

## SPECTRUM DC

Revision: 2024-10-22

Version: 01.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name: SPECTRUM DC

#### 1.2 Recommended use and restrictions on use

See product label.  
For professional and industrial use only.

#### 1.3 Details of the supplier of the safety data sheet

SOLENIS VIETNAM COMPANY LIMITED

#### Contact details

Level 4&5, M-Building, Lot C7B-02A, Block A, No.9 Street 8, Zone Saigon South New Urban Area, Tan Phu Ward, District 7, Ho Chi Minh City, VIETNAM  
Tel. 0314996293

#### 1.4 Emergency telephone number

In case of medical emergency, please seek professional medical advice.

### SECTION 2: Composition/information on ingredients

#### 2.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Classification	Weight percent
Oils, eucalyptus	8000-48-4	283-406-2	Flammable liquids, Category 3 (H226) Aspiration toxicity, Category 1 (H304) Skin irritation, Category 2 (H315) Skin sensitisation, Category 1 (H317) Chronic aquatic toxicity, Category 2 (H411)	3-10
4-tert-Pentylphenol	80-46-6	201-280-9	Skin corrosion, Category 1B (H314) Skin sensitisation, Category 1 (H317) Chronic aquatic toxicity, Category 2 (H411) Serious eye damage, Category 1 (H318)	1-3
clorofene	120-32-1	204-385-8	Acute toxicity - Oral, Category 4 (H302) Specific target organ toxicity - Single exposure, Category 3 (H335) Skin irritation, Category 2 (H315) Serious eye damage, Category 1 (H318) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 1 M=1 (H410)	0.1-1

Workplace exposure limit(s), if available, are listed in subsection 8.1.  
ATE, if available, are listed in section 11.

### SECTION 3: Hazards identification

#### 3.1 Classification of the substance or mixture

Skin irritation, Category 2  
Eye irritation, Category 2A  
Skin sensitisation, Category 1  
Acute aquatic toxicity, Category 3  
Chronic aquatic toxicity, Category 3

#### 3.2 Label elements



Signal word: Warning.

#### Hazard statements:

H315 + H319 - Causes skin and serious eye irritation.

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H320 - Causes eye irritation.  
 H317 - May cause an allergic skin reaction.  
 H412 - Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

P280 - Wear protective gloves.

**3.3 Other hazards**

No other hazards known. Exposure and appropriate engineering controls are specified in subsection 8.2 exposure controls.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General Information:**

Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident.

**Inhalation:**

Get medical attention or advice if you feel unwell.

**Skin contact:**

Take off immediately all contaminated clothing and wash it before reuse.

**Eye contact:**

Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**Ingestion:**

Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.

**Self-protection of first aider:**

Consider personal protective equipment as indicated in subsection 8.2.

**4.2 Most important symptoms and effects, both acute and delayed****Inhalation:**

No known effects or symptoms in normal use.

**Skin contact:**

Causes irritation. May cause an allergic skin reaction.

**Eye contact:**

Causes severe irritation.

**Ingestion:**

No known effects or symptoms in normal use.

**4.3 Indication of any immediate medical attention and special treatment needed**

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

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

No special hazards known.

**5.3 Advice for firefighters**

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable gloves.

**6.2 Environmental precautions**

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

**6.3 Methods and material for containment and cleaning up**

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

**6.4 Reference to other sections**

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

**Measures required to protect the environment:**

For environmental exposure controls see subsection 8.2.

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**Advice on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Use personal protective equipment as required. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. Keep from freezing. For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

**7.3 Specific end use(s)**

No specific advice for end use available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Biological limit values, if available:

**8.2 Exposure controls**

*The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.*

*Recommended safety measures for handling the undiluted product:*

**Appropriate engineering controls:** No special requirements under normal use conditions.  
**Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

**Personal protective equipment****Eye / face protection:**

Safety glasses are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product (EN 16321 / EN 166).

**Hand protection:**

Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.

Suggested gloves for prolonged contact: Material: butyl rubber Penetration time:  $\geq 480$  min Material thickness:  $\geq 0.7$  mm

Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time:  $\geq 30$  min Material thickness:  $\geq 0.4$  mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

**Body protection:**

No special requirements under normal use conditions.

