BARRIER FLUID 5

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4.0	03/27/2026	Date of first issue: 06/23/2021	03/27/2026

SECTION 1. IDENTIFICATION

Product name : BARRIER FLUID 5

Article-No. : 340011

Manufacturer or supplier's details

Company name of supplier : Klüber Lubrication NA LP
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Tyler, Texas 75707
USA
Phone: +1 903 534 8021
Fax: +1 903 581 4376
info@us.kluber.com

Klüber Lubrication NA LP
32 Industrial Drive
Londonderry, NH 03053
USA
Phone: +1 603 647 4104
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info@us.kluber.com

E-mail address of person responsible for the SDS : mcm@us.kluber.com

Emergency telephone number : +1 517 545 7070 NCEC

Recommended use of the chemical and restrictions on use

Recommended use : Lubricating oil

Restrictions on use : Restricted to professional users.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Acute toxicity (Inhalation) : Category 4

a brand of FREUDENBERG

Reproductive toxicity	:	Category 2
Aspiration hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal word	:	Danger
Hazard statements	:	May be fatal if swallowed and enters airways. Harmful if inhaled. Suspected of damaging fertility.
Precautionary statements	:	**Prevention:** Obtain special instructions before use. Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Do NOT induce vomiting. **Storage:** Store locked up. **Disposal:** Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	Synthetic hydrocarbon oil

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Dec-1-ene, dimers,	68649-11-6*	>= 80 - <= 100	TSC

hydrogenated			
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1*	>= 0.1 - <= 1	TSC

* Indicates that the identifier is a CAS No.
TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

If inhaled :
Obtain medical attention.
Remove person to fresh air. If signs/symptoms continue, get medical attention.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact :
Take off all contaminated clothing immediately.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Wash off immediately with plenty of water.

In case of eye contact :
Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
Seek medical advice.

If swallowed :
Move the victim to fresh air.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
Do NOT induce vomiting.
Obtain medical attention.
Rinse mouth with water.
Never give anything by mouth to an unconscious person.
Aspiration hazard if swallowed - can enter lungs and cause damage.

Most important symptoms and effects, both acute and delayed :
Aspiration may cause pulmonary oedema and pneumonitis.
Inhalation may provoke the following symptoms:
Headache
Nausea
May be fatal if swallowed and enters airways.
Harmful if inhaled.
Suspected of damaging fertility.
Risk of product entering the lungs on vomiting after ingestion.

Health injuries may be delayed.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

Hazardous combustion products : Carbon oxides

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
Exposure to decomposition products may be a hazard to health.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Use personal protective equipment.
Ensure adequate ventilation.
Do not breathe vapours or spray mist.
Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Try to prevent the material from entering drains or water courses.
Prevent further leakage or spillage if safe to do so.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not use in areas without adequate ventilation.
Do not breathe vapours or spray mist.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Do not ingest.
Do not repack.
Do not re-use empty containers.
These safety instructions also apply to empty packaging which may still contain product residues.
Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Keep container closed when not in use.
Keep in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store in accordance with the particular national regulations.
Keep in properly labelled containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type A-P

Hand protection
Material : Nitrile rubber
Break through time : > 10 min
Protective index : Class 1

Remarks	:	Wear protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.
Eye protection	:	Safety glasses with side-shields
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures	:	Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	colourless
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flammability	:	Flammability (solid, gas): Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	>= 266 °F / 130 °C

		Method: Cleveland open cup
Auto-ignition temperature	:	No data available
Self-ignition	:	No data available
Decomposition temperature	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	5 mm2/s (104 °F / 40 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	< 1.3 hPa (68 °F / 20 °C)
Density	:	0.80 g/cm3 (68 °F / 20 °C)
Relative density	:	0.796 (68 °F / 20 °C) Reference substance: Water The value is calculated
Relative vapour density	:	No data available
Bulk density	:	No data available
Particle characteristics		
Other information		
Evaporation rate	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	No data available
Sublimation point	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No hazards to be specially mentioned.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No conditions to be specially mentioned.
Incompatible materials	:	No materials to be especially mentioned.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if inhaled.

Product:

Acute oral toxicity	:	Remarks: This information is not available.
Acute inhalation toxicity	:	Acute toxicity estimate: 1.18 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Symptoms: Redness, Local irritation

Components:

Dec-1-ene, dimers, hydrogenated:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity	:	LC50 (Rat): 1.17 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes
Acute dermal toxicity	:	LD50 (Rabbit): > 3,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

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

Product:

Remarks : This information is not available.

Components:

Dec-1-ene, dimers, hydrogenated:

Species	:	Rabbit
Assessment	:	No skin irritation
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit
Assessment	:	No skin irritation
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

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

Product:

Remarks : This information is not available.

Components:

Dec-1-ene, dimers, hydrogenated:

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit

Result	:	No eye irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

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

Respiratory sensitisation

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

Product:

Remarks	:	This information is not available.

Components:

Dec-1-ene, dimers, hydrogenated:

Test Type	:	Maximisation Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.
GLP	:	yes

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Guinea pig
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

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

Product:

Genotoxicity in vitro	:	Remarks: No data available
Genotoxicity in vivo	:	Remarks: No data available

Carcinogenicity

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

Product:

Remarks	:	No data available

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Suspected of damaging fertility.

Product:

Effects on fertility	:	Remarks: No data available
Effects on foetal development	:	Remarks: No data available

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Reproductive toxicity - Assessment	:	- Fertility - Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

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

Product:

Remarks	:	No data available

STOT - repeated exposure

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

Product:

Remarks	:	No data available

Repeated dose toxicity

Product:

Remarks	:	This information is not available.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

This information is not available.

Components:

Dec-1-ene, dimers, hydrogenated:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Information given is based on data on the components and the toxicology of similar products.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

Components:

Dec-1-ene, dimers, hydrogenated:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants	:	EC50 (Scenedesmus capricornutum (fresh water algae)): > 1,000 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 125 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 GLP: yes

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 51 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available
Physico-chemical removability	:	Remarks: No data available

Components:

Dec-1-ene, dimers, hydrogenated:

Biodegradability	:	Result: Not rapidly biodegradable

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Biodegradability	:	aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Biodegradation: 1 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes

Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: No data available

Components:

Dec-1-ene, dimers, hydrogenated:

Partition coefficient: n-octanol/water	:	log Pow: 9

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Partition coefficient: n-octanol/water	:	log Pow: 5.2 - 10.82

Mobility in soil

Product:

Mobility	:	Remarks: No data available
Distribution among environmental compartments	:	Remarks: No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No information on ecology is available.

Components:

Dec-1-ene, dimers, hydrogenated:

Results of PBT and vPvB assessment	:	Not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	:	Packaging that is not properly emptied must be disposed of as the unused product. Dispose of waste product or used containers according to local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to IMO instruments
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

Special precautions for user
Not applicable

SECTION 15. REGULATORY INFORMATION

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Reproductive toxicity
Aspiration hazard

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory

concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 03/27/2026

|| Relevant changes compared to the last edition are highlighted at the left margin. This version replaces all previous editions.

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