

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

1.1. Product identifier

Product name: BMR24
Product indicator: Brake cleaner 400 ml
Synonyme: BMR24

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

Use of the substance/mixture: Cleaner

1.3. Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt

Hersteller/Lieferant Dichtstofftechnik Müller & Müller GmbH & Co.KG
Dübener Landstraße 1
06905 Bad Schmiedeberg OT Söllichau
Telefon +49 34 2 43 / 34 55 - 00
Fax +49 34 2 43 / 34 55 - 20
Email kontakt@dubaust.de

1.4. Emergency number

Giftnotrufzentrale Berlin, 24 h daily: +49 (0) 30 19240

SECTION 2:: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Aerosol 1; H222-H229
Asp. Tox. 1; H304
Skin Irrit. 2; H315
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation
Safety Label P102 Keep out of the reach of children.

Hazard components for labelling

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane

May cause allergic reactions. Safety data sheet available on request.

Signal word

Danger

Pictograms



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.
P261 Avoid breathing spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS-No.	Chemical name			Anteil
	EG-No	Index-No	REACH-No	
	Classification (GB CLP Regulation)			
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane			50- <100 %
	921-024-6		01-2119475514-35	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
124-38-9	carbon dioxide			3-<5 %
	204-696-9			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS-No	EG-No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
	921-024-6	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	50-<100 %
	inhalation: LC50 = > 25,2 mg/l (vapours); dermal: LD50 = > 2800 - 3100 mg/kg; oral: LD50 = > 5000 mg/kg		

Labelling for contents according to Regulation (EC) No 648/2004

>= 30 % aliphatic hydrocarbons.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

Verschlucken:

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water fog. Foam. Carbon dioxide (CO₂). Extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice :	Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protection equipment.
Pers. protection measures:	Personal protective equipment see section 8
For non-emergency personnel:	First aider: Pay attention to self-protection!
For emergency responders:	Fight fire with normal precautions from a reasonable distance.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

For containment	Prevent spread over a wide area (e.g. by containment or oil barriers).
For cleaning up	Clean contaminated articles and floor according to the environmental legislation.
Other information	Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Advice on safe handling

Observe instructions for use.

Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. When using do not eat, drink, smoke, sniff. Wear personal protection equipment (refer to section 8). In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS-No	Substance	ppm	mg/m ³	F/m ³	Category	Origin
124-38-9	Carbon dioxide	5000	9150		TWA (8 h)	WEL
		15000	27400		STEL (15 min)	WEL

CAS-Nr.	Bezeichnung			
DNL Typ		Exposure route	Effect	Value
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane			
Worker DNEL, long-term		inhalation	systemic	2035 mg/m³
Worker DNEL, long-term		dermal	systemic	773 mg/kg bw/d
Consumer DNEL, long-term		inhalation	systemic	608 mg/m³
Consumer DNEL, long-term		dermal	systemic	699 mg/kg bw/d
Consumer DNEL, long-term		oral	systemic	699 mg/kg bw/d

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

Blut (B)
Urin (U)

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.DIN EN 166

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min Thickness of the glove material 0,45 mm EN ISO 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..
Filtering device with filter or ventilator filtering device of type: AX
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

ABSCHNITT 9: Physikalische und chemische Eigenschaften

9.1. Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

Physical state: liquid
Colour: colourless
Odour: solvent like

Changes of state	Test method
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	88°C
Flammability Solid/liquid Gas:	not applicable
Flash point	-12°C
Lower explosion limits:	1 Vol.-%
Upper explosion limits:	8 Vol.-%
Auto-ignition temperature:	>200°C
Flash point	-12°C
Decomposition temperature:	not determined

Changes of state	Test method
pH-Value (at 20 °C):	not applicable
Solubility in other solvents	not determined
Viscosity / kinematic:	> 7 mm ² /s ISO 3219 (bei 40 °C)
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	0,673 g/cm ³ DIN 51757
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Self-ignition temperature not applicable

Solid: not applicable

Gas: not applicable

Oxidizing properties. Not oxidising

Other safety characteristics

Evaporation rate: not determined

Solvent separation test: No information available.

Solvent content: No information available.

Solid content: not determined

Sublimation point: No information available.

Softening point: No information available.

Flow time: No information available.

Further Information

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS-No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane				
	oral	LD50 > 5000 mg/kg	Rat		
	dermal	LD50 > 2800-3100 mg/kg	Rat		
	Inhalation (4h) vapour	LC50 >25,2 mg/l	Rat		

Irritation and corrosivity

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
No indications of human carcinogenicity exist.
No indications of human germ cell mutagenicity exist.

STOT-single exposure

May cause drowsiness or dizziness. (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane)

STOT-repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Specific effects in experiment on an animal

No information available.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS-No	Chemical name					
	Aquatic toxicity	Dose	[h] I [d]	Species	Source	Method
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane					
	Acute fish toxicity	LC50 > 1-10 mg/l	96 h	Pimephales promelas		
	Acute algae toxicity	ErC50 > 10-30 mg/l	72 h	Pseudokirchneriella subcapitata		OECD Guideline 201
	Acute crustacea toxicity	EL50 > 1-10 mg/l	48 h	Daphnia magna		
	Fish toxicity	NOEC 2,045 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	
	Crustacea toxicity	NOEC 1 mg/l	21 d	Daphnia magna	SIDS Initial Assessment Report For SIAM	OECD Guideline 201

12.2. Persistence and degradability

There are no data available on the mixture itself. AOX (mg/l): 0

CAS-No	Chemical name			
	Method	Value	d	Source
	Evaluation			
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane			
	OECD Guideline 301 F	98%	28	
	Easily biodegradable (concerning to the criteria of the OECD)			

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS-No	Chemical name	Log Pow
	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane	3,4 - 5,2

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations: Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 - WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN-Number or ID-Number:	UN 1950
14.2. UN- proper shipping name:	Aerosols
14.3. Transport hazard class(es):	2
14.4. packing group :	
Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN-Number oder ID-Number:	UN 1950
14.2. UN proper shipping name	Aerosol
14.3. Transport hazard class(es):	2

14.4. Packing group:

Hazard label:	2.1
Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN-Number or ID-Number: UN 1950

14.2. UN proper shipping name:

AEROSOLS flammable (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane)

14.3 Transport hazard class(es): 2.1

14.4. Packing group:

Hazard label:	2.1
Marine pollutant:	yes
Special Provisions:	63, 190, 277, 327, 344, 381, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1950

14.2. UN proper shipping name: AEROSOLS, flammable

14.3. Transport hazard class(es): 2.1

14.4. Packing group:

Hazard label:	2.1
Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-packing instructions - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	yes
Danger releasing substance:	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane

14.6. Special precautions for user

Warning: Flammable gases.

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

EU regulatory information

2010/75/EU (VOC):

2004/42/EC (VOC):

Information according to 2012/18/EU

Additional information:

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40

No information available.

No information available.

E2 Hazardous to the Aquatic Environment

P3b

Zusätzliche Hinweise

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Aerosol Directive (75/324/)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

2 - obviously hazardous to water Status:

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9,14.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement

concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer

(Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
STEL (EC) Short Term Exposure Limit
LC50: Lethal Concentration
EC50: half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Asp. Tox. 1; H304	Calculation method
Skin Irrit. 2; H315	Bridging principle "Aerosols"
STOT SE 3; H336	Bridging principle "Aerosols"
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)