

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

SECTION 1. IDENTIFICATION

Product name : HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Product code : 893.1063

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited

Address : 345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:
CHEMTREC (24/7): 1-800-424-9300
Transport related emergencies:
CANUTEC (24/7): 1-613-996-6666 or * 666 (cell)

Urgences impliquant un déversement, incendie, explosion ou exposition:
CHEMTREC (24/7): 1-800-424-9300
Urgences liées au transport:
CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire)

E-mail address : prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Flammable aerosols : Category 1

Gases under pressure : Liquefied gas

Skin irritation : Category 2

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 3

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 gVersion
9.0Revision Date:
01/22/2023SDS Number:
10780322-00009Date of last issue: 11/11/2022
Date of first issue: 12/23/2009**GHS label elements**

Hazard pictograms

:



Signal Word

:

Danger

Hazard Statements

:

H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.

Precautionary Statements

:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical attention.
P332 + P313 If skin irritation occurs: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F).

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

None known.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Isobutane	Propane, 2-methyl-	75-28-5	$\geq 30 - < 60$ *
Distillates (petroleum), hydrotreated heavy paraffinic	Baseoil	64742-54-7	$\geq 5 - < 10$ *
Propane	Dimethylmethane	74-98-6	$\geq 5 - < 10$ *
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Naphtha (petroleum), hydrotreated light	92128-66-0	$\geq 5 - < 10$ *
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Heptane, branched, cyclic and linear	64742-49-0	$\geq 5 - < 10$ *
Distillates (petroleum), hydrotreated heavy paraffinic	Mineral oil, petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	$\geq 1 - < 5$ *
Distillates (petroleum), hydrotreated heavy paraffinic	Mineral oil, petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	$\geq 1 - < 5$ *
Butane	Butyl hydride	106-97-8	$\geq 1 - < 5$ *
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	4-(2,2,3-Trimethylbut-3-en-1-yl)-N-[4-(2,2,3-trimethylbut-3-en-1-yl)phenyl]aniline	68411-46-1	$\geq 0.1 - < 1$ *

* Actual concentration or concentration range is withheld as a trade secret

Alternative CAS Numbers for some regions

Chemical name	Alternative CAS Number(s)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	64742-49-0

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

- | | | |
|---|---|--|
| If inhaled | : | If inhaled, remove to fresh air.
Get medical attention. |
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse. |
| In case of eye contact | : | Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists. |
| If swallowed | : | If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : | Causes skin irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility. |
| Protection of first-aiders | : | First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8). |
| Notes to physician | : | Treat symptomatically and supportively. |

SECTION 5. FIRE-FIGHTING MEASURES

- | | | |
|---------------------------------------|---|---|
| Suitable extinguishing media | : | Water spray
Alcohol-resistant foam
Carbon dioxide (CO ₂)
Dry chemical |
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during fire fighting | : | Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. |
| Hazardous combustion products | : | Carbon oxides |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area. |

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing. Avoid breathing spray. Do not swallow. Avoid contact with eyes. Wash skin thoroughly after handling.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the environment.

Do not spray on an open flame or other ignition source.

Conditions for safe storage : Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Do not pierce or burn, even after use.
Keep cool. Protect from sunlight.

Materials to avoid : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

Recommended storage temperature : < 40 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Isobutane	75-28-5	TWA	1,000 ppm	CA AB OEL
		TWA	1,000 ppm	CA BC OEL
		STEL	1,000 ppm	ACGIH
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
Propane	74-98-6	TWA (Mist)	1 mg/m ³	CA BC OEL
		TWA	1,000 ppm	CA AB OEL
		TWAEV	1,000 ppm	CA QC OEL

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g
Version
9.0Revision Date:
01/22/2023SDS Number:
10780322-00009Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	92128-66-0	TWA (Mist)	1,800 mg/m ³ 5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	TWA	400 ppm	CA BC OEL
		STEL	500 ppm	CA BC OEL
		TWA	400 ppm 1,640 mg/m ³	CA AB OEL
		STEL	500 ppm 2,050 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA (Mist)	1 mg/m ³	CA BC OEL
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA (Mist)	1 mg/m ³	CA BC OEL
Butane	106-97-8	TWA	1,000 ppm	CA AB OEL
		TWAEV	800 ppm 1,900 mg/m ³	CA QC OEL
		TWA	1,000 ppm	CA BC OEL
		STEL	1,000 ppm	ACGIH

Engineering measures : Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Filter type	:	Self-contained breathing apparatus
Hand protection		
Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.45 mm
Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	:	Wear the following personal protective equipment: Safety glasses
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	aerosol
Propellant	:	Isobutane, Propane, Butane
Color	:	yellow
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	substance/mixture is non-soluble (in water)

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Melting point/freezing point : No data available

Initial boiling point and boiling range : 51 °C

Flash point : -26 °C
Flash point is only valid for liquid portion in the aerosol can.

