

Reference material BAM-K008a

Safety Data Sheet

according to Regulation (EU) 2020/878

Date of issue: 20.04.2022

Revision date: -

Version/replaced version: 1.0/-



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

1.1. Product identifier

Product form : Mixture
Product name : Reference material BAM-K008a
UFI : -

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Calibration standard for the analytical standard procedures acc. to ISO 16703, ISO 9377-2 and EN 14039

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Bundesanstalt für Materialforschung und -prüfung (BAM)
Richard-Willstätter-Straße 11
12489 Berlin - Germany
T +49 (0) 30 8104-1170
matthias.koch@bam.de

Safety Data Sheet: DLAC Dienstleistungsagentur Chemie GmbH, E-mail: sds@dlac-gmbh.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number
Germany	Giftnotruf der Charité Universitätsmedizin Berlin	Oranienburger Straße 285 13437 Berlin	+49 30 30686700 (German, English) only in Germany; in all other cases use the information below

Information on national poison control centres within the EU can be found under the member states information on their national helpdesks:

<http://echa.europa.eu/de/support/helpdesks/national-helpdesks/list-of-national-helpdesks>

Global information on poison centres can be found at the WHO homepage: http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226
Aspiration hazard, Category 1 H304
Skin corrosion/irritation, Category 2 H315
Acute toxicity (inhal.), Category 4 H332
Carcinogenicity, Category 2 H351
Specific target organ toxicity – Repeated exposure, Category 2 H373
Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411
Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Causes skin irritation. Harmful if inhaled. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) : Danger
Contains : Fuels, diesel; Gasoil— unspecified, C8-C26 branched and linear hydrocarbons – Distillates, Alkanes, C10-20-branched and linear
Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.

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Precautionary statements (CLP) :

- H332 - Harmful if inhaled.
- H351 - Suspected of causing cancer.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H411 - Toxic to aquatic life with long lasting effects.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, eye protection.
- P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P331 - Do NOT induce vomiting.
- P403+P235 - Store in a well-ventilated place. Keep cool.
- P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Fuels, diesel; Gasoil — unspecified	CAS-No.: 68334-30-5 EC-No.: 269-822-7 EC Index-No.: 649-224-00-6 REACH-No.: 01-2119484664-27-xxxx	< 100	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
C8-C26 branched and linear hydrocarbons – Distillates	CAS-No.: 848301-67-7 EC-No.: 481-740-5 REACH-No.: 01-0000020119-75-xxxx	0 – 20	Asp. Tox. 1, H304
Alkanes, C10-20-branched and linear	CAS-No.: 928771-01-1 EC-No.: 618-882-6 REACH-No.: 01-2119450077-42-xxxx	0 – 20	Asp. Tox. 1, H304
Naphthalene substance with a Community workplace exposure limit	CAS-No.: 91-20-3 EC-No.: 202-049-5 EC Index-No.: 601-052-00-2	0 – 0.5	Carc. 2, H351 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. In case of loss of conscience place the victim in the recovery position. Call a physician immediately.

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Do not induce vomiting - aspiration hazard. Rinse mouth. Call a physician immediately

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation : Harmful if inhaled.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Risk of lung oedema.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Extinguishing powder. Carbon dioxide. Water spray. Sand.

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Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.
Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon monoxide. Carbon dioxide.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate air ventilation. No open flames, no sparks, and no smoking. Do not breathe vapours/spray. Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose of in accordance with relevant local regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Use only outdoors or in a well-ventilated area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Hygiene measures : When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.
Storage conditions : Store in original container. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep out of direct sunlight. Store locked up.
Prohibitions on mixed storage : Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Fuels, diesel; Gasoil— unspecified (68334-30-5)		
United Kingdom	Local name	Normal and branched chain alkanes
United Kingdom	WEL TWA [mg/m ³]	1200 mg/m ³ (≥ C7)
Ireland	Local name	Diesel fuel/kerosene
Ireland	OEL TWA [mg/m ³]	100 mg/m ³
Ireland	Notes	SK
Naphthalene (91-20-3)		
EU	Local name	Naphthalene
EU	IOEL TWA [mg/m ³]	50 mg/m ³
EU	IOEL TWA [ppm]	10 ppm
Ireland	Local name	Naphthalene

