

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Protek Blaze HD

Version number: GHS 3.0
Replaces version of: 2015-08-06 (GHS 2)

Revision: 2018-05-02

SECTION 1: Identification

1.1 Product identifier

Trade name **Protek Blaze HD**

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

Relevant identified uses Citrus degreaser

1.3 Details of the supplier of the safety data sheet

Pro-Tek Chemical
487 W. 1st Avenue
P.O. Box 1057
Glenns Ferry ID 83623
1-888-776-8351

protek@protekchemical.com

1.4 Emergency telephone number

Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hour emergency number

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
A.4S	skin sensitization	1B	Skin Sens. 1B	H317
A.10	aspiration hazard	1	Asp. Tox. 1	H304
B.6	flammable liquid	3	Flam. Liq. 3	H226

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word **danger**

- Pictograms

GHS02, GHS07,
GHS08



- Hazard statements

H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

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- Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P302+P352	If on skin: Wash with plenty of water.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P331	Do NOT induce vomiting.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazardous ingredients for labelling d-limonene

2.3 Other hazards

Hazards not otherwise classified

Toxic to aquatic life (GHS category 2: aquatic toxicity - acute).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
2-butoxy-1-ethanol	CAS No 111-76-2	10 - < 25	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Flam. Liq. 4 / H227
d-limonene	CAS No 5989-27-5	10 - < 25	Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Flam. Liq. 3 / H226
sodium 1-octanesulfonate	CAS No 5324-84-5	1 - < 5	Flam. Liq. 4 / H227

For full text of abbreviations: see SECTION 16.

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SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

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Control of the effects

Protect against external exposure, such as

Frost

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)								
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Source
US	2-butoxyethanol	111-76-2	PEL	50	240			29 CFR 1910.1000

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-butoxy-1-ethanol	111-76-2	DNEL	75 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
2-butoxy-1-ethanol	111-76-2	DNEL	98 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
d-limonene	5989-27-5	DNEL	33.3 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
2-butoxy-1-ethanol	111-76-2	PNEC	8.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	0.88 mg/l	aquatic organisms	marine water	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	463 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	34.6 mg/kg	benthic organisms	sediment	short-term (single instance)
2-butoxy-1-ethanol	111-76-2	PNEC	3.13 mg/kg	terrestrial organisms	soil	short-term (single instance)

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Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
2-butoxy-1-ethanol	111-76-2	PNEC	9.1 mg/l	aquatic organisms	water	intermittent re-release
d-limonene	5989-27-5	PNEC	5.4 µg/l	aquatic organisms	freshwater	short-term (single instance)
d-limonene	5989-27-5	PNEC	0.54 µg/l	aquatic organisms	marine water	short-term (single instance)
d-limonene	5989-27-5	PNEC	1.8 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
d-limonene	5989-27-5	PNEC	1.32 mg/kg	benthic organisms	sediment	short-term (single instance)
d-limonene	5989-27-5	PNEC	0.13 mg/kg	pelagic organisms	sediment	short-term (single instance)
d-limonene	5989-27-5	PNEC	0.262 mg/kg	terrestrial organisms	soil	short-term (single instance)
d-limonene	5989-27-5	PNEC	3.33 mg/kg	(top) predators	water	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	orange
Odor	characteristic

Other safety parameters

pH (value)	6.7 – 7.3 (25 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	100 °C
Flash point	54 °C at 1 atm 130 °F at 1 atm
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	31.69 hPa at 25 °C
Density	0.9613 g/ml
Vapor density	this information is not available
Relative density	0.96 – 0.99 at 25 °C (water = 1)

Solubility(ies)

- Water solubility	miscible in any proportion
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Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	230 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Temperature class (USA, acc. to NEC 500)	T2D (maximum permissible surface temperature on the equipment: 215°C)

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SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
2-butoxy-1-ethanol	111-76-2	oral	1,746 mg/kg
2-butoxy-1-ethanol	111-76-2	dermal	1,100 mg/kg
2-butoxy-1-ethanol	111-76-2	inhalation: vapor	11 mg/l/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

May cause an allergic skin reaction.