**Respiratory protection:**

No special requirements under normal use conditions.

**Environmental exposure controls:**

No special requirements under normal use conditions.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

**Physical state:** Liquid

**Colour:** Clear , Light , Brown

**Odour:** Product specific

**Odour threshold:** Not applicable

**pH:**  $\approx 11$  (neat)

**Dilution pH:**  $\approx 12$  (1%)

**Melting point/freezing point (°C):** Not determined

**Initial boiling point and boiling range (°C):** Not determined

**Method / remark**

ISO 4316

ISO 4316

Not relevant to classification of this product

**Flammability (liquid):** Not flammable.

**Flash point (°C):** Not applicable.

**Sustained combustion:** Not applicable.

( UN Manual of Tests and Criteria, section 32, L.2 )

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**Evaporation rate:** Not determined  
**Flammability (solid, gas):** Not applicable to liquids  
**Lower and upper explosion limit/flammability limit (%):** Not determined  
**Vapour pressure:** Not determined  
**Relative density:**  $\approx$  1.00 (20 °C)  
**Relative vapour density:** Not determined.  
**Particle characteristics:** No data available.  
**Solubility in / Miscibility with water:** Fully miscible  
**Partition coefficient: n-octanol/water** No information available.

Not relevant to classification of this product

OECD 109 (EU A.3)  
 Not relevant to classification of this product  
 Not applicable to liquids.

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

**Autoignition temperature:** Not determined  
**Decomposition temperature:** Not applicable.  
**Kinematic viscosity:** Not determined  
**Explosive properties:** Not explosive.  
**Oxidising properties:** Not oxidising.

### 9.2 Other information

**Surface tension (N/m):** Not determined  
**Corrosion to metals:** Not corrosive

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal storage and use conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

### 10.4 Conditions to avoid

None known under normal storage and use conditions.

### 10.5 Incompatible materials

Reacts with acids.

### 10.6 Hazardous decomposition products

None known under normal storage and use conditions.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

No data is available on the mixture.

Substance data, where relevant and available, are listed below:.

#### Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
Oils, eucalyptus	LD <sub>50</sub>	3320	Mouse		
4-tert-Pentylphenol		No data available			
clorofene	LD <sub>50</sub>	4147	Rat	OECD 401 (EU B.1)	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
Oils, eucalyptus	LD <sub>50</sub>	> 5000	Rabbit		
4-tert-Pentylphenol		No data available			
clorofene	LD <sub>50</sub>	> 5000	Rabbit	OECD 402 (EU B.3)	

## Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Oils, eucalyptus		No data available			
4-tert-Pentylphenol		No data available			
clorofene		No data available			

## Irritation and corrosivity

## Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Oils, eucalyptus	Irritant	Rabbit		
4-tert-Pentylphenol	No data available			
clorofene	Irritant		Method not given	

## Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Oils, eucalyptus	Not corrosive or irritant	Rabbit		
4-tert-Pentylphenol	No data available			
clorofene	Severe damage		Method not given	

## Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Oils, eucalyptus	No data available			
4-tert-Pentylphenol	No data available			
clorofene	No data available			

## Sensitisation

## Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
Oils, eucalyptus	Sensitising			
4-tert-Pentylphenol	No data available			
clorofene	No data available			

## Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
Oils, eucalyptus	No data available			
4-tert-Pentylphenol	No data available			
clorofene	No data available			

## CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

## Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
Oils, eucalyptus	No data available		No data available	
4-tert-Pentylphenol	No data available		No data available	
clorofene	No evidence for mutagenicity, negative test results	Method not given	No data available	

## Carcinogenicity

Ingredient(s)	Effect
Oils, eucalyptus	No data available
4-tert-Pentylphenol	No data available
clorofene	No data available

## Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
Oils, eucalyptus			No data available				
4-tert-Pentylphenol			No data available				
clorofene			No data				

			available				
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**Repeated dose toxicity**