Evaporation rate : Not applicable

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper flammability limit : 15 %(V)

Lower explosion limit / Lower flammability limit : 0.6 %(V)

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Density : 0.8075 g/cm³ (20 °C)
Method: DIN 51757

Solubility(ies)
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : > 200 °C

Decomposition temperature : No data available

Viscosity
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Possibility of hazardous reactions	:	Extremely flammable aerosol. Vapors may form explosive mixture with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

|| Not classified based on available information.

Product:

Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
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Components:

Isobutane:

Acute inhalation toxicity	:	LC50 (Mouse): 260200 ppm Exposure time: 4 h Test atmosphere: gas
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Distillates (petroleum), hydrotreated heavy paraffinic:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat): > 5.53 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Remarks: Based on data from similar materials

Propane:

Acute inhalation toxicity : LC50 (Rat): > 800000 ppm
Exposure time: 15 min
Test atmosphere: gas

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

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 25.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Acute oral toxicity : LD50 (Rat): > 5,840 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 23.3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,800 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Method: OECD Test Guideline 403
 Assessment: The substance or mixture has no acute inhalation toxicity
 Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Method: OECD Test Guideline 402
 Remarks: Based on data from similar materials

Butane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
 Exposure time: 4 h
 Test atmosphere: vapor

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
 Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

|| Causes skin irritation.

Components:
Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
 Result : No skin irritation
 Remarks : Based on data from similar materials

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

Species : Rabbit
 Method : OECD Test Guideline 404
 Result : Skin irritation

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species : Rabbit
 Result : Skin irritation
 Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
 Result : No skin irritation

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

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

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:**Distillates (petroleum), hydrotreated heavy paraffinic:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

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

Species : Rabbit
Result : No eye irritation

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

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

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

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Respiratory or skin sensitization**Skin sensitization**

|| Not classified based on available information.

Respiratory sensitization

|| Not classified based on available information.

Components:**Distillates (petroleum), hydrotreated heavy paraffinic:**

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative
Remarks : Based on data from similar materials

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

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Result : negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Result : negative
Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative
Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative
Remarks : Based on data from similar materials

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

|| Test Type : Maximization Test

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Routes of exposure	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: negative

Germ cell mutagenicity

Not classified based on available information.

Components:**Isobutane:**

Genotoxicity in vitro	: Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: inhalation (gas) Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials

Propane:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: inhalation (gas) Method: OECD Test Guideline 474 Result: negative

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

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative
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HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapor)
Method: OPPTS 870.5395
Result: negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: Based on data from similar materials

Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Butane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

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

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Carcinogenicity

Not classified based on available information.

Components:**Distillates (petroleum), hydrotreated heavy paraffinic:**

Species : Mouse
Application Route : Skin contact
Exposure time : 78 weeks
Method : OECD Test Guideline 451
Result : negative
Remarks : Based on data from similar materials

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

Species : Mouse
Application Route : Skin contact
Exposure time : 102 weeks
Result : negative

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Mouse
Application Route : Skin contact
Exposure time : 78 weeks
Method : OECD Test Guideline 451
Result : negative
Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Mouse
Application Route : Skin contact
Exposure time : 78 weeks
Method : OECD Test Guideline 451
Result : negative

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Remarks : Based on data from similar materials

Reproductive toxicity

|| Suspected of damaging fertility.

Components:**Isobutane:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Distillates (petroleum), hydrotreated heavy paraffinic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Propane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

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

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Fertility/early embryonic development
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Result: negative
Remarks: Based on data from similar materials

Butane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

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

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 443
Result: positive

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

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

STOT-single exposure

|| May cause drowsiness or dizziness.

Components:

Isobutane:

Assessment : May cause drowsiness or dizziness.

Propane:

Assessment : May cause drowsiness or dizziness.

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

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Assessment : May cause drowsiness or dizziness.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Butane:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

|| Not classified based on available information.

