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SECTION 1: Identification

1.1 **Product identifier**

1.3

Trade name Alternative number(s)

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

Relevant identified uses

25225 Detroit Rd. Westlake OH 44145 United States

Energizer Manufacturing, Inc.

General use

078161000221

Nu Finish Graphene Coating

Telephone: 800-383-7323; 314-985-2000 (USA / CANADA) Website: http://data.energizer.com

Details of the supplier of the safety data sheet

1.4 **Emergency telephone number**

Emergency information service

1-314-985-1511 Int'l: 1-800-526-4727 This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

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 state- ment
A.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
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

Delayed or immediate effects can be expected after short or long-term exposure. 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 warning



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- Pictograms GHS02, GHS08 - Hazard statements H226 Flammable liquid and vapor. H373 May cause damage to organs (nervous system) through prolonged or repeated exposure. - Precautionary statements If medical advice is needed, have product container or label at hand. P101 P102 Keep out of reach of children. P103 Read label before use. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. Ground/bond container and receiving equipment. P240 P241 Use explosion-proof electrical/ventilating/lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. P260 Wear protective gloves/eye protection/face protection. P280 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ P303+P361+P353 shower. P314 Get medical advice/attention if you feel unwell. 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. P501 Dispose of contents/container in accordance with national regulations.
 - Hazardous ingredients for labelling

Distillates (petroleum), hydrotreated light

2.3 Other hazards

Hazards not otherwise classified

Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction. Harmful to aquatic life with long lasting effects (GHS category 3: aquatic toxicity - acute and/or chronic).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 **Mixtures**

Description of the mixture



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Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Distillates (petroleum), hy- drotreated light	CAS No 64742-47-8	1-<5	Acute Tox. 3 / H331 STOT SE 3 / H336 STOT RE 2 / H373 Asp. Tox. 1 / H304 Flam. Liq. 3 / H226	
1,2-Benzisothiazolin-3-one	CAS No 2634-33-5	<1	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317	

For full text of abbreviations: see SECTION 16.

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. 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



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SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, 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 (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate 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.

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

Advice on how to contain a spill

Covering of drains

Advice 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.



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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.

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.



Energizer. Holdings, Inc.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Г

This information is not available.

Relevant DNELs of components of the mixture							
Name of sub- stance							
1,2-Benzisothiazolin- 3-one	2634-33-5	DNEL	6.81 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects	
1,2-Benzisothiazolin- 3-one	2634-33-5	DNEL	0.966 mg/ kg bw/day	human, dermal	worker (industry)	chronic - systemic effects	

Relevant PNECs of components of the mixture

Name of sub- stance	CAS No	End- point	Threshold level	Organism	Environmental compartment	Exposure time
1,2-Benzisothiazolin- 3-one	2634-33-5	PNEC	4.03 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
1,2-Benzisothiazolin- 3-one	2634-33-5	PNEC	0.403 ^{µg} / _l	aquatic organ- isms	marine water	short-term (single instance)
1,2-Benzisothiazolin- 3-one	2634-33-5	PNEC	1.03 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
1,2-Benzisothiazolin- 3-one	2634-33-5	PNEC	49.9 ^{µg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
1,2-Benzisothiazolin- 3-one	2634-33-5	PNEC	4.99 ^{µg} / _{kg}	aquatic organ- isms	marine sediment	short-term (single instance)
1,2-Benzisothiazolin- 3-one	2634-33-5	PNEC	3 ^{mg} / _{kg}	terrestrial organ- isms	soil	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.



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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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	not determined
Particle	not relevant (liquid)
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	100 °C
Flash point	29 °C at 101.3 kPa
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	≤3.7 kPa at 37.8 °C





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Density	not determined
Vapor density	this information is not available
Relative density	Information on this property is not available
Solubility(ies)	not determined
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Other information	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

9.2

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



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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	ΑΤΕ			
Distillates (petroleum), hydrotreated light	64742-47-8	inhalation: vapor	>5.28 ^{mg} /ı/4h			
1,2-Benzisothiazolin-3-one	2634-33-5	oral	670 ^{mg} / _{kg}			

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

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

May cause damage to organs (nervous system) through prolonged or repeated exposure.





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Hazard category	Target organ	Exposure route
2	nervous system	if exposed

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute)	of components of the mixture
--------------------------	------------------------------

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Distillates (petroleum), hydrotreated light	64742-47-8	LC50	>1,000 ^{mg} / _l	rainbow trout (Onco- rhynchus mykiss)	96 h
Distillates (petroleum), hydrotreated light	64742-47-8	LC50	>1,000 ^{mg} / _l	goldfish (Carassius auratus)	72 h
Distillates (petroleum), hydrotreated light	64742-47-8	EC50	>1,000 ^{mg} / _l	water flea (Daphnia)	48 h
Distillates (petroleum), hydrotreated light	64742-47-8	EC50	>1,000 ^{mg} / _l	algae	72 h
Distillates (petroleum), hydrotreated light	64742-47-8	LL50	5 ^{mg} /l	fish	96 h
Distillates (petroleum), hydrotreated light	64742-47-8	EL50	1.4 ^{mg} / _l	aquatic invertebrates	48 h
Distillates (petroleum), hydrotreated light	64742-47-8	LOEL	1 ^{mg} /l	algae	72 h
1,2-Benzisothiazolin-3- one	2634-33-5	LC50	16.7 ^{mg} / _l	fish	96 h
1,2-Benzisothiazolin-3- one	2634-33-5	EC50	2.94 ^{mg} / _l	aquatic invertebrates	48 h
1,2-Benzisothiazolin-3- one	2634-33-5	ErC50	150 ^{µg} /ן	algae	72 h
1,2-Benzisothiazolin-3- one	2634-33-5	NOEC	55 ^{µg} / _l	algae	72 h





