

## SAFETY DATA SHEET of:

### Thermoblack 400ml

Revision date: Wednesday, January 31, 2024  
S123.454

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

##### 1.1 Product identifier:

Thermoblack 400ml

UFI: /

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

/

Concentration in use: /

##### 1.3 Details of the supplier of the safety data sheet:

###### Dovre NV

Nijverheidsstraat 18

2381 Weelde

Phone: 003214659191 – E-mail: – Website:

##### 1.4 Emergency telephone number:

+32 70 245 245

#### SECTION 2: Hazards identification:

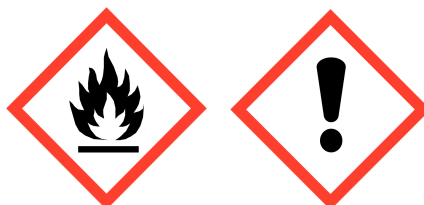
##### 2.1 Classification of the substance or mixture:

Classification of the substance or mixture in accordance with regulation (EU) 1272/2008

H222 Flam. Aerosol 1 H229 H312+H332 Acute tox. 4 H315 Skin Irrit. 2 H319 Eye Irrit. 2

##### 2.2 Label elements:

Pictograms



## Signal word

Danger

## Hazard statements

<b>H222 Flam. Aerosol 1:</b>	Extremely flammable aerosol.
<b>H229:</b>	Pressurised container: May burst if heated.
<b>H312+H332 Acute tox. 4:</b>	Harmful in contact with skin or if inhaled.
<b>H315 Skin Irrit. 2:</b>	Causes skin irritation.
<b>H319 Eye Irrit. 2:</b>	Causes serious eye irritation.

## Precautionary statements

<b>P210:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P251:</b>	Do not pierce or burn, even after use.
<b>P305+P351+P338:</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P362+P364:</b>	Take off contaminated clothing and wash it before reuse.
<b>P410+P412:</b>	Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.

## Contains

Solvent naphtha (petroleum), light arom., Low boiling point naphtha - unspecified 1-Butanol Xylene, mixture of isomers

## 2.3 Other hazards:

None

## SECTION 3: Composition/information on ingredients:

### 3.2 Mixtures:

n-Butane (<0,01% Butadiene -1,3)	≤ 30 %	CAS number:	106-97-8
		EINECS:	203-448-7
		REACH Registration number:	Annex V
		CLP Classification:	H220 Flam. Gas 1
Xylene, mixture of isomers	≤ 30 %	CAS number:	1330-20-7
		EINECS:	215-535-7
		REACH Registration number:	01-2119488216-32
		CLP Classification:	H226 Flam. Liq. 3 H304 Asp. Tox. 1 H312 Acute tox. 4 H315 Skin Irrit. 2 H319 Eye Irrit. 2 H332 Acute tox. 4 H335 STOT SE 3 H373 STOT RE 2 H412 Aquatic Chronic 3
		Additional data:	ATE (H312) = 1000 mg/kg ; ATE (H332) = 11 mg/kg

Propane	≤ 20 %	CAS number: 74-98-6 EINECS: 200-827-9 REACH Registration number: Annex V CLP Classification: H220 Flam. Gas 1
Hydrocarbons, C9-C10, n-alkanes, iso-alkanes, cyclic, <2% aromatics	≤ 20 %	CAS number: / EINECS: 927-241-2 REACH Registration number: 01-2119471843-32 CLP Classification: EUH066 H226 Flam. Liq. 3 H304 Asp. Tox. 1 H336 STOT SE 3 H412 Aquatic Chronic 3
Acetone	≤ 7 %	CAS number: 67-64-1 EINECS: 200-662-2 REACH Registration number: 01-2119471330-49 CLP Classification: EUH066 H225 Flam. Liq. 2 H319 Eye Irrit. 2 H336 STOT SE 3
n-Butylacetate	≤ 7 %	CAS number: 123-86-4 EINECS: 204-658-1 REACH Registration number: 01-2119485493-29 CLP Classification: EUH066 H226 Flam. Liq. 3 H336 STOT SE 3
Ethylbenzene	≤ 5 %	CAS number: 100-41-4 EINECS: 202-849-4 REACH Registration number: 01-2119489370-35 CLP Classification: H225 Flam. Liq. 2 H304 Asp. Tox. 1 H332 Acute tox. 4 H373 STOT RE 2 H412 Aquatic Chronic 3
1-Butanol	≤ 3 %	CAS number: 71-36-3 EINECS: 200-751-6 REACH Registration number: 01-2119484630-38 CLP Classification: H226 Flam. Liq. 3 H302 Acute tox. 4 H315 Skin Irrit. 2 H318 Eye Dam. 1 H335 STOT SE 3 H336 STOT SE 3

