

SAFETY DATA SHEET

1. Identification

Product identifier: SURFYNOL® GA

Chemical name: Surfactant blend

Other means of identification

Recommended use: Industrial use

Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

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Nutrition & Care
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Richmond, VA 23234
USA

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Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency : 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Classification according to GHS

Health Hazards

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 5
Skin Corrosion/Irritation	Category 3
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Specific Target Organ Toxicity - Repeated Exposure	Category 2

Environmental Hazards

Acute hazards to the aquatic environment	Category 3
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Chronic hazards to the aquatic environment

Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Harmful if swallowed.
May be harmful in contact with skin.
Causes mild skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention: Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/ eye protection/ face protection.

Response: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER or doctor/ physician if you feel unwell. Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Get medical advice/attention if you feel unwell.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards: None known.

3. Composition/information on ingredients

Chemical name:
Surfactant blend

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched	No data available.	68412-54-4	30 - 60%
Ethane-1,2-diol	No data available.	107-21-1	10 - <30%
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	No data available.	126-86-3	10 - <30%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General information:	Immediately remove contaminated clothing.
Inhalation:	fresh air supply, consult a doctor if feeling unwell.
Skin Contact:	In case of contact with skin wash off with soap and water. In case of discomfort: Supply with medical care.
Eye contact:	In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice
Ingestion:	Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
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5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray.

Unsuitable extinguishing media:	High volume water jet.
Special hazards arising from the substance or mixture:	In the event of fire the following can be released: - carbon dioxide, carbon monoxide Under certain conditions of combustion traces of other toxic substances cannot be excluded
Special protective equipment and precautions for firefighters	
Special fire fighting procedures:	No specific precautions.
Special protective equipment for fire-fighters:	Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus and wear protective suit

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with the regulations.
Environmental Precautions:	Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.

7. Handling and storage

Handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep container tightly closed in a cool, well-ventilated place. Protect from frost. Do not store together with oxidizing agents.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

Biological Limit Values

Observe national threshold limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information:	No data available.
Eye/face protection:	Tightly fitting safety goggles
Hand Protection:	Additional Information: gloves made of chloroprene (CR, e.g. Neoprene), gloves made of nitril (NBR)
Other:	protective clothing
Respiratory Protection:	in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2
Hygiene measures:	Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Remove soiled or soaked clothing immediately. Use skin protective preparation as preventive skin protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Pale yellow
Odor:	like menthol
Odor Threshold:	not measured
Freezing point:	not measured
Boiling Point:	67,5 °C/153,5 °F
Flammability:	not measured
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	not measured
Explosive limit - lower:	not measured
Flash Point:	> 110 °C/> 230 °F
Auto-ignition temperature:	not measured
Decomposition Temperature:	not measured
pH:	7 - 9
	100 g/l

10 %
 25 °C/77 °F
 in Water

Viscosity

Dynamic viscosity: not measured
Kinematic viscosity: not measured
Flow Time: No data available.

Solubility(ies)

Solubility in Water: not measured
Solubility (other): not measured
Partition coefficient (n-octanol/water): not measured

Vapor pressure: 20 hPa
 21 °C/70 °F

Relative density: not measured

Density: 1,05 g/cm³
 21 °C/70 °F

Bulk density: No data available.

Relative vapor density: not measured

Other information

Explosive properties: not measured
Oxidizing properties: not oxidizing
Pyrophoric properties: not measured
Metal Corrosion: Not corrosive to metals
Evaporation Rate: not measured

10. Stability and reactivity

Reactivity: see section "Possibility of hazardous reactions".
Chemical Stability: The product is stable under normal conditions.
Possibility of hazardous reactions: No hazardous reactions with proper storage and handling
Conditions to avoid: Freezing.
Incompatible Materials: Oxidizing agents.
Hazardous Decomposition Products: None with proper storage and handling.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	LD 50, Rat, 1.860 mg/kg
Components:	
Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	LD 50, Rat, 3.000 mg/kg
Ethane-1,2-diol	LD 50, Rat, 7.712 mg/kg
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	LD 50, Rat, Female, Male, > 5.000 mg/kg

