Safety Data Sheet

Tri-Flow Aerosol

Replaces date: 20/09/2017

Revision date: 28/10/2021
Version: 3.1.0

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

1.1. Product identifier

Trade name: Tri-Flow Aerosol

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

Recommended uses: Lubricant

1.3. Details of the supplier of the safety data sheet

Supplier

Company:	Brd. Klee A/S
Address:	Gadagervej 11-13
Zip code:	2620
City:	Albertslund
E-mail:	klee@brd-klee.dk
Phone:	+45 43 86 83 33

1.4. Emergency Telephone Number

Members of the public: 111 (NHS 111 (Scotland: NHS 24))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Aerosol 1;H222 Aerosol 1;H229 STOT SE 3;H336 Aquatic Chronic 3;H412

Most serious harmful effects: Extremely flammable aerosol. Pressurised container: May burst if heated. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects. Prolonged or repeated inhalation of vapours may cause damage to the central nervous system.

2.2. Label elements

Pictograms

Signal word: Danger

Contains

Substance: Naphtha (petroleum), hydrotreated heavy;

H-phrases

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

P-phrases

P102	Keep out of reach of children.
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+412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122°F.
P501	Dispose of contents/container in accordance with local regulation.

Supplemental information

EUH066	Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

The product does not contain any PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No./ EC No./ REACH Reg. No.	Concentration	Notes	CLP-classification
Naphtha (petroleum), hydrotreated heavy	64742-48-9 265-150-3 01-2119463258-33	10 -< 25%	3	Flam. Liq. 3;H226 Asp. Tox. 1;H304 STOT SE 3;H336
Butane (containing < 0,1 % butadiene (203-450-8))	106-97-8 203-448-7	10 -< 25%		Flam. Gas 1A;H220
Polytetrafluoroethylene	9002-84-0	1 -< 3%		Acute Tox. 4;H332
pentyl acetate	628-63-7 211-047-3	1 -< 3%		Flam. Liq. 3;H226 EUH066
Sulfonic acids, petroleum, barium salts	61790-48-5 263-140-3	1 -< 3%		Acute Tox. 4;H302 Skin Irrit. 2;H315 Acute Tox. 4;H332
2,6-di-tert-butylphenol	128-39-2 204-884-0	1 -< 3%		Skin Irrit. 2;H315 Aquatic Acute 1;H400 Aquatic Chronic 1;H410
(2-methoxymethylethoxy) propanol	34590-94-8 252-104-2 01-2119450011-60	1 -< 3%	12	

Please see section 16 for the full text of H- / EUH-phrases..

3 = H304 is not applicable due to use as aerosols.

12 = The substance is included in the EU list of limit values for occupational exposure

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of persistent discomfort.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of discomfort.

Skin contact: Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.

Eye contact: Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

Burns:	Flush with water until pain ceases. Remove clothing that is not stuck to the skin - seek medical advice/transport to hospital. If possible, continue flushing until medical attention is obtained.
General:	When obtaining medical advice, show the safety data sheet or label.

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

Inhalation of spray mist may cause chemical pneumonia. Prolonged or repeated inhalation of vapours may cause damage to the central nervous system.

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

Treat symptoms. No special immediate treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Extinguish with powder, foam or water mist. Use water or water mist to cool non-ignited stock.
Unsuitable extinguishing media:	Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

CAUTION! Aerosol containers may explode. The product decomposes when combusted and the following toxic gases can be formed: Carbon monoxide and carbon dioxide/ Nitrous gases.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Stay upwind/keep distance from source. Wear gloves. Wear safety goggles if there is a risk of eye splash. In case of insufficient ventilation, wear respiratory protective equipment. Provide adequate ventilation. Smoking and naked flames prohibited.
For emergency responders:	In addition to the above: Protective suit equivalent to EN 368, type 3, is recommended.

6.2. Environmental precautions

Avoid unnecessary release to the environment.

6.3. Methods and material for containment and cleaning up

Wipe up drops and splashes with a cloth.