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Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
2-butoxy-1-ethanol	111-76-2	3	Volume 88
d-limonene	5989-27-5	3	Volume 73

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
2-butoxy-1-ethanol	111-76-2	LC50	1,474 mg/l	fish	96 h
2-butoxy-1-ethanol	111-76-2	EC50	1,550 mg/l	aquatic invertebrates	48 h
2-butoxy-1-ethanol	111-76-2	ErC50	1,840 mg/l	algae	72 h
d-limonene	5989-27-5	LC50	720 µg/l	fish	96 h
d-limonene	5989-27-5	EC50	688 µg/l	fish	96 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

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12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	UN number	1993
14.2	UN proper shipping name	Combustible liquid, n.o.s.
	Technical name (hazardous ingredients)	d-limonene
14.3	Transport hazard class(es)	
	Class	3 (flammable liquids)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6	Special precautions for user	
		There is no additional information.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
		The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	1993
Proper shipping name	Combustible liquid, n.o.s.
Class	3
Packing group	III
Special provisions (SP)	IB3, T1, T4, TP1

International Maritime Dangerous Goods Code (IMDG)

UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Class	3



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Marine pollutant	-
Packing group	III
Danger label(s)	3
	
Special provisions (SP)	223, 274, 955
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, <u>S-E</u>
Stowage category	A
International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	1993
Proper shipping name	Flammable liquid, n.o.s.
Class	3
Packing group	III
Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

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New Jersey Worker and Community Right to Know Act

Right to Know Hazardous Substance List			
Name acc. to inventory	CAS No	Remarks	Classifications
2-BUTOXY ETHANOL (ETHANOL, 2-BUTOXY-, BUTYL CELLOSOLVE)	111-76-2		CA F2

Legend

CA Carcinogenic
F2 Flammable - Second Degree

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

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SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.3	Details of the supplier of the safety data sheet: Pro-Tek P.O. Box 1057 Glenns Ferry, ID 83623 1-888-776-8351	Details of the supplier of the safety data sheet: Pro-Tek Chemical 487 W. 1st Avenue P.O. Box 1057 Glenns Ferry ID 83623 1-888-776-8351 protek@protekchemical.com	yes
1.3	Competent person responsible for the SDS: Denver Price		yes
1.4	Emergency information service: USA 1.800.535.5053, INTL 1.352.323.3500 24 hour emergency telephone number.	Emergency information service: USA 1.800.535.5053, INTL 1.352.323.3500 24 hour emergency number	yes
2.1	Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): Annex - Hazard class and category - Hazard statement code(s)	Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)	yes
2.1		Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): change in the listing (table)	yes
2.1	Remarks: For full text of H-phrases: see SECTION 16.		yes
2.1	Hazards not otherwise classified		yes
2.1		Hazards not otherwise classified: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2	Hazard statements		yes
2.2		- Pictograms: change in the listing (table)	yes
2.2	Precautionary statements		yes
2.2	Precautionary statements - prevention		yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2	Precautionary statements - response		yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Precautionary statements - storage		yes
2.2		Precautionary statements - storage: change in the listing (table)	yes
2.2	Precautionary statements - disposal		yes
2.2		Precautionary statements - disposal: change in the listing (table)	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.2		- Hazardous ingredients for labelling: d-limonene	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Hazards not otherwise classified	yes
2.3		Hazards not otherwise classified: change in the listing (table)	yes
2.3		Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes
3.2		Description of the mixture: change in the listing (table)	yes
3.2		Description of the mixture: change in the listing (table)	yes
4.1	Following inhalation: In case of respiratory tract irritation, consult a physician. Provide fresh air.	Following inhalation: If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.	yes
4.1	Following skin contact: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.	Following skin contact: Wash with plenty of soap and water.	yes
4.1	Following eye contact: Irrigate copiously with clean, fresh water, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing.	Following eye contact: Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.	yes
4.2		Most important symptoms and effects, both acute and delayed: Symptoms and effects are not known to date.	yes
4.3		Indication of any immediate medical attention and special treatment needed: none	yes
6.4	Reference to other sections: Hazardous combustion products: see section 5. Personal precautions: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.	Reference to other sections: Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.	yes
7.2	Incompatible substances or mixtures: Observe compatible storage of chemicals.		yes
7.2	Consideration of other advice		yes
7.2	Packaging compatibilities: Only packagings which are approved (e.g. acc. to DOT) may be used.	- Packaging compatibilities: Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.	yes
8.1	National limit values		yes
8.1	Occupational exposure limit values (Workplace Exposure Limits)		yes
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes
8.1	Relevant DNELs/DMELs/PNECs and other threshold levels: No data available.		yes
8.1		Relevant DNELs of components of the mixture: change in the listing (table)	yes