Methanol	≤ 0.9 %	<b>CAS number:</b> 67-56-1 <b>EINECS:</b> 200-659-6 <b>REACH Registration number:</b> 01-2119433307-44 <b>CLP Classification:</b> H225 Flam. Liq. 2 H301 Acute tox. 3 H311 Acute tox. 3 H331 Acute tox. 3 H370 STOT SE 1  <b>Additional data:</b> H370 >10% ; H371 3-10% ; ATE(H301) = 143,00 mg/kg ; ATE (H311) = 300 mg/kg ; ATE (H331) = 3 mg/L
Solvent naphtha (petroleum), light arom., Low boiling point naphtha - unspecified	≤ 0.9 %	<b>CAS number:</b> 64742-95-6 <b>EINECS:</b> 265-199-0 <b>REACH Registration number:</b> / <b>CLP Classification:</b> EUH066 H226 Flam. Liq. 3 H304 Asp. Tox. 1 H335 STOT SE 3 H336 STOT SE 3 H411 Aquatic Chronic 2

For the full text of the H phrases mentioned in this section, see section 16.

## SECTION 4: First aid measures:

### 4.1 Description of first aid measures:

Always ask medical advice as soon as possible should serious or continuous disturbances occur.

<b>Skin contact:</b>	Remove contaminated clothing, rinse skin with plenty of water and immediately transport to hospital.
<b>Eye contact:</b>	Thoroughly rinse with water (contact lenses to be removed if this is easily done) then take to physician.
<b>Ingestion:</b>	Rinse mouth, do not induce vomiting, take to hospital immediately.
<b>Inhalation:</b>	Let sit upright, fresh air, rest and take to hospital.

### 4.2 Most important symptoms and effects, both acute and delayed:

<b>Skin contact:</b>	Redness, pain
<b>Eye contact:</b>	Redness, pain, blurred vision
<b>Ingestion:</b>	Diarrhoea, headache, abdominal cramps, sleepiness, vomiting
<b>Inhalation:</b>	Sore throat, cough, shortness of breath, headache

### 4.3 Indication of any immediate medical attention and special treatment needed:

None

## SECTION 5: Firefighting measures:

### 5.1 Extinguishing media:

CO2, foam, powder, sprayed water

## 5.2 Special hazards arising from the substance or mixture:

None

## 5.3 Advice for firefighters:

Extinguishing agents to be avoided: None

## SECTION 6: Accidental release measures:

### 6.1 Personal precautions, protective equipment and emergency procedures:

Do not walk into or touch spilled substances and avoid inhalation of fumes, smoke, dusts and vapours by staying up wind. Remove any contaminated clothing and used contaminated protective equipment and dispose of it safely.

### 6.2 Environmental precautions:

Do not allow to flow into sewers or open water.

### 6.3 Methods and material for containment and cleaning up:

Contain released substance, store into suitable containers. If possible, remove by using absorbent material.

### 6.4 Reference to other sections:

For further information, check sections 8 & 13.

## SECTION 7: Handling and storage:

### 7.1 Precautions for safe handling:

Handle with care to avoid spillage.

### 7.2 Conditions for safe storage, including any incompatibilities:

Keep in a sealed container in a closed, frost-free, ventilated room.

