SAFETY DATA SHEET

Contact Cleaner OL

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/23/2018	2529449-00001	Date of first issue: 02/23/2018

SECTION 1. IDENTIFICATION

Product name : Contact Cleaner OL

Product code : 0890101101

Manufacturer or supplier's details

Company name of supplier : Wurth USA Inc.

Address : 93 Grant St.
Ramsey, NJ 07446

Telephone : (201) 825-2710

Telefax : (201) 825-1643

Emergency telephone : +1 800 255 3924

E-mail address : prodsafe@wuerth.com

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable aerosols : Category 1

Gases under pressure : Liquefied gas

Skin irritation : Category 2

Serious eye damage : Category 1

Specific target organ systemic toxicity - single exposure : Category 3

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.

H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

Precautionary Statements :

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: 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/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Heptane	142-82-5	>= 10 - < 20
Butan-1-ol	71-36-3	>= 10 - < 20
Propan-2-ol	67-63-0	15
Hydrocarbons, C6, isoalkanes, <5% n-	64742-49-0	< 15

hexane		
Distillates (petroleum), light distillate hydrotreating process, low-boiling	68410-97-9	< 15
Solvent naphtha (petroleum), light aliph.	64742-89-8	< 15
1,1-Difluoroethane	75-37-6	>= 8 - < 12
Carbon dioxide	124-38-9	>= 3 - < 7

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.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

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 : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.

If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control center immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
May cause drowsiness or dizziness.

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.

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media	:	None known.
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 Fluorine compounds
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.
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 and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. 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 : Use with local exhaust ventilation.
Use only in an area equipped with explosion-proof exhaust ventilation if advised by assessment of the local exposure potential

Advice on safe handling : Do not get on skin or clothing.
Do not breathe vapors or spray mist.
Do not swallow.
Do not get in eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat and sources of ignition.
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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Heptane	142-82-5	TWA	85 ppm 350 mg/m³	NIOSH REL
		C	440 ppm	NIOSH REL

			1,800 mg/m³	
		TWA	500 ppm 2,000 mg/m³	OSHA Z-1
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
Butan-1-ol	71-36-3	TWA	20 ppm	ACGIH
		C	50 ppm 150 mg/m³	NIOSH REL
		TWA	100 ppm 300 mg/m³	OSHA Z-1
Propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m³	NIOSH REL
		ST	500 ppm 1,225 mg/m³	NIOSH REL
		TWA	400 ppm 980 mg/m³	OSHA Z-1
Hydrocarbons, C6, isoalkanes, <5% n-hexane	64742-49-0	TWA	500 ppm	ACGIH
		STEL	1,000 ppm	ACGIH
		TWA	100 ppm 350 mg/m³	NIOSH REL
		C	510 ppm 1,800 mg/m³	NIOSH REL
Distillates (petroleum), light distillate hydrotreating process, low-boiling	68410-97-9	TWA	500 ppm 2,000 mg/m³	OSHA Z-1
Solvent naphtha (petroleum), light aliph.	64742-89-8	TWA	500 ppm 2,000 mg/m³	OSHA Z-1
1,1-Difluoroethane	75-37-6	TWA	1,000 ppm	US WEEL
Carbon dioxide	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m³	OSHA Z-1
		TWA	5,000 ppm 9,000 mg/m³	NIOSH REL
		ST	30,000 ppm 54,000 mg/m³	NIOSH REL

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

Engineering measures : Minimize workplace exposure concentrations.
Use only in an area equipped with explosion-proof exhaust ventilation if advised by assessment of the local exposure

potential
Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material	:	Nitrile rubber
Directive	:	DIN EN 374
Material	:	PVC
Directive	:	DIN EN 374
Material	:	Viton (R)
Directive	:	DIN EN 374

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. Breakthrough time is not determined for the product. Change gloves often!

Eye protection : Wear the following personal protective equipment:
Chemical resistant goggles must be worn.
If splashes are likely to occur, wear:
Face-shield

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:
Flame retardant antistatic protective clothing, unless assessment demonstrates that the risk of explosive atmospheres or flash fires is low
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are located 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 containing a liquefied gas
Propellant	:	Carbon dioxide
Color	:	colorless
Odor	:	solvent
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	Not applicable
Relative vapor density	:	Not applicable
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	partly miscible
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
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.
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.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	None.
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 oral toxicity	:	Acute toxicity estimate: 3,950 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Heptane:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat): > 29.29 mg/l Exposure time: 4 h Test atmosphere: vapor

Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

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

Butan-1-ol:

Acute oral toxicity : LD50 (Rat): 790 mg/kg

Acute inhalation toxicity : LC0 (Rat): > 17.76 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): 3,430 mg/kg

Propan-2-ol:

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

Acute inhalation toxicity : LC50 (Rat): 72.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor

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

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Acute oral toxicity : LD50 (Rat): 16,750 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 259.354 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 3,350 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

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

Acute inhalation toxicity : LC50 (Rat): > 5.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal

toxicity

1,1-Difluoroethane:

Acute inhalation toxicity : LC50 (Rat): > 437500 ppm
Exposure time: 4 h
Test atmosphere: gas

Skin corrosion/irritation

Causes skin irritation.

