

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: October 22, 2022

Revision: April 20, 2018

1 Identification

- **Product identifier**
- **Trade name:** ZyClear
- **Other means of identification:** No other identifiers
- **Recommended use and restriction on use**
 - **Recommended use:** Coating material
 - **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
 ZyCoat, LLC
 15032 W 117th Street
 Olathe, Kansas 66062
 Telephone (General) 1-913-599-2600
- **Emergency telephone number:**
 Manufacturer (813) 248-0573 – Chem-Tel

2 Hazard(s) identification

- **Classification of the substance or mixture**
 Flam. Liq. 2 H225 Highly flammable liquid and vapor.
 Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Dam. 1 H318 Causes serious eye damage.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS02 GHS05 GHS07

- **Signal word:** Danger
- **Hazard statements:**
 H225 Highly flammable liquid and vapor.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H336 May cause drowsiness or dizziness.

- **Precautionary statements:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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- 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 mist, vapors, or spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection.
- P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
- P330 Rinse mouth.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a poison center/doctor.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use foam, powder, or carbon dioxide for extinction.
- 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.

• **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

• **Components:**

108-21-4	isopropyl acetate  Flam. Liq. 2, H225  Eye Irrit. 2A, H319; STOT SE 3, H336	50-75%
475645-84-2	Organic Polysilazane Compound  Flam. Liq. 2, H225  Skin Corr. 1B, H314; Eye Dam. 1, H318  Acute Tox. 4, H302	25-35%
64741-66-8	Naphtha (petroleum), light alkylate  Asp. Tox. 1, H304	<10%
919-30-2	3-aminopropyltriethoxysilane  Skin Corr. 1B, H314  Acute Tox. 4, H302; Skin Sens. 1, H317	<2%

• **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

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4 First-aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

Seek medical help for symptoms or if unconscious.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

Do not pull solidified product away from the skin.

Wash with soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Remove contact lenses if worn.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

A person vomiting while lying on their back should be turned onto their side.

- **Most important symptoms and effects, both acute and delayed:**

Breathing difficulty

Dizziness

Coughing

Irritant to skin and mucous membranes.

Eye damage.

Allergic reactions

- **Danger:**

Harmful if swallowed.

Danger of impaired breathing.

- **Indication of any immediate medical attention and special treatment needed:**

If necessary oxygen respiration treatment.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

Alcohol resistant foam

Carbon dioxide

Gaseous extinguishing agents

Fire-extinguishing powder

Water fog / haze

- **For safety reasons unsuitable extinguishing agents:**

Water stream.

Water spray

- **Special hazards arising from the substance or mixture**

Highly flammable liquid and vapor.

Formation of toxic gases is possible during heating or in case of fire.

- **Advice for firefighters**

- **Protective equipment:**

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Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information:

Eliminate all ignition sources if safe to do so.

Cool endangered containers with water fog.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Keep away from ignition sources.

Wear protective equipment. Keep unprotected persons away.

Environmental precautions Avoid release to the environment.**Methods and material for containment and cleaning up**

Allow to solidify. Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling**Precautions for safe handling:**

Use only in well ventilated areas.

Keep out of reach of children.

Open and handle receptacle with care.

Avoid contact with the eyes and skin.

Avoid breathing mist, vapors, or spray.

Information about protection against explosions and fires:

Highly flammable liquid and vapor.

Flammable gas-air mixtures may be formed in empty containers/receptacles.

Conditions for safe storage, including any incompatibilities**Requirements to be met by storerooms and receptacles:**

Store in cool, dry conditions in well sealed receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

Protect from humidity and water.

Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidizing agents.

Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

108-21-4 isopropyl acetate

PEL (USA)	Long-term value: 950 mg/m ³ , 250 ppm
TLV (USA)	Short-term value: 626 mg/m ³ , 150 ppm Long-term value: 417 mg/m ³ , 100 ppm
EL (Canada)	Short-term value: 200 ppm Long-term value: 100 ppm
EV (Canada)	Short-term value: 200 ppm Long-term value: 100 ppm
LMPE (Mexico)	Short-term value: 200 ppm Long-term value: 100 ppm

· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:**



Protective gloves

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

Form: Liquid
 Color: According to product specification

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

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· pH-value:	Not determined.
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	102 °C (215.6 °F)
· Flash point:	<15 °C (<59 °F)
· Flammability (solid, gaseous):	Not applicable.
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	Not determined.
· Vapor pressure:	Not determined.
· Density:	
Relative density:	0.89
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· Solubility in / Miscibility with Water:	Slowly reacts with water.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Highly flammable liquid and vapor.
Used empty containers may contain product gases which form explosive mixtures with air.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
Reacts with oxidizing agents.
Reacts with peroxides.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** Oxidizers

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· **Hazardous decomposition products**

Under fire conditions only:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:** Harmful if swallowed.