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Oils, eucalyptus		No data available				
4-tert-Pentylphenol		No data available				
clorofene		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Oils, eucalyptus		No data available				
4-tert-Pentylphenol		No data available				
clorofene		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Oils, eucalyptus		No data available				
4-tert-Pentylphenol		No data available				
clorofene		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
Oils, eucalyptus			No data available					
4-tert-Pentylphenol			No data available					
clorofene			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
Oils, eucalyptus	No data available
4-tert-Pentylphenol	No data available
clorofene	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
Oils, eucalyptus	No data available
4-tert-Pentylphenol	No data available
clorofene	No data available

**Aspiration hazard**

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

**Potential adverse health effects and symptoms**

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

**SECTION 12: Ecological information****12.1 Toxicity**

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

**Aquatic short-term toxicity**

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Oils, eucalyptus	LC <sub>50</sub>	42	<i>Fish</i>	OECD 203 (EU C.1)	96
4-tert-Pentylphenol		No data available			
clorofene	LC <sub>50</sub>	1.5	<i>Brachydanio rerio</i>	Method not given	96

## Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Oils, eucalyptus	EC <sub>50</sub>	1.02			48
4-tert-Pentylphenol		No data available			
clorofene	EC <sub>50</sub>	0.59	<i>Daphnia magna Straus</i>	Method not given	48

## Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Oils, eucalyptus		No data available			
4-tert-Pentylphenol		No data available			
clorofene	EC <sub>50</sub>	0.2	<i>Pseudokirchneriella subcapitata</i>	Method not given	72

## Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
Oils, eucalyptus		No data available			
4-tert-Pentylphenol		No data available			
clorofene		No data available			

## Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
Oils, eucalyptus		No data available			
4-tert-Pentylphenol		No data available			
clorofene		No data available			

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
Oils, eucalyptus		No data available				
4-tert-Pentylphenol		No data available				
clorofene		No data available				

## Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
Oils, eucalyptus		No data available				
4-tert-Pentylphenol		No data available				
clorofene		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

## Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

## 12.2 Persistence and degradability

### Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

### Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
Oils, eucalyptus				Weight of evidence	Readily biodegradable
4-tert-Pentylphenol				OECD 301B	Readily biodegradable, without 10 day window
clorofene		CO <sub>2</sub> production	68% in 28 day(s)	OECD 301B	Not readily biodegradable.

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

## 12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
Oils, eucalyptus	No data available			
4-tert-Pentylphenol	No data available			
clorofene	No data available			

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
Oils, eucalyptus	No data available				
4-tert-Pentylphenol	No data available				
clorofene	110		Method not given	No bioaccumulation expected	

## 12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
Oils, eucalyptus	No data available				
4-tert-Pentylphenol	No data available				
clorofene	No data available				

## 12.5 Other adverse effects

No other adverse effects known.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**Empty packaging**

**Recommendation:**

Dispose of observing national or local regulations.

**Suitable cleaning agents:**

Water, if necessary with cleaning agent.

## SECTION 14: Transport information

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**Land transport, Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)**

- 14.1 UN number: Non-dangerous goods
- 14.2 UN proper shipping name: Non-dangerous goods
- 14.3 Transport hazard class(es): Non-dangerous goods
- 14.4 Packing group: Non-dangerous goods
- 14.5 Environmental hazards: Non-dangerous goods
- 14.6 Special precautions for user: Non-dangerous goods
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Non-dangerous goods

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

- Decree 108/2008/NP-CP Circular No.: 04/2012/TT-BCT Regulations on the Classification and Labeling of Chemicals

**SECTION 16: Other information**

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**SDS code:** MS4800066**Version:** 01.0**Revision:** 2024-10-22**Abbreviations and acronyms:**

- DNEL - Derived No Effect Limit
- PNEC - Predicted No Effect Concentration
- ATE - Acute Toxicity Estimate
- LD50 - Lethal Dose, 50% / Median Lethal dose
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- EC50 - effective concentration, 50%
- NOEL - No observed effect level
- NOAEL - No observed adverse effect level
- STOT-RE - Specific target organ toxicity (repeated exposure)
- STOT-SE - Specific target organ toxicity (single exposure)
- OECD - Organisation for Economic Cooperation and Development
- H226 - Flammable liquid and vapour.
- H302 - Harmful if swallowed.
- H304 - May be fatal if swallowed and enters airways.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- H411 - Toxic to aquatic life with long lasting effects.

**End of Safety Data Sheet**