Ingredients:

Heptane:

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

Butan-1-ol:

Species: Rabbit
Result: Skin irritation

Propan-2-ol:

Species: Rabbit
Result: No skin irritation

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

Distillates (petroleum), light distillate hydrotreating process, low-boiling:

Result: Skin irritation

Solvent naphtha (petroleum), light aliph.:

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

Serious eye damage/eye irritation

Causes serious eye damage.

Ingredients:

Heptane:

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

Butan-1-ol:

Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405

Propan-2-ol:

Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

Solvent naphtha (petroleum), light aliph.:

Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Ingredients:

Heptane:

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

Butan-1-ol:

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

Propan-2-ol:

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

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative
Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

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

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Heptane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Butan-1-ol:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Propan-2-ol:

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: Mouse
Application Route: Intraperitoneal injection
Result: negative

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

Test Type: Chromosome aberration test in vitro

Result: negative
Remarks: Based on data from similar materials

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

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Solvent naphtha (petroleum), light aliph.:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: Inhalation
Result: negative

1,1-Difluoroethane:

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: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Propan-2-ol:

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 104 weeks
Method: OECD Test Guideline 451
Result: negative

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 2 yr
Result: negative
Remarks: Based on data from similar materials

Species: Mouse
Application Route: inhalation (vapor)
Exposure time: 2 yr
Result: negative
Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

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

1,1-Difluoroethane:

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 104 weeks
Result: negative

IARC	No ingredient 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 ingredient 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

Not classified based on available information.

Ingredients:

Heptane:

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: Embryo-fetal development Species: Mouse Application Route: inhalation (vapor) Result: negative Remarks: Based on data from similar materials

Butan-1-ol:

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

Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

Propan-2-ol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

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

1,1-Difluoroethane:

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

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat
Application Route: inhalation (vapor)
Result: negative

STOT-single exposure

May cause drowsiness or dizziness.

Ingredients:

Heptane:

Assessment: May cause drowsiness or dizziness.

Butan-1-ol:

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

Propan-2-ol:

Assessment: May cause drowsiness or dizziness.

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Assessment: May cause drowsiness or dizziness.

Solvent naphtha (petroleum), light aliph.:

Assessment: May cause drowsiness or dizziness.

1,1-Difluoroethane:

Assessment: May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Heptane:

Species: Rat
NOAEL: 12.47 mg/l
Application Route: inhalation (vapor)
Exposure time: 16 Weeks

Butan-1-ol:

Species: Rat
NOAEL: 125 mg/kg
Application Route: Ingestion
Exposure time: 13 Weeks

Propan-2-ol:

Species: Rat
NOAEL: 5000 ppm

Application Route: inhalation (vapor)
Exposure time: 104 Weeks
Method: OECD Test Guideline 413

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Species: Rat, male
NOAEL: 10.504 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 Days
Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

Species: Rat
NOAEL: > 20 mg/l
Application Route: inhalation (vapor)
Exposure time: 13 Weeks
Method: OPPTS 870.3465
Remarks: Based on data from similar materials

1,1-Difluoroethane:

Species: Rat
NOAEL: 100000 ppm
Application Route: inhalation (gas)
Exposure time: 14 Days

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

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.

Ingredients:

Heptane:

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, isoalkanes, <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.