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8.1		Relevant PNECs of components of the mixture: change in the listing (table)	yes
9.1	Odor: characteristic		yes
9.1		Odor: characteristic	yes
9.1	Flash point: 54 °C at 1 atm 130 °F at 1 atm (closed cup)	Flash point: 54 °C at 1 atm 130 °F at 1 atm	yes
9.1	Vapor pressure: 200 Pa at 298 K	Vapor pressure: 31.69 hPa at 25 °C	yes
9.1		Vapor density: this information is not available	yes
9.1		Temperature class (USA, acc. to NEC 500): T2D (maximum permissible surface temperature on the equipment: 215 °C)	yes
10.4	Physical stresses which might result in a hazardous situation and have to be avoided: strong shocks		yes
10.5	Incompatible materials: There is no additional information.	Incompatible materials: Oxidizers	yes
11.1	Acute toxicity of components of the mixture		yes
11.1		Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)	yes
11.1	Summary of evaluation of the CMR properties: Shall not be classified as germ cell mutagenic, car- cinogenic nor as a reproductive toxicant.		yes
11.1	Carcinogenicity		yes
11.1	• National Toxicology Program (United States): none of the ingredients are listed		yes
11.1	• IARC Monographs		yes
11.1	Specific target organ toxicity (STOT): Shall not be classified as a specific target organ tox- icant.		yes
11.1		Germ cell mutagenicity: Shall not be classified as germ cell mutagenic.	yes
11.1		Carcinogenicity: Shall not be classified as carcinogenic.	yes
11.1		IARC Monographs on the Evaluation of Carcinogen- ic Risks to Humans: change in the listing (table)	yes
11.1		Reproductive toxicity: Shall not be classified as a reproductive toxicant.	yes
11.1		Specific target organ toxicity - single exposure: Shall not be classified as a specific target organ tox- icant (single exposure).	yes
11.1		Specific target organ toxicity - repeated exposure: Shall not be classified as a specific target organ tox- icant (repeated exposure).	yes
12.1	Toxicity: Toxic to aquatic life with long lasting effects.	Toxicity: Toxic to aquatic life.	yes

