Based on available data, the classification criteria are not met.

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LD50, oral, Rat, 4130 - 4320 mg/kg bw
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
LD50, oral, Rat, > 10000 mg/kg (OECD 401)

Acute dermal toxicity Based on available data, the classification criteria are not met.

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LD50, dermal, Rat, 4500 mg/kg bw
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
LD50, dermal, Rabbit, > 9400 mg/kg (OECD 402)

Acute inhalational toxicity Based on available data, the classification criteria are not met.

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LC50, oral, Rat, 5,64 mg/L, 4h
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
LC50, inhalativ (mist), Rat, 0,31 mg/l/4h (OECD 403)
NOAEL, inhalative, Rat, 0,2 mg/m³ (OECD 453)
LOAEL, inhalative, Rat, 1 mg/m³ (OECD 453)
ATE, inhalativ (mist), 1,5 mg/l

Serious eye damage/irritation Based on the available information, the classification criteria are fulfilled.
Irritant

Skin corrosion/irritation Irritant

Respiratory or skin sensitisation May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific target organ toxicity — single exposure May cause respiratory irritation.

Specific target organ toxicity — repeated exposure May cause damage to organs through prolonged or repeated exposure through inhalation.

Mutagenicity Does not contain a relevant substance that meets the classification criteria.

Reproduction toxicity Does not contain a relevant substance that meets the classification criteria.

Carcinogenicity This product contains one or more substances of categorie Carc. 2 (CLP).
Suspected of causing cancer.

Aspiration hazard Does not contain a relevant substance that meets the classification criteria.

General remarks

Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Bis(isopropyl)naphthalene, CAS: 38640-62-9
LC50, (96h), fish, 500 µg/L
EC50, (48h), Invertebrates, 160 µg/L
LC0, (96h), fish, 240 µg/L
NOEC, (72h), Algae, 150 µg/L
NOELR, (48h), Invertebrates, 1 mg/L
Diphenylmethanediisocyanate, isomeres and homologues, CAS: 9016-87-9
LC50, (96h), Danio rerio, > 1000 mg/l (OECD 203)
EC50, (3h), Bacteria, > 100 mg/l (OECD 209)
EC50, (24h), Daphnia magna, > 1000 mg/l (OECD 202)
NOEC, (21d), Daphnia magna, > 10 mg/l (OECD 202)
ErC50, (72h), Scenedesmus subspicatus, > 1640 mg/l (OECD 201)

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

not determined

12.4 Mobility in soil

not determined

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.

12.7 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with national regulations.

Product

Dispose of as hazardous waste.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Dispose full / partially emptied cartridges as hazardous waste in accordance with official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	3082
Inland navigation (ADN)	3082
Marine transport in accordance with IMDG	3082
Air transport in accordance with IATA	3082

14.2 UN proper shipping name

Transport by land according to ADR/RID	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- Classification Code	M6
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (-)
Inland navigation (ADN)	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- Classification Code	M6
- Label	
Marine transport in accordance with IMDG	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- EMS	F-A, S-F
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Environmentally hazardous substance, liquid, n.o.s. (Bis(isopropyl)naphthalene)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9 (N)
Inland navigation (ADN)	9 (N)
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

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	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not determined

SECTION 15: Regulatory information

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

TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for young people. Observe employment restrictions for mothers-to-be and nursing mothers.
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 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
IUCLID = 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

16.2 Other information

Classification procedure

Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Calculation method)
STOT SE 3: H335 May cause respiratory irritation. (Calculation method)
Carc. 2: H351 Suspected of causing cancer. (Calculation method)
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure through inhalation. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none

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

1.1 Product identifier

Mirapont Agent Plus
Article number: 203016

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

1.2.1 Relevant uses

Isolating agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Hager & Werken GmbH & Co. KG
Ackerstr. 1
47269 Duisburg / GERMANY
Phone +49(0)203-99269-0
Fax +49 (0)203 29 92 83
Homepage www.hagerwerken.de
E-mail info@hagerwerken.de

