BARRIER FLUID 5

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SECTION 1: IDENTIFICATION

Product name : BARRIER FLUID 5

Article-No. : 340011

Manufacturer or supplier's details

Company : Klüber Lubrication NA LP
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Tyler, Texas 75707
USA
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USA
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info@us.kluber.com

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

National contact :

Emergency telephone number : 1800 074 234 (toll-free, Australia only) NCEC

+61 2 8014 4558 NCEC

13 11 26 Australian Poisons Information Centre

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

Acute toxicity (Inhalation) : Category 4

Aspiration hazard : Category 1

a brand of FREUDENBERG

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.

Precautionary statements :

Prevention:

P261 Avoid breathing vapours.
P271 Use only outdoors or in a well-ventilated area.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P331 Do NOT induce vomiting.

Storage:

P405 Store locked up.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Synthetic hydrocarbon oil

Components

Chemical name	CAS-No.	Concentration (% w/w)
Dec-1-ene, dimers, hydrogenated	68649-11-6	>= 90 -<= 100
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	>= 0.1 -< 1
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol	10191-41-0	>= 0.1 -< 1

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 Risk of product entering the lungs on vomiting after ingestion. Health injuries may be delayed. May be fatal if swallowed and enters airways. Harmful if inhaled.
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
Specific extinguishing methods	:	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.
Hazchem Code	:	-

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.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.

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.

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	:	>= 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 (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 (20 °C)
Density	:	0.80 g/cm3 (20 °C)
Relative density	:	0.796 (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

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

Acute oral toxicity	:	LD50 (Rat): > 4,000 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute dermal toxicity	:	LD50 (Rat): > 3,000 mg/kg Method: OECD Test Guideline 402 GLP: no 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

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

Species	:	Rabbit
Exposure time	:	4 h
Assessment	:	No skin irritation
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes

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

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

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

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.

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1B.
Method	:	OECD Test Guideline 429
Result	:	The product is a skin sensitiser, sub-category 1B.
GLP	:	yes

Chronic toxicity

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

Reproductive toxicity

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

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

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 25.8 mg/l Exposure time: 72 h

		Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 28 d Test Type: semi-static test Method: OECD Test Guideline 215 GLP: yes

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

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

Biodegradability	:	aerobic Inoculum: activated sludge Result: Not readily biodegradable. Biodegradation: 20 % Exposure time: 28 d Method: OECD Test Guideline 301F 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

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol:

Partition coefficient: n-octanol/water : log Pow: 12.2 (25 °C)

Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

Other adverse effects

Product:

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

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Environmentally hazardous	:	no

IATA-DGR

Not regulated as a dangerous good

UN/ID No.	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Packing instruction (cargo aircraft)	:	Not applicable
Packing instruction (passenger aircraft)	:	Not applicable

IMDG-Code

Not regulated as a dangerous good

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable

EmS Code	:	Not applicable
Marine pollutant	:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

ADG

Not regulated as a dangerous good

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Hazchem Code	:	Not applicable

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

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

Therapeutic Goods (Poisons Standard) Instrument	:	Schedule 5 (Please use the original publication to check for specific uses, specific conditions or threshold limits that might apply for this chemical)
Prohibition/Licensing Requirements	:	There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations.
National Code of Practice for Chemicals of Security Concern	:	Not listed

Other international regulations

Montreal Protocol	:	Not applicable
Rotterdam Convention (Prior Informed Consent)	:	Not applicable
Stockholm Convention (Persistent Organic Pollutants)	:	Not applicable

SECTION 16: ANY OTHER RELEVANT INFORMATION

Revision Date	:	27.03.2026

Date format : dd.mm.yyyy

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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

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