Solvent naphtha (petroleum), light aliph.:

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

Ingredients:

Heptane:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.2 mg/l Exposure time: 48 h
M-Factor (Acute aquatic toxicity)	:	1

Butan-1-ol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 1,376 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1,328 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 225 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 4.1 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 4,390 mg/l Exposure time: 17 h

Propan-2-ol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 10,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): > 1,050 mg/l Exposure time: 16 h

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 10 - 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other	:	EL50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

aquatic invertebrates		Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae	:	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 aquatic invertebrates (Chronic toxicity)	:	NOELR (Daphnia magna (Water flea)): > 0.1 - 1 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 8.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 2.6 mg/l Exposure time: 21 d Method: OECD Test Guideline 211

Carbon dioxide:

Toxicity to fish	:	NOEC (Lepomis macrochirus (Bluegill sunfish)): > 100 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	NOEC (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Remarks: Based on data from similar materials

Persistence and degradability

Ingredients:

Butan-1-ol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 92 %
Exposure time: 20 d

Propan-2-ol:

Biodegradability : Result: rapidly degradable

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light aliph.:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 77.07 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Bioaccumulative potential

Ingredients:

Heptane:

Partition coefficient: n-octanol/water : log Pow: 4.5

Butan-1-ol:

Partition coefficient: n-octanol/water : log Pow: 1

Propan-2-ol:

Partition coefficient: n-octanol/water : log Pow: 0.05

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Partition coefficient: n-octanol/water : log Pow: 3.6

Solvent naphtha (petroleum), light aliph.:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Expert judgment

1,1-Difluoroethane:

Partition coefficient: n-octanol/water : log Pow: 0.75

Carbon dioxide:

Partition coefficient: n-octanol/water : log Pow: 0.83

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.
Please ensure aerosol cans are sprayed completely empty (including propellant)

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1

IATA-DGR

UN/ID No.	:	UN 1950
Proper shipping name	:	Aerosols, flammable
Class	:	2.1
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 (Heptane, Solvent naphtha (petroleum), light aliph.)
Class	:	2.1
Packing group	:	Not assigned by regulation

Labels	:	2.1
EmS Code	:	F-D, S-U
Marine pollutant	:	yes

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 1950
Proper shipping name	:	Aerosols
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	FLAMMABLE GAS
ERG Code	:	126
Marine pollutant	:	yes(Heptane, Solvent naphtha (petroleum), light aliph.)

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Butan-1-ol	71-36-3	5000	25000

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

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 : Flammable (gases, aerosols, liquids, or solids)
Gases under pressure
Skin corrosion or irritation
Serious eye damage or eye irritation
Aspiration hazard
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Butan-1-ol	71-36-3	>= 10 - < 20 %
Propan-2-ol	67-63-0	15 %

Volatile organic compounds (VOC) content

40 CFR Part 59 National VOC Emission Standards For Aerosol Coatings, Subpart E: Electronic Cleaner
VOC content: 75 %

US State Regulations

Pennsylvania Right To Know

Heptane	142-82-5

Butan-1-ol	71-36-3
Propan-2-ol	67-63-0
Solvent naphtha (petroleum), light aliph.	64742-89-8
Hydrocarbons, C6, isoalkanes, <5% n-hexane	64742-49-0
Distillates (petroleum), light distillate hydrotreating process, low-boiling	68410-97-9
1,1-Difluoroethane	75-37-6
Carbon dioxide	124-38-9

California Prop. 65

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

California List of Hazardous Substances

Heptane	142-82-5
Butan-1-ol	71-36-3
Propan-2-ol	67-63-0
Hydrocarbons, C6, isoalkanes, <5% n-hexane	64742-49-0
Carbon dioxide	124-38-9

California Permissible Exposure Limits for Chemical Contaminants

Heptane	142-82-5
Butan-1-ol	71-36-3
Propan-2-ol	67-63-0
Hydrocarbons, C6, isoalkanes, <5% n-hexane	64742-49-0
Carbon dioxide	124-38-9

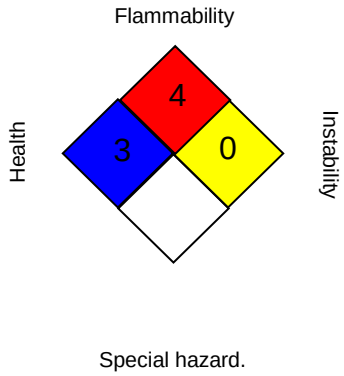
The ingredients of this product are reported in the following inventories:

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

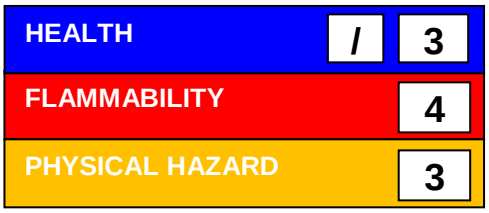
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	:	Ceiling value not be exceeded at any time.
OSHA Z-1 / TWA	:	8-hour time weighted average
US WEEL / TWA	:	8-hr TWA

AICS - Australian Inventory of Chemical Substances; 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 Harmonized 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 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; 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 - 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; 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; 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

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/

Revision Date : 02/23/2018

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

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.

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