Address enquiries to

Technical information info@hagerwerken.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0) 551-19240 Giftinformationszentrum-Nord

SECTION 2: Hazards identification

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

Aerosol 1: H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.
Skin Irrit. 2: H315 Causes skin irritation.
STOT SE 3: H336 May cause drowsiness or dizziness.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

The determination of properties hazardous to health does not take the propellant or carrier material into account.
The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word DANGER

Contains: Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Hazard statements
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122°F.
P260 Do not breathe mist / vapours / spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P312 Call a POISON CENTER / doctor if you feel unwell.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Environmental hazards Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

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
40 - <60	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
	GHS/CLP: Flam. Liq. 2: H225 - Asp. Tox. 1: H304 - Skin Irrit. 2: H315 - STOT SE 3: H336 - Aquatic Chronic 2: H411
25 - <40	Propane
	CAS: 74-98-6
	GHS/CLP: Flam. Gas 1: H220 - Press. Gas: H280
2,5 - <5	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
	CAS: 64742-48-9
	GHS/CLP: Flam. Liq. 3: H226 - Asp. Tox. 1: H304 - STOT SE 3: H336 - EUH066
0,25 - <1	Tetrachloroethylene
	CAS: 127-18-4
	GHS/CLP: Carc. 2: H351 - Aquatic Chronic 2: H411

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
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 In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion Do not induce vomiting.
In the event of symptoms seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Drowsiness
Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

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), not combusted hydrocarbons
Bursting aerosols can be forcibly projected from a fire.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Cool containers at risk with water spray jet.

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 (protective gloves, safety glasses, protective clothing).
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, 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 solvent-resistant equipment.
Use only in well-ventilated areas.

Keep away from all sources of ignition - Refrain from smoking.
Vapours can form an explosive mixture with air.

Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.

Do not store together with oxidizing agents.

Keep container in a well-ventilated place.
Protect from heat/overheating and from sun.
Keep in a cool place, heat causes increase in pressure and risk of bursting.

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
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Long-term exposure: 1200 mg/m³
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
CAS: 64742-48-9
Long-term exposure: 100 ppm, 525 mg/m³, OSHA
Tetrachloroethylene
CAS: 127-18-4
Long-term exposure: 50 ppm, 345 mg/m³
Short-term exposure (15-minute): 100 ppm, 689 mg/m³

DNEL

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
Industrial, inhalative (vapor), Long-term - systemic effects, 1500 mg/m³
Industrial, dermal, Long-term - systemic effects, 300 mg/kg bw/d
general population, oral, Long-term - systemic effects, 300 mg/kg bw/d
general population, dermal, Long-term - systemic effects, 300 mg/kg bw/d
general population, inhalative (vapor), Long-term - systemic effects, 900 mg/m³
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Industrial, inhalative, Long-term - systemic effects, 2085 mg/m³
Industrial, dermal, Long-term - systemic effects, 300 mg/kg bw/d
general population, oral, Long-term - systemic effects, 149 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 477 mg/m³
general population, dermal, Long-term - systemic effects, 149 mg/kg bw/d
Propane, CAS: 74-98-6
There are no DNEL values established for the substance.

PNEC

Substance
Propane, CAS: 74-98-6
There are no PNEC values established for the substance.

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	Safety glasses. (EN 166:2001)
Hand protection	0,7 mm Butyl rubber 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. 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	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter AX (DIN EN 14387).
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	aerosol
Color	colourless
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	830 (20°C)
Density [g/cm³]	0,675
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	virtually insoluble
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	not applicable
Auto-ignition temperature	>200
Decomposition temperature [°C]	not applicable
Particle characteristics	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.
Because of the high vapour pressure, containers are liable to burst if temperature rises.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Strong oxidizing agent.