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Naphthalene (91-20-3)		
Ireland	OEL TWA [mg/m ³]	50 mg/m ³
Ireland	OEL TWA [ppm]	10 ppm
Malta	Local name	Naphtalene
Malta	OEL TWA [mg/m ³]	50 mg/m ³
Malta	OEL TWA [ppm]	10 ppm

Fuels, diesel; Gasoil— unspecified (68334-30-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	4288 mg/m ³
Long-term - systemic effects, dermal	2.91 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	68.34 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	2572.8 mg/m ³
Long-term - systemic effects, oral	1.25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	20.22 mg/m ³
Long-term - systemic effects, dermal	1.25 mg/kg bodyweight/day

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize vapour concentrations.

Hand protection:

Wear suitable gloves (EN 374). Nitrile rubber, 0.35 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Chemical goggles or safety glasses (EN 166).

Skin and body protection:

Wear suitable protective clothing.

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Combined gas/dust mask with filter type A/P.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless - yellow
Odour	: Characteristic
Melting point/freezing point	: No data available
Boiling point or initial boiling point and boiling range	: 170 – 390 °C
Flammability	: Flammable liquid and vapour.
Lower and upper explosion limit	: 1 – 6 vol.-%
Flash point	: > 55 °C (ASTM D-93 / PMCC)
Auto-ignition temperature	: > 220 °C
Decomposition temperature	: No data available
pH	: Not applicable
Kinematic viscosity	: 2 – 4.5 mm ² /s (40 °C)
Solubility	: Water: practically insoluble
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: < 0.1 hPa (20 °C)
Density and/or relative density	: 0.82 – 0.845 g/cm ³ (15 °C)
Relative vapour density	: No data available
Particle characteristics	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Pourpoint : $\leq 6\text{ }^{\circ}\text{C}$

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

No hazardous decomposition products known. In case of fire: Toxic fumes may be released. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

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

Acute toxicity : Harmful if inhaled.

Fuels, diesel; Gasoil— unspecified (68334-30-5)	
LD50 oral rat	17900 mg/kg
LD50 dermal rabbit	> 4300 mg/kg
LC50 Inhalation rat	4.1 mg/l/4 h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.

11.2. Information on other hazards

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

Fuels, diesel; Gasoil— unspecified (68334-30-5)	
LL50 fish	21 mg/l 96 h, Oncorhynchus mykiss
EL50 crustacea	68 mg/l 48 h, Daphnia magna
EL50 algae	10 mg/l 72 h, Pseudokirchneriella subcapitata
NOEL chronic algae	1 mg/l 72 h, Pseudokirchneriella subcapitata

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12.2. Persistence and degradability

Fuels, diesel; Gasoil— unspecified (68334-30-5)

Persistence and degradability	Readily biodegradable.
Biodegradation	60 % 28 d (OECD 301 F)

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: This material and its container must be disposed of in a safe way. Do not empty into drains.
European List of Waste (LoW) code	: 13 07 01* - Fuel oil and diesel
Waste code number	: The valid EWC waste code numbers are source related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR)	: UN 1202
UN-No. (IMDG)	: UN 1202
UN-No.(IATA)	: UN 1202

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: DIESEL FUEL
Proper Shipping Name (IMDG)	: DIESEL FUEL
Proper Shipping Name (IATA)	: Diesel fuel
Transport document description (ADR)	: UN 1202 DIESEL FUEL, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1202 DIESEL FUEL, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1202 Diesel fuel, 3, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Danger labels (IATA) : 3

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14.4. Packing group

Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III

14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 640K, 664
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: 3Y

Transport by sea

Special provisions (IMDG)	: 363
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Immiscible with water.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3L

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Changes compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet
STP	Sewage Treatment Plant
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.