

Safety data sheet

Revision: 24-11-2011
Replaces: 18-01-2008
Version: 01.00 / UK

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

1.1. Product identifier

Trade name: Tri-Flow Liquid

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

Recommended uses: Universal lubricant

1.3. Details of the supplier of the safety data sheet

Supplier: Brd. Klee A/S
Gadagervej 11-13
2620 Albertslund

Tel: Denmark
+45 43 86 83 33
Fax: +45 46 86 83 88
Email: klee@brd-klee.dk

1.4. Emergency telephone number

0870 600 6266 (UK only) Only available to health professionals.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

DPD-classification: R10 N;R51/53 R67

Please see section 16 for the full text of R-phrases and H-phrases.

Most serious harmful effects: Flammable. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Repeated exposure may cause skin dryness or cracking.
Prolonged or repeated exposure by skin contact or inhalation of vapours may cause damage to the central nervous system.

2.2. Label elements



Dangerous for the environment

Hazard designation: Dangerous for the environment

R-phrases: Flammable.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Repeated exposure may cause skin dryness or cracking.

S-phrases: Avoid release to the environment. Refer to special instructions/safety data sheet.

Other labelling: None.

2.3. Other hazards

Assessment to determine PBT and vPvB has not been made.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Registration number	CAS/EC Number	Substance	DSD-classification/ CLP-classification	w/w%	Note
.	34590-94-8	(2-methoxymethylethoxy)propanol	-	1-5	.
.	252-104-2
.	628-63-7	Pentyl acetate	R10 R66	1-5	.
.	211-047-3
.	64742-48-9	Naphtha (petroleum), hydrotreated	R10 Xn;R65 R66	5-10	4
.	265-150-3	heavy (<0.1% benzene)	.	.	.
.	64742-82-1	Naphtha (petroleum),	R10 Xn;R65 R66 N;R51/53	10-25	4
.	265-185-4	hydrodesulfurized heavy	.	.	.
.	68649-42-3	Phosphorodithioic acid,	Xi;R36/38 N;R51/53	0-2.5	.
.	272-028-3	O,O-di-C1-14-alkyl esters, zinc salts	.	.	.

4) R65 is not applicable due to the high viscosity of the product.

Please see section 16 for the full text of R-phrases and H-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:	Seek fresh air.
Ingestion:	Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of persistent discomfort.
Skin:	Immediately remove contaminated clothing. Wash skin with soap and water.
Eyes:	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.
Other information:	When obtaining medical advice, show the safety data sheet or label. Symptoms: See section 11.

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

Repeated exposure may cause skin dryness or cracking. Prolonged or repeated exposure by skin contact or 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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with powder, foam, carbon dioxide or water mist.
Unsuitable extinguishing media	Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

The product decomposes when combusted and the following toxic gases can be formed: Carbon monoxide and carbon dioxide.

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: Wear gloves. Wear respiratory protective equipment.

For emergency responders: In addition to the above: Protective suit equivalent to EN 368, type 3, is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent, non-combustible material and transfer to suitable waste containers.

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

Work under effective process ventilation (e.g. local exhaust ventilation). Running water and eye wash equipment should be available. Smoking and naked flames prohibited. Wash hands before breaks, before using restroom facilities, and at the end of work. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk during pregnancy.

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. Storage temperature: 5 - 25°C

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Ingredient:	Exposure limit	Remarks
(2-methoxymethylethoxy)propanol	50 (8h), - (15m) ppm 308 (8h), - (15m) mg/m ³	Sk
Pentyl acetate	50 (8h), 100 (15m) ppm 270 (8h), 541 (15m) mg/m ³	-
Naphtha (petroleum), hydrodesulfurized heavy	- (8h), - (15m) ppm 1200 (8h), - (15m) mg/m ³	1

Legal basis: EH40/2005 Workplace exposure limits incl. supplement from October 2007.

Remarks: SK: Can be absorbed through skin
1: Guidance value for >=C7(normal branched chain alkanes+ cycloalcanes): 1200 mg/m³.

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

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below. See also section 7.1.

Personal protective equipment, eye/face protection: Wear safety goggles. Eye protection must conform to EN 166.

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

Personal protective equipment, respiratory protection: In case of insufficient ventilation, wear respiratory protective equipment. Filter type: A. 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

State:	Liquid
Colour:	Brown
Odour:	Solvent
Odour threshold:	No data
pH (solution for use):	No data
pH (concentrate):	No data
Melting point/freezing point:	No data
Initial boiling point and boiling range:	No data
Flash point:	52°C
Evaporation rate:	No data
Flammability (solid, gas):	No data
Upper/lower flammability limits:	No data
Upper/lower explosive limits:	No data
Vapour pressure:	No data
Vapour density:	No data
Relative density:	0,866 g/ml
Solubility:	No data
Partition coefficient n-octanol/water:	No data
Auto-ignition temperature:	No data
Decomposition temperature:	No data
Viscosity:	>7 mm ² /s (40°C)
Explosive properties:	No data
Oxidising properties:	No data

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid heating and contact with ignition sources.

10.5. Incompatible materials

Avoid contact with the following: Strong alkalis/ Acids/ Oxidisers.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral:	The product does not have to be classified. Test data are not available.
Acute toxicity - dermal:	The product does not have to be classified. Test data are not available.
Acute toxicity - inhalation:	The product does not have to be classified. Test data are not available.
Skin corrosion/irritation:	Degreases and dries the skin. Repeated exposure may cause skin dryness or cracking. Test data are not available.
Serious eye damage/eye irritation:	May cause eye irritation. The product does not have to be classified. Test data are not available.
Sensitisation:	The product does not have to be classified. Test data are not available.

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.
Toxicity in case of single exposure:	The product does not have to be classified. Test data are not available.
Toxicity in case of repeated or prolonged 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.
Other toxicological effects:	None known.

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Test data are not available.

12.2. Persistence and degradability

Test data are not available.

12.3. Bioaccumulative potential

Test data are not available.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

No assessment has been made.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.

EWC code: Depends on line of business and use, for instance 13 02 08 other engine, gear and lubricating oils

Absorbent/cloth contaminated with the product:
EWC code: 15 02 03 Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02.

SECTION 14: Transport information

ADR/RID

14.1. UN number	1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S.(Naphtha)
14.3. Transport hazard class(es)	3
14.4. Packing group	III
Hazard identification number	

30
Tunnel restriction code: D/E
14.5. Environmental hazards The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.

ADN

14.1. UN number 1993
14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S.(Naphtha)
14.3. Transport hazard class(es) 3
14.4. Packing group III
14.5. Environmental hazards The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
Environmental hazard in tank vessels: -

IMDG

14.1. UN number 1993
14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S.(Naphtha)
14.3. Transport hazard class(es) 3
14.4. Packing group III
14.5. Environmental hazards The product must be labelled as a Marine Pollutant (MP) in packaging sizes of more than 5 kg/l.
IMDG Code segregation group: -

ICAO/IATA

14.1. UN number 1993
14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S.(Naphtha)
14.3. Transport hazard class(es) 3
14.4. Packing group III

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

Special provisions: None.

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

SECTION 16: Other information

Abbreviation explanations: PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative

R-phrases:

R10 Flammable.
R36/38 Irritating to eyes and skin.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: May cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.

H-phrases:

No H-phrases.

Training:

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

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