### 7.3 Specific end use(s):

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## SECTION 8: Exposure controls/personal protection:




### 8.1 Control parameters:

Listing of the hazardous ingredients in section 3, of which the workplace exposure limit values are known

n-Butane (<0,01% Butadiene -1,3) 2370 mg/m<sup>3</sup>, Xylene, mixture of isomers 221 mg/m<sup>3</sup>, Propane 1800 mg/m<sup>3</sup>, Acetone 1210 mg/m<sup>3</sup>, n-Butylacetate 238 mg/m<sup>3</sup>, Ethylbenzene 87 mg/m<sup>3</sup>, 1-Butanol 62 mg/m<sup>3</sup>, Methanol 266 mg/m<sup>3</sup>

### 8.2 Exposure controls:

<b>Inhalation protection:</b>	If necessary, use an air-purifying face mask in case of respiratory hazards.	
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<b>Skin protection:</b>	Handling with butyl-gloves (EN 374). Breakthrough time: >480' Material thickness: 0,7 mm. Thoroughly check gloves before use. Take of the gloves properly without touching the outside with your bare hands. The manufacturer of the protective gloves has to be consulted about the suitability for a specific work station. Wash and dry your hands.	
<b>Eye protection:</b>	Keep an eye-rinse bottle within reach. Tight-fitting safety goggles. Wear a face shield and protective suit in case of exceptional processing problems.	
<b>Other protection:</b>	Wear impermeable clothing. The type of protective equipment depends on the concentration and amount of hazardous substances at the work station in question.	
<b>Environmental controls:</b>	Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions. For further information, check sections 6 and 13.	
<b>Engineering controls:</b>	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Adequate ventilation should be provided so that exposure limits are not exceeded. For further information, check section 7.	

## SECTION 9: Physical and chemical properties:

### 9.1 Information on basic physical and chemical properties:

<b>Physical state, 20°C:</b>	Liquid
<b>Colour:</b>	colourless
<b>Odour:</b>	characteristic
<b>Melting point/freezing point:</b>	/
<b>Boiling point/Boiling range:</b>	-42 °C – 166 °C
<b>Flammability (solid, gas):</b>	Not applicable
<b>Lower explosive limit, (Vol %):</b>	1.000 %
<b>Upper explosive limit, (Vol %):</b>	15.000 %
<b>Flash point:</b>	-11 °C
<b>Auto-ignition temperature:</b>	370 °C
<b>Decomposition temperature:</b>	/
<b>pH:</b>	/
<b>pH 1% diluted in water:</b>	/
<b>Kinematic viscosity, 40°C:</b>	1 mm <sup>2</sup> /s
<b>Solubility in water:</b>	Not soluble
<b>Partition coefficient: n-octanol/water (log value):</b>	Not applicable
<b>Vapour pressure, 20°C,:</b>	853,000 Pa
<b>Relative density, 20°C:</b>	0.9800 kg/l
<b>Vapour density:</b>	Not applicable
<b>Particle characteristics:</b>	/

### 9.2 Other information:

<b>Dynamic viscosity, 20°C:</b>	1 mPa.s
<b>Sustained combustion test:</b>	/
<b>Evaporation rate (n-BuAc = 1):</b>	5.900
<b>Volatile organic component (VOC):</b>	97.84 %
<b>Volatile organic component (VOC):</b>	771.203 g/l

## SECTION 10: Stability and reactivity:

### 10.1 Reactivity:

Stable under normal conditions.

### 10.2 Chemical stability:

Extremely high or low temperatures.

### 10.3 Possibility of hazardous reactions:

None

### 10.4 Conditions to avoid:

Protect from sunlight and do not expose to temperatures exceeding + 50°C.

### 10.5 Incompatible materials:

Keep away from sources of ignition

### 10.6 Hazardous decomposition products:

Under recommended usage conditions, hazardous decomposition products are not expected.

## SECTION 11: Toxicological information:

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

#### a) acute toxicity:

H312+H332 Acute tox. 4: Harmful in contact with skin or if inhaled.