10.6 Hazardous decomposition products

Flammable gases/vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
LD50, oral, Rat, > 5000 mg/kg
Tetrachloroethylene, CAS: 127-18-4
LD50, oral, Rat, 2629 mg/kg (IUCLID)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
LD50, oral, Rat, > 3000 mg/kg bw

Acute dermal toxicity Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
LD50, dermal, Rabbit, > 5000 mg/kg

Acute inhalational toxicity Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
LC50, inhalative, Rat, > 4951 mg/m³/4h
Tetrachloroethylene, CAS: 127-18-4
LC50, inhalative, Rat, 27,58 mg/l 4h OECD 403 (IUCLID)
Propane, CAS: 74-98-6
LC50, inhalative, Rat, > 1443 mg/l (15 min) (Lit.)

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
Rabbit, not irritating (OECD 405)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Eye, Rabbit, In vivo study, non-irritating
Propane, CAS: 74-98-6
Eye, non-irritating

Skin corrosion/irritation Irritant

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
Rabbit, not irritating (OECD 404)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
dermal, Rabbit, OECD 404, irritant
Propane, CAS: 74-98-6
dermal, non-irritating

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
No information available.

Propane, CAS: 74-98-6
inhalative, non-sensitizing
dermal, non-sensitizing

Specific target organ toxicity — single exposure

Vapours may cause drowsiness and dizziness.

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
NOAEC, inhalative, Human, 1500-2500 mg/m³
Propane, CAS: 74-98-6
inhalative, non-irritating

Specific target organ toxicity — repeated exposure

Based on available data, the classification criteria are not met.

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
NOAEC, inhalative, Rat, > 24,3g/m³ (13 weeks)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
NOAEC, inhalative, Rat, 12470 mg/m³, Study, negativ
Propane, CAS: 74-98-6
NOAEC, inhalative, Rat, 4437 mg/m³

Mutagenicity

Does not contain a relevant substance that meets the classification criteria.

Substance
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
No information available.

Reproduction toxicity

Does not contain a relevant substance that meets the classification criteria.

Substance
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
NOAEC, inhalative, Rat, 31680 mg/m³, In vivo study, negativ

Carcinogenicity

This product contains one or more substances of categorie Carc. 2 (CLP).

Substance
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
No information available.

Aspiration hazard

Based on available data, the classification criteria are not met.

General remarks

Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, CAS: 64742-48-9
EL0, (48h), Daphnia magna, 1000 mg/l
EL50, (72h), Algae, > 1000 mg/l
NOELR, (72h), Algae, 100 mg/l
LL50, (96h), Oncorhynchus mykiss, > 1000 mg/l
Tetrachloroethylene, CAS: 127-18-4
LC50, (96h), Oncorhynchus mykiss, 4,99 mg/l (OECD 203 (Lit.)
EC50, (48h), Daphnia magna, 22 mg/l (OECD 202 (Lit.)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
EC50, (72h), Pseudokirchneriella subcapitata, 10 - 30 mg/l
EC50, (48h), Daphnia magna, 3 mg/l
NOEC, (21d), Daphnia magna, 0,17 mg/l
NOELR, (72h), Pseudokirchneriella subcapitata, 10 mg/l
LL50, (96h), Oncorhynchus mykiss, > 13,4 mg/l

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

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.

12.7 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 must be disposed of in accordance with national regulations.

Product

Dispose of as hazardous waste.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	1950
Inland navigation (ADN)	1950
Marine transport in accordance with IMDG	1950
Air transport in accordance with IATA	1950

14.2 UN proper shipping name

Transport by land according to ADR/RID	Aerosols
- Classification Code	5F
- Label	
- ADR LQ	1 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D)
Inland navigation (ADN)	Aerosols
- Classification Code	5F
- Label	
Marine transport in accordance with IMDG	Aerosols (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
- EMS	F-D, S-U
- Label	
- IMDG LQ	1 l
Air transport in accordance with IATA	Aerosols, flammable
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	2
Inland navigation (ADN)	2
Marine transport in accordance with IMDG	2.1
Air transport in accordance with IATA	2.1

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

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

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

TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	100 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 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
IUCLID = 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

16.2 Other information

Classification procedure

Aerosol 1: H222 Extremely flammable aerosol. (Bridging principle "Aerosols") H229 Pressurised container: May burst if heated. (Bridging principle "Aerosols")
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none