· **LD/LC50 values that are relevant for classification:**

919-30-2 3-aminopropyltriethoxysilane

Oral	LD50	1780 mg/kg (rat)
Dermal	LD50	4000 mg/kg (rabbit)

475645-84-2 cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine

Oral	LD50	>300-2000 mg/kg (rat)
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· **Primary irritant effect:**

· **On the skin:** Irritant to skin and mucous membranes.
· **On the eye:** Strong irritant with the danger of severe eye injury.

· **Sensitization:**

Contains 3-aminopropyltriethoxysilane. May produce an allergic reaction.
Sensitization possible through skin contact.

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** May cause drowsiness or dizziness.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity**

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Harmful to aquatic life with long lasting effects.

475645-84-2 cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine


LC50 | 57.1 mg/l (zebra fish)

- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Avoid release to the environment.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1139
- **UN proper shipping name**
- **DOT, IATA** Coating solution
- **ADR, IMDG** COATING SOLUTION
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 3 Flammable liquids
- **Label** 3

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· **ADR**



· **Class** 3 (F1) Flammable liquids
 · **Label** 3

· **IMDG, IATA**



· **Class** 3 Flammable liquids
 · **Label** 3

· **Packing group**

· **DOT, ADR, IMDG, IATA** II

· **Environmental hazards**

· **Marine pollutant:** No

· **Special precautions for user**

Warning: Flammable liquids

· **Danger code (Kemler):** 33

· **EMS Number:** F-E,S-E

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **DOT**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **ADR**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **IMDG**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **IATA**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each / 1 L net.

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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

- **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** April 20, 2018 / -

- **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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PBT: Persistent, Bio-accumulable, Toxic
vPvB: very Persistent and very Bioaccumulative
OSHA: Occupational Safety & Health Administration
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

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Tampa, Florida USA 33602-2902

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Website: www.chemtelinc.com

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: August 06, 2018

Revision: August 06, 2018

1 Identification

- **Product identifier**
- **Trade name:** ZyBar
- **Other means of identification:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Coating material
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Zycoat, LLC
15032 W. 117th Street
Olathe, KS 66062
(913)599-2600
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- Flam. Liq. 2 H225 Highly flammable liquid and vapor.
- Acute Tox. 4 H302 Harmful if swallowed.
- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2A H319 Causes serious eye irritation.
- Carc. 2 H351 Suspected of causing cancer.
- Repr. 2 H361 Suspected of damaging fertility or the unborn child. Route of exposure: Inhalation.
- STOT SE 3 H336 May cause drowsiness or dizziness.
- STOT RE 1 H372 Causes damage to the central nervous system through prolonged or repeated exposure.
- Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- **Label elements**

- **GHS label elements**

The label elements below are for use on industrial products in the workplace only. Labeling for consumer products in Canada must comply with the Consumer Chemicals and Containers Regulations (CCCR). Labeling for consumer products in the USA must comply with the Consumer Product Safety Commission (CPSC) requirements.

- **Hazard pictograms:**



GHS02 GHS07 GHS08

- **Signal word:** Danger
- **Hazard statements:**

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H225 Highly flammable liquid and vapor.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H351 Suspected of causing cancer.
 H361 Suspected of damaging fertility or the unborn child. Route of exposure: Inhalation.
 H336 May cause drowsiness or dizziness.
 H372 Causes damage to the central nervous system through prolonged or repeated exposure.
 H304 May be fatal if swallowed and enters airways.

Precautionary statements:



P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - 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.
 P260 Do not breathe dusts or mists.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection.
 P301+P310 If swallowed: Immediately call a poison center/doctor.
 P330 Rinse mouth.
 P331 Do NOT induce vomiting.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P370+P378 In case of fire: Use foam, powder, or carbon dioxide for extinction.
 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.

Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Components:

64742-48-9	Naphtha (petroleum), hydrotreated heavy	10-20%
	 Flam. Liq. 3, H226	
	 Asp. Tox. 1, H304	

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7429-90-5	Aluminum	<10%
108-88-3	Toluene ⚠ Flam. Liq. 2, H225 ☠ Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	<10%
540-88-5	tert-butyl acetate ⚠ Flam. Liq. 2, H225 ⚠ STOT SE 3, H336	<10%
64741-66-8	Naphtha (petroleum), light alkylate ☠ Asp. Tox. 1, H304	<10%
1330-20-7	xylene ⚠ Flam. Liq. 3, H226 ☠ Asp. Tox. 1, H304 ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335-H336 Eye Irrit. 2B, H320	<10%
8052-41-3	Stoddard solvent ⚠ Flam. Liq. 3, H226 ☠ STOT RE 1, H372; Asp. Tox. 1, H304	<5%
100-41-4	ethylbenzene ⚠ Flam. Liq. 2, H225 ☠ Carc. 2, H351; STOT RE 2, H373; Asp. Tox. 1, H304 ⚠ Acute Tox. 4, H332 Eye Irrit. 2B, H320	<5%
108-21-4	isopropyl acetate ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336	<5%
64742-95-6	Solvent naphtha (petroleum), light arom. ⚠ Flam. Liq. 3, H226 ☠ Asp. Tox. 1, H304	<5%
398475-96-2	1,2-Ethanediamine, polymer with aziridine, N-[3-[(2-ethylhexyl)oxy]-3-oxypopyl] dervs., compds. with polyethylene-polypropylene glycol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319	<5%
64742-47-8	Distillates (petroleum), hydrotreated light ⚠ Flam. Liq. 3, H226 ☠ Asp. Tox. 1, H304 ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	<5%
95-63-6	1,2,4-trimethylbenzene ⚠ Flam. Liq. 3, H226 ☠ Asp. Tox. 1, H304 ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	<5%
64-17-5	Ethanol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2A, H319	<1%
1333-86-4	Carbon black	<1%
71-36-3	butan-1-ol ⚠ Flam. Liq. 3, H226	<1%

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	 Eye Dam. 1, H318  Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	
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· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

If experiencing respiratory symptoms: Call a poison center/doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately remove any clothing soiled by the product.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

A person vomiting while lying on their back should be turned onto their side.

· **Most important symptoms and effects, both acute and delayed:**

Breathing difficulty

Dizziness

Coughing

Allergic reactions

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

Irritating to eyes and skin.

Disorientation

· **Danger:**

May cause neurotoxic effects.

Condition may deteriorate with alcohol consumption.

Danger of impaired breathing.

Causes serious eye damage.

Harmful if swallowed.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

Suspected of damaging fertility or the unborn child. Route of exposure: Inhalation.

Causes damage to the central nervous system through prolonged or repeated exposure.

Suspected of causing cancer.

· **Indication of any immediate medical attention and special treatment needed:**

If swallowed or in case of vomiting, danger of entering the lungs.

Medical supervision for at least 48 hours.

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If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary edema.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Alcohol resistant foam
 - Fire-extinguishing powder
 - Carbon dioxide
 - Gaseous extinguishing agents
 - Water fog / haze
- **For safety reasons unsuitable extinguishing agents:**
 - Water spray
 - Water stream.
- **Special hazards arising from the substance or mixture**
 - Highly flammable liquid and vapor.
 - Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:**
 - Eliminate all ignition sources if safe to do so.
 - Cool endangered containers with water fog.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Wear protective equipment. Keep unprotected persons away.
 - For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
 - Ensure adequate ventilation.
 - Keep away from ignition sources.
 - Protect from heat.
- **Environmental precautions**
 - Do not allow to enter sewers/ surface or ground water.
 - Prevent from spreading (e.g. by damming-in or oil barriers).
 - Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**
 - Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
 - Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
 - Avoid splashes or spray in enclosed areas.
 - Use only in well ventilated areas.
 - Open and handle receptacle with care.
 - Avoid breathing mist, vapors, or spray.
 - Avoid contact with the eyes and skin.
- **Information about protection against explosions and fires:**
 - Highly flammable liquid and vapor.
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
 - Flammable gas-air mixtures may be formed in empty containers/receptacles.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
 - Avoid storage near extreme heat, ignition sources or open flame.
 - Store in cool, dry conditions in well sealed receptacles.
 - Store in a cool location.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from oxidizing agents.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

7429-90-5 Aluminum

PEL (USA)	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)
LMPE (Mexico)	Long-term value: 1* mg/m ³ A4, *fracción respirable

108-88-3 Toluene

PEL (USA)	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL (USA)	Short-term value: 560 mg/m ³ , 150 ppm