**Calculated acute toxicity, ATE oral:** > 2,000 mg/kg

**Calculated acute toxicity, ATE dermal:** > 2,000 mg/kg

n-Butane (<0,01% Butadiene -1,3)	LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
Xylene, mixture of isomers	LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: 1,000 mg/kg LC50, Inhalation, rat, 4h: 11 mg/l
Propane	LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
Hydrocarbons, C9-C10, n-alkanes, iso-alkanes, cyclic, <2% aromatics	LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l

Acetone	LD50 oral, rat: $\geq 5,000$ mg/kg LD50 dermal, rabbit: $\geq 5,000$ mg/kg LC50, Inhalation, rat, 4h: $\geq 50$ mg/l
n-Butylacetate	LD50 oral, rat: $\geq 5,000$ mg/kg LD50 dermal, rabbit: $\geq 5,000$ mg/kg LC50, Inhalation, rat, 4h: $\geq 50$ mg/l
Ethylbenzene	LD50 oral, rat: 3,500 mg/kg LD50 dermal, rabbit: $\geq 5,000$ mg/kg LC50, Inhalation, rat, 4h: 11 mg/l
1-Butanol	LD50 oral, rat: 790 mg/kg LD50 dermal, rabbit: $\geq 5,000$ mg/kg LC50, Inhalation, rat, 4h: $\geq 50$ mg/l
Methanol	LD50 oral, rat: 143 mg/kg LD50 dermal, rabbit: 300 mg/kg LC50, Inhalation, rat, 4h: 3 mg/l
Solvent naphtha (petroleum), light arom., Low boiling point naphtha - unspecified	LD50 oral, rat: $\geq 5,000$ mg/kg LD50 dermal, rabbit: $\geq 5,000$ mg/kg LC50, Inhalation, rat, 4h: $\geq 50$ mg/l

b) skin corrosion/irritation:

H315 Skin Irrit. 2: Causes skin irritation.

c) serious eye damage/irritation:

H319 Eye Irrit. 2: Causes serious eye irritation.

d) respiratory or skin sensitisation:

Not classified according to the CLP calculation method

e) germ cell mutagenicity:

Not classified according to the CLP calculation method

f) carcinogenicity:

Not classified according to the CLP calculation method

g) reproductive toxicity:

Not classified according to the CLP calculation method

h) STOT-single exposure:

Not classified according to the CLP calculation method

i) STOT-repeated exposure:

Not classified according to the CLP calculation method

j) aspiration hazard:

Not classified according to the CLP calculation method

### 11.2 Information on other hazards:

No additional data available

## SECTION 12: Ecological information:

### 12.1 Toxicity:

Xylene, mixture of isomers	LC50 (Fish): EC50 (Daphnia): EC50 (Algae):	1-10 mg/L (96h) 1-10 mg/L (96h) 1-10 mg/L (96h)
Acetone	LC50 (Fish): EC50 (Daphnia):	5540 mg/L (Oncorhynchus mykiss) (96h) 8800 mg/L (48h)
n-Butylacetate	LC50 (Fish): EC50 (Daphnia): EC50 (Algae): NOEC (Algae):	18 mg/L (96h) 44 mg/L (48h) 674,7 mg/L (72h) 200 mg/L (72h)
Methanol	LC50 (Fish): EC50 (Daphnia): EC50 (Algae):	15400 mg/L (96h) 18260 mg/L (96h) ca. 22000 mg/L (96h)

### 12.2 Persistence and degradability:

No additional data available

### 12.3 Bioaccumulative potential:

	Additional data:
n-Butane (<0,01% Butadiene -1,3)	log Pow: 2,890
n-Butylacetate	Log Pow: 1.81 - 2.3
Methanol	Log Pow: -0.77

### 12.4 Mobility in soil:

**Water hazard class, WGK (AwSV):** 2  
**Solubility in water:** Not soluble

### 12.5 Results of PBT and vPvB assessment:

No additional data available

### 12.6 Endocrine disrupting properties:

No additional data available

### 12.7 Other adverse effects:

No additional data available

## SECTION 13: Disposal considerations:

### 13.1 Waste treatment methods:

Draining into the sewers is not permitted. Removal should be carried out by licensed services. Possible restrictive regulations by local authority should always be adhered to.