6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Smoking and naked flames prohibited. The product should be used under well-ventilated conditions and preferably under process ventilation. Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Do not expose to heat (e.g. sunlight). Pressurized container: Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not store with the following: Oxidisers/ Strong alkalis/ Strong acids.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit

Substance name	Time period	ppm	mg/m³	fiber/cm3	Comments	Remarks
Naphtha (petroleum), hydrotreated heavy	-		1200			
Butane (containing < 0,1 % butadiene (203-450-8))	-	600	1450			
pentyl acetate	-	50	270			
(2-methoxymethyl ethoxy)propanol	-	50	308			Sk

Sk = Can be absorbed through the skin.

Measuring methods: Compliance with the stated occupational exposure limits may be checked by occupational hygiene measurements.

Legal basis: EH40/2005 Workplace exposure limits. Last amended January 2020.

DNEL - workers

Naphtha (petroleum), hydrotreated heavy, cas-no 64742-48-9					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	871 mg/m³				
Dermal DNEL (long-term exposure - systemic effects)	208 mg/kg bw/day				

DNEL - general population

Naphtha (petroleum), hydrotreated heavy, cas-no 64742-48-9					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal DNEL (long-term exposure - systemic effects)	125 mg/kg bw/day				
Inhalation DNEL (long-term exposure - systemic effects)	900 mg/m³				
Oral DNEL (long-term exposure - systemic effects)	125 mg/kg bw/day				

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles if there is a risk of eye splash. Eye protection must conform to EN 166.

Personal protective equipment, hand protection: Wear gloves. Type of material: Nitrile rubber. Breakthrough time has not been determined for the product. Change gloves often. Gloves must conform to EN 374.

Personal protective equipment, respiratory protection: In case of insufficient ventilation, wear respiratory protective equipment. Filter type: A. P. Respiratory protection must conform to one of the following standards: EN 136/140/145.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Aerosol
Colour	Brown
Odour	Solvent
Solubility	No data

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	No data	
Freezing point	No data	
Initial boiling point and boiling range	-42 - 213 °C	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	0.8 - 14 vol%	
Flash Point	-17.78 °C	(closed cup)
Auto-ignition temperature	No data	
Decomposition temperature	No data	
pH (solution for use)	No data	
pH (concentrate)	No data	
Kinematic viscosity	No data	
Viscosity	No data	

Partition coefficient n-octonol/water	No data	
Vapour pressure	101.3 kPa	(20 °C)
Density	No data	
Relative density	0.778	
Vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

Parameter	Value/unit	Remarks
Evaporation rate	<1	(Ether = 1)
Heat of combustion	36,03 kJ/g	

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts under heat generation with the following: Oxidisers/ Strong alkalis/ Strong acids.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

Product vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

Avoid heating and contact with ignition sources.

10.5. Incompatible materials

Oxidisers/ Strong alkalis/ Strong acids.

10.6. Hazardous decomposition products

The product decomposes when combusted or heated to high temperatures and the following toxic gases can be formed: Carbon monoxide and carbon dioxide/ Nitrous gases/

SECTION 11: Toxicological information

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

Acute toxicity - oral

Naphtha (petroleum), hydrotreated heavy, cas-no 64742-48-9

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 6g/kg			

2,6-di-tert-butylphenol, cas-no 128-39-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		1320mg/kg			

Spray mist in mouth may irritate mucous membranes in mouth and throat. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - dermal

2,6-di-tert-butylphenol, cas-no 128-39-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		> 10g/kg			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - inhalation

Naphtha (petroleum), hydrotreated heavy, cas-no 64742-48-9

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50	4h	8500mg/m³			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Skin corrosion/irritation

2,6-di-tert-butylphenol, cas-no 128-39-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat			0.5ml	Irritating		

(2-methoxymethylethoxy)propanol, cas-no 34590-94-8

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit			500mg	Irritating		

Degreases and dries the skin. Repeated exposure may cause skin dryness or cracking. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Serious eye damage/eye irritation

(2-methoxymethylethoxy)propanol, cas-no 34590-94-8

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit		24 h	500mg	Irritating		
Human			8mg	Irritating		

May cause eye irritation. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Respiratory sensitisation or skin sensitisation: The product does not have to be classified. Test data are not available.