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TLV (USA)	Long-term value: 375 mg/m ³ , 100 ppm Long-term value: 75 mg/m ³ , 20 ppm BEI
EL (Canada)	Long-term value: 20 ppm R
EV (Canada)	Long-term value: 20 ppm
LMPE (Mexico)	Long-term value: 20 ppm A4, IBE

540-88-5 tert-butyl acetate

PEL (USA)	Long-term value: 950 mg/m ³ , 200 ppm
REL (USA)	Long-term value: 950 mg/m ³ , 200 ppm
TLV (USA)	Short-term value: 712 mg/m ³ , 150 ppm Long-term value: 238 mg/m ³ , 50 ppm
EL (Canada)	Long-term value: 200 ppm
EV (Canada)	Long-term value: 950 mg/m ³ , 200 ppm
LMPE (Mexico)	Long-term value: 200 ppm

1330-20-7 xylenes

PEL (USA)	Long-term value: 435 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV (USA)	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI
EL (Canada)	Short-term value: 150 ppm Long-term value: 100 ppm
EV (Canada)	Short-term value: 650 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
LMPE (Mexico)	Short-term value: 150 ppm Long-term value: 100 ppm A4, IBE

8052-41-3 Stoddard solvent

PEL (USA)	Long-term value: 2900 mg/m ³ , 500 ppm
REL (USA)	Long-term value: 350 mg/m ³ Ceiling limit value: 1800* mg/m ³ *15-min
TLV (USA)	Long-term value: 525 mg/m ³ , 100 ppm
EL (Canada)	Short-term value: 580 mg/m ³ Long-term value: 290 mg/m ³
EV (Canada)	Long-term value: 525 mg/m ³
LMPE (Mexico)	Long-term value: 100 ppm

100-41-4 ethylbenzene

PEL (USA)	Long-term value: 435 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 545 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm

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TLV (USA)	Long-term value: 87 mg/m ³ , 20 ppm BEI
EL (Canada)	Long-term value: 20 ppm IARC 2B
EV (Canada)	Short-term value: 540 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm
LMPE (Mexico)	Long-term value: 20 ppm

108-21-4 isopropyl acetate

PEL (USA)	Long-term value: 950 mg/m ³ , 250 ppm
TLV (USA)	Short-term value: 626 mg/m ³ , 150 ppm Long-term value: 417 mg/m ³ , 100 ppm
EL (Canada)	Short-term value: 200 ppm Long-term value: 100 ppm
EV (Canada)	Short-term value: 200 ppm Long-term value: 100 ppm
LMPE (Mexico)	Short-term value: 200 ppm Long-term value: 100 ppm

64742-47-8 Distillates (petroleum), hydrotreated light

EL (Canada)	Long-term value: 200 mg/m ³ Skin
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95-63-6 1,2,4-trimethylbenzene

REL (USA)	Long-term value: 125 mg/m ³ , 25 ppm
TLV (USA)	Long-term value: 123 mg/m ³ , 25 ppm

64-17-5 Ethanol

PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1,900 mg/m ³ , 1,000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm A3

1333-86-4 Carbon black

PEL (USA)	Long-term value: 3.5 mg/m ³
REL (USA)	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs; See Pocket Guide Apps.A+C
TLV (USA)	Long-term value: 3* mg/m ³ *inhalable fraction
EL (Canada)	Long-term value: 3 mg/m ³ IARC 2B
EV (Canada)	Long-term value: 3.5 mg/m ³
LMPE (Mexico)	Long-term value: 3* mg/m ³ A3, *fracción inhalable

71-36-3 butan-1-ol

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PEL (USA)	Long-term value: 300 mg/m ³ , 100 ppm
REL (USA)	Ceiling limit value: 150 mg/m ³ , 50 ppm Skin
TLV (USA)	Long-term value: 61 mg/m ³ , 20 ppm
EL (Canada)	Long-term value: 15 ppm Ceiling limit value: 30 ppm
EV (Canada)	Long-term value: 20 ppm
LMPE (Mexico)	Long-term value: 20 ppm

Ingredients with biological limit values:

108-88-3 Toluene

BEI (USA)	0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene
	0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene
	0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)

1330-20-7 xylenes

BEI (USA)	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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100-41-4 ethylbenzene

BEI (USA)	0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)
	- Medium: end-exhaled air Time: not critical Parameter: Ethyl benzene (semi-quantitative)

Exposure controls

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes and skin.

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- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:** Use suitable respiratory protective device when aerosol or mist is formed.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules.

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
No relevant information available.
- **Risk management measures** No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid
Color: According to product specification

- **Odor:** Characteristic
- **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** >35 °C (>95 °F)

· **Flash point:** <15 °C (<59 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· **Oxidizing properties:** Non-oxidizing.