## SECTION 14: Transport information:



### 14.1 UN number or ID number:

1950

### 14.2 UN proper shipping name:

UN 1950 Aerosols, flammable, 5F, (D)

### 14.3 Transport hazard class(es):

**Class(es):** 5F  
**Identification number of the hazard:** Not applicable

### 14.4 Packing group:

Not applicable

### 14.5 Environmental hazards:

Not dangerous to the environment

### 14.6 Special precautions for user:

**Hazard characteristics:** Risk of fire. Risk of explosion. Containments may explode when heated.  
**Additional guidance:** Take cover. Keep out of low areas.

### 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:

**Water hazard class, WGK (AwSV):** 2  
**Volatile organic component (VOC):** 97.845 %  
**Volatile organic component (VOC):** 771.203 g/l

**Composition by regulation (EC) 648/2004:** Aliphatic hydrocarbons > 30%, Aromatic hydrocarbons 15% - 30%

Contains substances subject to Regulation (EU) No 2019/1148 on the marketing and use of explosives precursors.

## 15.2 Chemical Safety Assessment:

No data available

## SECTION 16: Other information:

### Legend to abbreviations used in the safety data sheet:

<b>ADR:</b>	The European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>ATE:</b>	Acute Toxicity Estimate
<b>BCF:</b>	Bioconcentration factor
<b>CAS:</b>	Chemical Abstracts Service
<b>CLP:</b>	Classification, Labelling and Packaging of chemicals
<b>EINECS:</b>	European INventory of Existing commercial Chemical Substances
<b>LC50:</b>	median Lethal Concentration for 50% of subjects
<b>LD50:</b>	median Lethal Dose for 50% of subjects
<b>Nr.:</b>	Number
<b>PTB:</b>	Persistent, Toxic, Bioaccumulative
<b>STOT:</b>	Specific Target Organ Toxicity
<b>UFI:</b>	Unique Formula Identifier
<b>vPvB:</b>	very Persistent and very Bioaccumulative substances
<b>WGK:</b>	Water hazard class
<b>WGK 1:</b>	Slightly hazardous for water
<b>WGK 2:</b>	Hazardous for water
<b>WGK 3:</b>	Extremely hazardous for water

### Legend to the H Phrases used in the safety data sheet

EUH066: Repeated exposure may cause skin dryness or cracking. H220 Flam. Gas 1: Extremely flammable gas. H222 Flam. Aerosol 1: Extremely flammable aerosol. H225 Flam. Liq. 2: Highly flammable liquid and vapour. H226 Flam. Liq. 3: Flammable liquid and vapour. H229: Pressurised container: May burst if heated. H301 Acute tox. 3: Toxic if swallowed. H302 Acute tox. 4: Harmful if swallowed. H304 Asp. Tox. 1: May be fatal if swallowed and enters airways. H311 Acute tox. 3: Toxic in contact with skin. H312 Acute tox. 4: Harmful in contact with skin. H312+H332 Acute tox. 4: Harmful in contact with skin or if inhaled. H315 Skin Irrit. 2: Causes skin irritation. H318 Eye Dam. 1: Causes serious eye damage. H319 Eye Irrit. 2: Causes serious eye irritation. H331 Acute tox. 3: Toxic if inhaled. H332 Acute tox. 4: Harmful if inhaled. H335 STOT SE 3: May cause respiratory irritation. H336 STOT SE 3: May cause drowsiness or dizziness. H370 STOT SE 1: Causes damage to organs. H373 STOT RE 2: May cause damage to organs through prolonged or repeated exposure. H411 Aquatic Chronic 2: Toxic to aquatic life with long lasting effects. H412 Aquatic Chronic 3: Harmful to aquatic life with long lasting effects.

### CLP Calculation method

Calculation method

### Reason of revision, changes of following items

None

**SDS reference number**

ECM-105059,00

*This safety information sheet has been compiled in accordance with annex II/A of the regulation (EU) No 2020/878. Classification has been calculated in accordance with European regulation 1272/2008 with their respective amendments. It has been compiled with the utmost care. We cannot, however, accept responsibility for damage, of any kind, that may be caused by using these data or the product concerned. To use this preparation for an experiment or a new application , the user must carry out a material suitability and safety study himself.*