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12.1	Aquatic toxicity (acute): Shall not be classified as hazardous to the aquatic environment.		yes
12.1	Aquatic toxicity (acute) of components of the mixture		yes
12.1	Aquatic toxicity (chronic)		yes
12.1	Aquatic toxicity (chronic) of components of the mixture		yes
12.1		Aquatic toxicity (chronic) of components of the mixture: change in the listing (table)	yes
12.2	Degradability of components of the mixture		yes
12.2		Degradability of components of the mixture: change in the listing (table)	yes
12.3	Bioaccumulative potential of components of the mixture		yes
12.3		Bioaccumulative potential of components of the mixture: change in the listing (table)	yes
12.1		Aquatic toxicity (acute) of components of the mixture: change in the listing (table)	yes
12.6	Other adverse effects: Data are not available.	Other adverse effects	yes
12.6		Endocrine disrupting potential: None of the ingredients are listed.	yes
13.1	Waste treatment of containers/packages: Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.	Waste treatment of containers/packages: Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.	yes
14.2		Technical name (hazardous ingredients): d-limonene	yes
14.5	Environmental hazards: none (non-environmentally hazardous acc. to the dangerous goods regulations)	Environmental hazards: non-environmentally hazardous acc. to the dangerous goods regulations	yes
14.7	• Transport of dangerous goods by road or rail (49 CFR US DOT)		yes
14.7	Index number: 1993		yes
14.7	Proper shipping name: Combustible liquid, n.o.s.		yes
14.7	Class: 3		yes
14.7	Packing group: III		yes
14.7	Danger label(s)		yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Special provisions (SP): IB3, T1, T4, TP1		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.7		Transport of dangerous goods by road or rail (49 CFR US DOT)	yes
14.7		Index number: 1993	yes
14.7		Proper shipping name: Combustible liquid, n.o.s.	yes
14.7		Class: 3	yes
14.7		Packing group: III	yes
14.7		Special provisions (SP): IB3, T1, T4, TP1	yes
14.7		Marine pollutant: -	yes
14.7	EmS: F-E, S-E	EmS: F-E, <u>S-E</u>	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Special provisions (SP): A3, 274	Special provisions (SP): A3	yes
15.1	National regulations (United States)		yes
15.1	Toxic Substance Control Act (TSCA): all ingredients are listed		yes
15.1	SARA TITLE III (Superfund Amendment and Reauthorization Act)		yes
15.1	List of Extremely Hazardous Substances (40 CFR 355) (EPCRA Section 302 and 304): none of the ingredients are listed		yes
15.1	Specific Toxic Chemical Listings (40 CFR 372) (EPCRA Section 313): none of the ingredients are listed		yes
15.1	Industry or sector specific available guidance(s)		yes
15.1	NPCA-HMIS® III: Hazardous Materials Identification System (American Coatings Association)		yes
15.1		NPCA-HMIS® III: change in the listing (table)	yes
15.1	NFPA® 704: National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States)		yes
15.1		NFPA® 704: change in the listing (table)	yes
15.1	Right to Know Hazardous Substance List		yes
15.1		Right to Know Hazardous Substance List: change in the listing (table)	yes
15.1	Proposition 65 List of chemicals: none of the ingredients are listed		yes

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15.1	Relevant European Union (EU) safety, health and environmental provisions		yes
15.1	Classification according to GHS (1272/2008/EC, CLP)		yes
15.1		Classification according to GHS (1272/2008/EC, CLP): change in the listing (table)	yes
15.1		National regulations (United States)	yes
15.1		Toxic Substance Control Act (TSCA): all ingredients are listed	yes
15.1		Superfund Amendment and Reauthorization Act (SARA TITLE III)	yes
15.1		The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304): none of the ingredients are listed	yes
15.1		Specific Toxic Chemical Listings (EPCRA Section 313): none of the ingredients are listed	yes
15.1		Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	yes
15.1		List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4): none of the ingredients are listed	yes
15.1		Clean Air Act: none of the ingredients are listed	yes
15.1		New Jersey Worker and Community Right to Know Act	yes
15.1		Right to Know Hazardous Substance List: change in the listing (table)	yes
15.1		California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987: none of the ingredients are listed	yes
15.1		Industry or sector specific available guidance(s)	yes
15.1		NPCA-HMIS® III: Hazardous Materials Identification System. American Coatings Association.	yes
15.1		NPCA-HMIS® III: change in the listing (table)	yes
15.1		NFPA® 704: National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).	yes
15.1		NFPA® 704: change in the listing (table)	yes
15.2		Chemical Safety Assessment: Chemical safety assessments for substances in this mixture were not carried out.	yes
16		Abbreviations and acronyms: change in the listing (table)	yes

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16	Key literature references and sources for data: - OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200 - 49 CFR § 172.101 Hazardous Materials Table (DOT)	Key literature references and sources for data: OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200. Transport of dangerous goods by road or rail (49 CFR US DOT). International Mari- time Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR § 40 U.S. Department of Transportation
Acute Tox.	Acute toxicity
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit

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Abbr.	Descriptions of used abbreviations
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapor.
H227	Combustible liquid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.