Dermal

Product:	LD 50, Rabbit, > 2.000 mg/kg
Components:	
Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	LD 50, Rabbit, 2.830 mg/kg
Ethane-1,2-diol	LD 50, Mouse, Female, Male, > 3.500 mg/kg
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	LD 50, Rabbit, > 5.000 mg/kg, OECD 402

Inhalation

Product:	No data available.
Components:	
Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	Not toxic after single exposure, Vapour, No data available. Not toxic after single exposure, Dust and mist, No data available.
Ethane-1,2-diol	Vapour, Not toxic after single exposure, No data available. Dust and mist, Not toxic after single exposure, Not applicable
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	LC 50, Rat, 4 h, > 5 mg/l, Dust and mist Vapour, Not toxic after single exposure, No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	No data available.
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	NOAEL - No Observable Adverse Effect Level, Rat, Oral, daily, 500 mg/kg

Skin Corrosion/Irritation**Product:** Slightly irritating., Slightly irritating.**Components:**

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	No data available.
Ethane-1,2-diol	Not irritating, Rabbit
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	Not irritating, OECD 404, Rabbit, 4 h

Serious Eye Damage/Eye Irritation**Product:** No data available.**Components:**

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	Irritating., Rabbit
Ethane-1,2-diol	Not irritating, Rabbit
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	Risk of serious damage to eyes., US-EPA-method, Rabbit

Respiratory or Skin Sensitization**Product:** No data available.**Components:**

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	No data available.
Ethane-1,2-diol	Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer. Not a respiratory sensitizer
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	Local Lymph Node Assay (LLNA), OECD 429, Mouse, Skin sensitizer

Carcinogenicity**Product:** No data available.**Components:**

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	No data available.
Ethane-1,2-diol	Not classified
2,4,7,9-Tetramethyldec-5- yne-4,7-diol	No data available.

Germ Cell Mutagenicity

No data available.

In vitro**Product:** No data available.**Components:**

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω - hydroxy-, branched	No data available.
Ethane-1,2-diol	Bacterial reverse mutation assay, OECD 471: , negative Chromosomal aberration, OECD 473: , negative

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Ames test, OECD 471: , negative, Own study
 Chromosomal aberration, OECD 473: , negative, Own study
 gene mutation test, OECD 476: , negative, Own study

In vivo

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched No data available.
 Ethane-1,2-diol No data available.
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Reproductive toxicity

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched No data available.
 Ethane-1,2-diol Not classified
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol Oral

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched No data available.
 Ethane-1,2-diol Not classified
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched No data available.
 Ethane-1,2-diol Oral, Kidney, Category 2 May cause damage to organs through prolonged or repeated exposure.
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Aspiration Hazard

Product: Not classified

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched Not classified

Ethane-1,2-diol	Not classified
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	Not applicable

Information on health hazards

Other hazards

Product: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched	No data available.
Ethane-1,2-diol	LC 50, Pimephales promelas, 96 h, 53.000 mg/l
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	LC 50, Pimephales promelas, 96 h, 36 mg/l OECD 203 LC 50, Cyprinus carpio, 96 h, 42 mg/l OECD 203 NOEC, Cyprinus carpio, 96 h, 10 mg/l OECD 203

Aquatic Invertebrates

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched	No data available.
Ethane-1,2-diol	EC 50, Daphnia magna, 48 h, > 100 mg/l OECD 202
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50, Daphnia magna, 48 h, 88 mg/l OECD 202 EC 50, Daphnia magna, 48 h, 91 mg/l OECD 202 NOEC, Daphnia magna, 48 h, 43 mg/l OECD 202