Germ cell mutagenicity: The product does not have to be classified. Test data are not available.

Carcinogenic properties: The product does not have to be classified. Test data are not available.

Reproductive toxicity: The product does not have to be classified. Test data are not available.

Single STOT exposure: The product releases organic solvent vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxication.

Repeated STOT exposure: Prolonged or repeated inhalation of vapours may cause damage to the central nervous system. The product does not have to be classified. Test data are not available.

Aspiration hazard: Inhalation of spray mist may cause chemical pneumonia. The product does not have to be classified. Test data are not available.

11.2. Information on other hazards

Endocrine disrupting properties: None known.

Other toxicological effects: None known.

SECTION 12: Ecological information

12.1. Toxicity

pentyl acetate, cas-no 628-63-7

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Gambusia affinis		96hLC50	65ppm			

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Naphtha (petroleum), hydrotreated heavy, cas-no 64742-48-9

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
					Readily biodegradable.		

Expected to be biodegradable.

12.3. Bioaccumulative potential

Naphtha (petroleum), hydrotreated heavy, cas-no 64742-48-9

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			BCF	10 - 2500			

Bioaccumulation can be expected.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

The product does not contain any PBT or vPvB substances.

12.6. Endocrine disrupting properties

None known.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid unnecessary release to the environment. Do not dispose of aerosol sprays in refuse collection, even when empty. The sprays must be sent to the municipal chemical waste collection facility with the specifications set out below.

Category of waste: Aerosol sprays: EWC code: 16 05 04* gases in pressure containers (including halons) containing hazardous substances

Absorbent/cloth contaminated with the product: EWC code: 15 02 02* absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	1950	**14.4. Packing group:**	
14.2. UN proper shipping name:	AEROSOLS	**14.5. Environmental hazards:**	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	2.1		
Hazard label(s):	2.1		
Hazard identification number:		**Tunnel restriction code:**	D

Inland water ways transport (ADN)

14.1. UN number or ID number:	1950	**14.4. Packing group:**	
14.2. UN proper shipping name:	AEROSOLS	**14.5. Environmental hazards:**	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	2.1		
Hazard label(s):	2.1		
Transport in tank vessels:	-		

Sea transport (IMDG)

14.1. UN number or ID number:	1950	**14.4. Packing group:**	
14.2. UN proper shipping name:	AEROSOLS	**14.5. Environmental hazards:**	The product is not a Marine Pollutant (MP).
14.3. Transport hazard class(es):	2.1	**Environmental Hazardous Substance Name(s):**	
Hazard label(s):	2.1		
EmS:	F-D, S-U	**IMDG Code segregation group:**	- None -

Air transport (ICAO-TI / IATA-DGR)

14.1. UN number or ID number:	1950	**14.4. Packing group:**	
14.2. UN proper shipping name:	AEROSOLS, FLAMMABLE	**14.5. Environmental hazards:**	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	2.1		
Hazard label(s):	2.1		

14.6. Special precautions for user

None.

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

Special Provisions: Covered by:
Directive 2012/18/EU (Seveso), P3a FLAMMABLE AEROSOLS: Column 2: 150 (net) t, Column 3: 500 (net) t.
Council Directive (EC) on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.
Council Directive (EC) on the protection of young people at work.

Special care should be applied for employees under the age of 18. Young people under the age of 18 may not carry out any work causing harmful exposure to this product.

15.2. Chemical Safety Assessment

REACH Reg. No.	Substance name
01-2119450011-60	(2-methoxymethylethoxy)propanol
01-2119463258-33	Naphtha (petroleum), hydrotreated heavy

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
3.1.0	28/10/2021	Bureau Veritas HSE / THS	3,8,9,11,12,16

Abbreviations: PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative
STOT: Specific Target Organ Toxicity

Other Information: This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

Training advice: A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method: Calculation based on the hazards of the known components.

List of relevant H-statements

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of relevant EUH-statements

EUH066	Repeated exposure may cause skin dryness or cracking.

SDS is prepared by

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