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

|| Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity**Components:****Isobutane:**

Species : Rat
NOAEL : 9000 ppm
Application Route : inhalation (gas)
Exposure time : 6 Weeks
Method : OECD Test Guideline 422

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
NOAEL : 1,000 mg/kg
Application Route : Skin contact
Exposure time : 4 Weeks
Method : OECD Test Guideline 410
Remarks : Based on data from similar materials

Species : Rat
NOAEL : > 980 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 4 Weeks

Propane:

Species : Rat
NOAEL : 7.214 mg/l
Application Route : inhalation (gas)
Exposure time : 6 Weeks
Method : OECD Test Guideline 422

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

Species : Rat
NOAEL : > 20 mg/l
Application Route : inhalation (vapor)
Exposure time : 13 Weeks

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species : Rat
NOAEL : 12.47 mg/l
Application Route : Inhalation
Exposure time : 90 Days
Remarks : Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
NOAEL : 1,000 mg/kg
Application Route : Skin contact
Exposure time : 4 Weeks
Method : OECD Test Guideline 410
Remarks : Based on data from similar materials

Species : Rat
NOAEL : > 980 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 4 Weeks

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
NOAEL : 1,000 mg/kg
Application Route : Skin contact
Exposure time : 4 Weeks
Method : OECD Test Guideline 410
Remarks : Based on data from similar materials

Species : Rat
NOAEL : > 980 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 4 Weeks

Butane:

Species : Rat
NOAEL : 9000 ppm
Application Route : inhalation (gas)
Exposure time : 6 Weeks
Method : OECD Test Guideline 422

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

Species : Rat
NOAEL : 25 mg/kg
LOAEL : 75 mg/kg
Application Route : Ingestion
Exposure time : 53 Days
Method : OECD Test Guideline 422

Aspiration toxicity

|| Not classified based on available information.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Components:**Distillates (petroleum), hydrotreated heavy paraffinic:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

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

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Distillates (petroleum), hydrotreated heavy paraffinic:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1.93 mg/l
Exposure time: 10 min
Method: DIN 38 412 Part 8
Remarks: Based on data from similar materials

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

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
Exposure time: 96 h

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): 0.5 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 13.4 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Selenastrum capricornutum (green algae)): > 10 - 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOELR (Selenastrum capricornutum (green algae)): 0.1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.17 mg/l

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

aquatic invertebrates (Chronic toxicity) : Exposure time: 21 d
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1.93 mg/l
Exposure time: 10 min
Method: DIN 38 412 Part 8
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1.93 mg/l
 Exposure time: 10 min
 Method: DIN 38 412 Part 8
 Remarks: Based on data from similar materials

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

Toxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 51 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	NOELR (Desmodesmus subspicatus (green algae)): > 1 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201
		EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EL10 (Daphnia magna (Water flea)): 1.69 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211

Persistence and degradability
Components:
Isobutane:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 100 %
 Exposure time: 385.5 h
 Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 31 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F

Propane:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 100 %

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version 9.0 Revision Date: 01/22/2023 SDS Number: 10780322-00009 Date of last issue: 11/11/2022
Date of first issue: 12/23/2009

Exposure time: 385.5 h
Remarks: Based on data from similar materials

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

Biodegradability : Result: Readily biodegradable.
Biodegradation: 77.05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Distillates (petroleum), hydrotreated heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Butane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

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

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential**Components:****Isobutane:**

Partition coefficient: n-octanol/water : log Pow: 2.8

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

Partition coefficient: n- : log Pow: 4

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

Packing group : Not assigned by regulation
 Labels : Flammable Gas
 Packing instruction (cargo aircraft) : 203
 Packing instruction (passenger aircraft) : 203

IMDG-Code

UN number : UN 1950
 Proper shipping name : AEROSOLS

Class : 2.1
 Packing group : Not assigned by regulation
 Labels : 2.1
 EmS Code : F-D, S-U
 Marine pollutant : no

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

Not applicable for product as supplied.

Domestic regulation

TDG

UN number : UN 1950
 Proper shipping name : AEROSOLS

Class : 2.1
 Packing group : Not assigned by regulation
 Labels : 2.1
 ERG Code : 126
 Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
 CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
 CA BC OEL : Canada. British Columbia OEL

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value

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 Harmonized 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 Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; 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; 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 - Organization 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; TECl - 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

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
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Revision Date	:	01/22/2023
Date format	:	mm/dd/yyyy

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

HHS 5000, High-temperature adhesive synthetic lubricating oil, 314 g

Version	Revision Date:	SDS Number:	Date of last issue: 11/11/2022
9.0	01/22/2023	10780322-00009	Date of first issue: 12/23/2009

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CA / Z8