Toxicity to Aquatic Plants

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)- ω -hydroxy-, branched	No data available.
Ethane-1,2-diol	No data available.
2,4,7,9-Tetramethyldec-5-yne-4,7-diol	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 15 mg/l (OECD 201) EC 10 (Algae (Pseudokirchneriella subcapitata), 72 h): 1,8 mg/l (OECD 201) ErC50 (Algae (Pseudokirchneriella subcapitata), 72 h): 82 mg/l (OECD 201)

Toxicity to microorganisms

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -hydroxy-, branched
 Ethane-1,2-diol EC 20, activated sludge, 0,5 h, > 1.995 mg/l, ISO 8192, (analogy)
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol EC 50, activated sludge, 3 h, Approximate, 630 mg/l, OECD 209

Toxicity to soil dwelling organisms

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.
 a-(nonylphenyl)- ω -hydroxy-, branched
 Ethane-1,2-diol No data available.
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Toxicity to terrestrial organisms

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.
 a-(nonylphenyl)- ω -hydroxy-, branched
 Ethane-1,2-diol No data available.
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.
 a-(nonylphenyl)- ω -hydroxy-, branched
 Ethane-1,2-diol NOEC, *Menidia peninsulae*, 28 d, > 40 mg/l, (analogy)
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Aquatic Invertebrates

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.
 a-(nonylphenyl)- ω -hydroxy-, branched
 Ethane-1,2-diol NOEC, *Ceriodaphnia dubia*, 7 d, 8.590 mg/l
 2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.
 a-(nonylphenyl)- ω -hydroxy-, branched
 Ethane-1,2-diol NOEC (*Algae (Pseudokirchneriella subcapitata)*, 72 h): > 100 mg/l (OECD 201) (analogy)

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Toxicity to microorganisms

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -hydroxy-, branched

Ethane-1,2-diol EC 20, activated sludge, 0,5 h, > 1.995 mg/l, ISO 8192, (analogy)

2,4,7,9-Tetramethyldec-5-yne-4,7-diol EC 50, activated sludge, 3 h, Approximate, 630 mg/l, OECD 209

Toxicity to soil dwelling organisms

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -hydroxy-, branched

Ethane-1,2-diol No data available.

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Toxicity to terrestrial organisms

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -hydroxy-, branched

Ethane-1,2-diol No data available.

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -hydroxy-, branched

Ethane-1,2-diol 90 - 100 %, 10 d, OECD 301 A, The product is easily biodegradable., aerobic

2,4,7,9-Tetramethyldec-5-yne-4,7-diol 5 %, 28 d, OECD 301 B, The product is not biodegradable., aerobic
8 - 12 %, 60 d, OECD 301 B, The product is not biodegradable., aerobic

25,4 %, 57 d, OECD 302 A, The product is not biodegradable., aerobic

BOD/COD Ratio

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -hydroxy-, branched

Ethane-1,2-diol No data available.

2,4,7,9-Tetramethyldec-5-
yne-4,7-diol No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -
hydroxy-, branched

Ethane-1,2-diol No data available.

2,4,7,9-Tetramethyldec-5-
yne-4,7-diol No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: not measured

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -
hydroxy-, branched

Ethane-1,2-diol No data available.

2,4,7,9-Tetramethyldec-5-
yne-4,7-diol 2,8, 22 °C, OECD 117, Yes

Mobility in soil:

Product No data available.

Components:

Poly(oxy-1,2-ethanediyl), No data available.

a-(nonylphenyl)- ω -
hydroxy-, branched

Ethane-1,2-diol No data available.

2,4,7,9-Tetramethyldec-5-
yne-4,7-diol No data available.

Other adverse effects:

Other hazards

Product: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: In accordance with local authority regulations, take to special waste incineration plant

Contaminated Packaging: If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

14. Transport information

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

15. Regulatory information

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

16. Other information, including date of preparation or last revision

Issue Date: 04.03.2019

Version #: 1.3

Abbreviations and acronyms:

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the

Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: No data available.

Revision Information: Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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