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Aquatic toxicity (chronic) of components of the mixture								
Name of substance	CAS No	Endpoint	Value	Species	Exposure time			
Distillates (petroleum), hydrotreated light	64742-47-8	EL50	0.89 ^{mg} / _l	aquatic invertebrates	21 d			
Distillates (petroleum), hydrotreated light	64742-47-8	LOEL	1.2 ^{mg} / _l	aquatic invertebrates	21 d			
1,2-Benzisothiazolin-3- one	2634-33-5	EC50	13 ^{mg} / _l	microorganisms	3 h			
1,2-Benzisothiazolin-3- one	2634-33-5	NOEC	11 ^{mg} / _l	microorganisms	3 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.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

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.



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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.

SECT	ION 14: Transport information	
14.1	UN number	
	DOT	UN 1993
	IMDG-Code	UN 1993
	ICAO-TI	UN 1993
14.2	UN proper shipping name	
	DOT	Flammable liquid, n.o.s.
	IMDG-Code	FLAMMABLE LIQUID, N.O.S.
	ICAO-TI	Flammable liquid, n.o.s.
	Technical name (hazardous ingredients)	Hexyl Acetate, Allyl Caproate
14.3	Transport hazard class(es)	
	DOT	3
	IMDG-Code	3
	ICAO-TI	3
14.4	Packing group	
	DOT	III
	IMDG-Code	III
	ICAO-TI	III
14.5	Environmental hazards	non-environmentally hazardous acc. to the danger- ous 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

DOT





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Transport of dangerous goods by road or ra	il (49 CFR US DOT) - Additional information
Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (Hexyl Acetate, Allyl Caproate, solution), 3, III
Reportable quantity (RQ)	505,055,607 lbs (229,295,245 kg) (ethyl acetate) (pentyl acetate)
Danger label(s)	3
Special provisions (SP)	B1, B52, IB3, T4, TP1, TP29
ERG No	128
International Maritime Dangerous Goods Co	ode (IMDG) - Additional information
Particulars in the shipper's declaration	UN1993, FLAMMABLE LIQUID, N.O.S., (Hexyl Acet- ate, Allyl Caproate, solution), 3, III, 29°C c.c.
Marine pollutant	-
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 (IC	CAO-IATA/DGR) - Additional information
Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (Hexyl Acetate, Allyl Caproate, solution), 3, III
Danger label(s)	3
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L





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SECTION 15: Regulatory information

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

National regulations (United States)

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
Water	7732-18-5	solvents	
Distillates (petroleum), hydrotreated light	64742-47-8	solvents	
Trimethylsilyl silicate	104133-09-7	defoamer	
Silicone compound	63148-62-9	defoamer	
Polyalkoxylated Heptamethyltrisiloxane	67674-67-3	surfactant	
Triethanolamine	102-71-6	pH Adjuster	
Acrylic polymer(s)	Proprietary	protective coating	
Water	7732-18-5	solvents	
Mineral Oil	8042-47-5	solvents	
Proprietary Acrylates/Acrylamide Copolymer		polymer	
Rapeseed oil	8002-13-9	solvents	
PEG	25322-68-3	polymer	
2-t-Butylcyclohexyl Acetate	88-41-5	fragrance	
1,2-Benzisothiazolin-3-one	2634-33-5	preservative	

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

Proposition 65 List of chemicals			
Name acc. to inventory	CAS No	Remarks	Type of the toxicity
acrylamide	79-06-1		cancer
acrylamide	79-06-1		developmental, male
diethanolamine	111-42-2		cancer





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Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

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	*	chronic (long-term) health effects may result from repeated overexposure
Health	0	no significant risk to health
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with wa- ter, 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	3	material that can be ignited under almost all ambient temperature conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of or- dinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AICS	not all ingredients are listed
CA	DSL	not all ingredients are listed
CA	NDSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed





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Country	Inventory	Status
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed
US	TSCA	not all ingredients are listed

Legend

Legend	
AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NDSL	Non-domestic Substances List (NDSL)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

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

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- relev- ant
15.1		Right to Know Hazardous Substance List	yes
15.1		Cleaning Product Right to Know Act Substance List (CA-RTK)	yes
15.1		Cleaning Product Right to Know Act Substance List (CA-RTK): change in the listing (table)	yes





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Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR 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)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
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
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval



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Abbr.	Descriptions of used abbreviations
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
LOEL	Lowest Observed Effect Level
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
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
PNEC	Predicted No-Effect Concentration
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
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
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.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.



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Code	Text
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs (nervous system) through prolonged or repeated exposure.

Disclaimer

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