· **Vapor pressure:** Not determined.

· **Density:**

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Relative density:	1.02
Vapor density:	Not determined.
Evaporation rate:	Not determined.

· **Solubility in / Miscibility with Water:** Partly miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Highly flammable liquid and vapor.
Reacts violently with oxidizing agents.
Reacts with strong acids and alkali.
Toxic fumes may be released if heated above the decomposition point.
Used empty containers may contain product gases which form explosive mixtures with air.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
- **Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
- **Incompatible materials** Oxidizers
- **Hazardous decomposition products**
Under fire conditions only:
Toxic metal oxide smoke
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Harmful if swallowed.

· **LD/LC50 values that are relevant for classification:**

DT-490A (TNG_UHTR Version)

Oral	LD50	1,000-6,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

64742-48-9 Naphtha (petroleum), hydrotreated heavy

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Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rabbit)
108-88-3 Toluene		
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4h	5,320 mg/l (mouse)
1330-20-7 xylenes		
Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
100-41-4 ethylbenzene		
Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	17,800 mg/kg (rabbit)
64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	LD50	>6,800 mg/kg (rat)
Dermal	LD50	>3,400 mg/kg (rab)
64742-47-8 Distillates (petroleum), hydrotreated light		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
95-63-6 1,2,4-trimethylbenzene		
Oral	LD50	5,000 mg/kg (rat)

· **Primary irritant effect:**

- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**

100-41-4	ethylbenzene	2B
64-17-5	Ethanol	1
1333-86-4	Carbon black	2B

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Suspected of causing cancer.
- **Reproductive toxicity:** Suspected of damaging fertility or the unborn child. Route of exposure: Inhalation.
- **STOT-single exposure:** May cause drowsiness or dizziness.
- **STOT-repeated exposure:**
May cause damage to the central nervous system through prolonged or repeated exposure.

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- **Aspiration hazard:** May be fatal if swallowed and enters airways.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity**
Harmful to aquatic life with long lasting effects.

1330-20-7 xylenes

LC50	13.4 mg/l (pimephales promelas)
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100-41-4 ethylbenzene

EC50	1-10 mg/kg (daphnia)
LC50	1-10 mg/l (Green Algae (chlorophyta))
	4.2 mg/l (Oncorhynchus mykiss)

398475-96-2 1,2-Ethanediamine, polymer with aziridine, N-[3-[(2-ethylhexyl)oxy]-3-oxopropyl] dervs., compds. with polyethylene-polypropylene glycol

EC50	<1 mg/kg (Pseudokirchneriella subcapitata)
LC50	8 mg/l (Oncorhynchus mykiss)

- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Ecotoxic effects:**
- **Remark:** Due to mechanical actions of the product (e.g. agglutinations), damages may occur.
- **Additional ecological information**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· UN-Number · DOT, ADR, IMDG, IATA	UN1139
· UN proper shipping name · DOT, IATA · ADR, IMDG	Coating solution COATING SOLUTION
· Transport hazard class(es) · DOT	
	
· Class · Label	3 3
· ADR	
	
· Class · Label	3 (F1) 3
· IMDG, IATA	
	
· Class · Label	3 3
· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards · Marine pollutant:	No
· Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Flammable liquids 33 F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT	

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Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **ADR**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **IMDG**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **IATA**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each / 1 L net.

15 Regulatory information· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7429-90-5	Aluminum
108-88-3	Toluene
1330-20-7	xylenes
100-41-4	ethylbenzene
95-63-6	1,2,4-trimethylbenzene

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65 (California)**· **Chemicals known to cause cancer:**

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

100-41-4	ethylbenzene
64-17-5	Ethanol

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1333-86-4	Carbon black
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· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

108-88-3	Toluene
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64-17-5	Ethanol
---------	---------

· EPA (Environmental Protection Agency):

108-88-3	Toluene		II
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1330-20-7	xylenes		I
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100-41-4	ethylbenzene		D
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95-63-6	1,2,4-trimethylbenzene		II
---------	------------------------	--	----

71-36-3	butan-1-ol		D
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· IARC (International Agency for Research on Cancer):

100-41-4	ethylbenzene		2B
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64-17-5	Ethanol		1
---------	---------	--	---

1333-86-4	Carbon black		2B
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· Canadian Domestic Substances List (DSL) (Substances not listed.):

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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Asp. Tox. 1: Aspiration hazard – Category 1

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor-internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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