

I U C L I D

D a t a s e t

Existing Chemical	Substance ID: 91770-80-8
CAS No.	91770-80-8
EINECS Name	Terpenes and Terpenoids, turpentine-oil, 3-carene fraction
EINECS No.	294-866-9
Molecular Weight	136
Molecular Formula	C10H16

Dataset created by: EUROPEAN COMMISSION - European Chemicals Bureau

This dossier is a compilation based on data reported by the European Chemicals Industry following 'Council Regulation (EEC) No. 793/93 on the Evaluation and Control of the Risks of Existing Substances'. All (non-confidential) information from the single datasets, submitted in the IUCLID/HEDSET format by individual companies, was integrated to create this document.

The data have not undergone any evaluation by the European Commission.

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1.0.1 OECD and Company Information

Name: Arizona Chemicals
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Town: 82022 Sandarne
Country: Sweden

Name: FORCHEM OY
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Country: Finland
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Telex: 321258

1.0.2 Location of Production Site

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1.0.3 Identity of Recipients

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1.1 General Substance Information

Substance type: organic
Physical status: liquid

1.1.1 Spectra

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1.2 Synonyms

Dipentene, OULU 405, OULU 405T
Source: FORCHEM OY FIN-90101 OULU

Turpentine, 3-carene fraction
Source: Arizona Chemicals Sandarne

1.3 Impurities

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1.4 Additives

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1.5 Quantity

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1.6.1 Labelling

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1.6.2 Classification

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1.7 Use Pattern

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1.7.1 Technology Production/Use

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1.8 Occupational Exposure Limit Values

Type of limit: other
Limit value: 560 mg/m³
Short term expos.
Limit value: 840 mg/m³
Schedule: 15 minute(s)
Country: delta-3-carene, 560mg/m³, 8h
beta-pinene, 560mg/m³, 8h, in the year 1993 (Finland)
Remark: IDLH (Immediately dangerous to life and health, USA)
8400mg/m³, 1500ppm/30min.
Source: FORCHEM OY FIN-90101 OULU

1.9 Source of Exposure

Remark: Production process:
Crude sulphate turpentine (CST) is collected from pulp mills located in Finland. is the stored at the plant site storage tanks in Oulu. CST is feeded into distillation process where it is fractionated into distillates one being this 3-carene/dipentene fraction. After the process the final product is collected and stored in product storage tanks from where it is further supplied to end users by using tanker ships, tank trucks, containers or drums.
Source: FORCHEM OY FIN-90101 OULU

1.10.1 Recommendations/Precautionary Measures

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1.10.2 Emergency Measures

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1.11 Packaging

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1.12 Possib. of Rendering Subst. Harmless

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1.13 Statements Concerning Waste

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1.14.1 Water Pollution

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1.14.2 Major Accident Hazards

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1.14.3 Air Pollution

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1.15 Additional Remarks

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1.16 Last Literature Search

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1.17 Reviews

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1.18 Listings e.g. Chemical Inventories

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2.1 Melting Point

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2.2 Boiling Point

Value: 162 - 174 degree C at 1013 hPa
Method: other
GLP: no data
Source: FORCHEM OY FIN-90101 OULU
Test condition: ASTM D 233-65

2.3 Density

Type: relative density
Value: 862 kg/m3 at 20 degree C
Method: other
GLP: no data
Source: FORCHEM OY FIN-90101 OULU
Test condition: Anton Paar DMA 40.

2.3.1 Granulometry

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2.4 Vapour Pressure

Value: 2 hPa at 20 degree C
Method: other (calculated)
GLP: no data
Source: FORCHEM OY FIN-90101 OULU
Test substance: 20°C, delta-3-carene.

2.5 Partition Coefficient

log Pow: 4.5 - 5.5 at 35 degree C
Method: OECD Guide-line 117 "Partition Coefficient (n-octanol/water), HPLC Method"
Year: 1993
GLP: yes
Source: FORCHEM OY FIN-90101 OULU
Test condition: Values at pH 2.0.
Ref. VKI (Water Quality Institute, Denmark) GLP Study No. 408335/488 24.5.1993/AXD.

2.6.1 Water Solubility

Source: FORCHEM OY FIN-90101 OULU
Test substance: Insoluble.

2.6.2 Surface Tension

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2.7 Flash Point

Value: 45 degree C
Type: closed cup
Method: other
Year: 1990
GLP: no data
Source: FORCHEM OY FIN-90101 OULU
Test condition: ISO 2719-73(E)

2.8 Auto Flammability

Value: 220 degree C
Method: other
GLP: no data
Source: FORCHEM OY FIN-90101 OULU

2.9 Flammability

Result: flammable
Source: FORCHEM OY FIN-90101 OULU
Test condition: Not determined.

2.10 Explosive Properties

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2.11 Oxidizing Properties

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2.12 Additional Remarks

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3.1.1 Photodegradation

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3.1.2 Stability in Water

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3.1.3 Stability in Soil

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3.2 Monitoring Data (Environment)

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3.3.1 Transport between Environmental Compartments

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3.3.2 Distribution

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3.4 Mode of Degradation in Actual Use

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3.5 Biodegradation

Type: aerobic
Inoculum: activated sludge, domestic
Concentration: 7.8 mg/l related to Test substance
Degradation: 0 - 3.8 % after 28 day
Result: other
Kinetic:

0 day	0 %
7 day	6.3 %
14 day	17.4 %
21 day	1.3 %
28 day	3.8 %

Method: OECD Guide-line 301 D "Ready Biodegradability: Closed Bottle Test"
Year: 1993 **GLP:** yes
Test substance: as prescribed by 1.1 - 1.4
Source: FORCHEM OY FIN-90101 OULU
Test substance: The test concentration of 3-Carene did not inhibit the respiratory activity in the inoculum.

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3.6 BOD5, COD or BOD5/COD Ratio

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3.7 Bioaccumulation

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3.8 Additional Remarks

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AQUATIC ORGANISMS**4.1 Acute/Prolonged Toxicity to Fish**

Type: semistatic
Species: Brachydanio rerio (Fish, fresh water)
Exposure period: 96 hour(s)
Unit: **Analytical monitoring:** no
LC50: 5 - 10
Method: OECD Guide-line 203 "Fish, Acute Toxicity Test"
Year: 1993 **GLP:** yes
Test substance: as prescribed by 1.1 - 1.4
Source: FORCHEM OY FIN-90101 OULU

4.2 Acute Toxicity to Aquatic Invertebrates

Species: Daphnia magna (Crustacea)
Exposure period: 48 hour(s)
Unit: **Analytical monitoring:** no
EC50: 12.8 - 24.3
Method: OECD Guide-line 202, part 1 "Daphnia sp., Acute Immobilisation Test"
Year: 1993 **GLP:** yes
Test substance: as prescribed by 1.1 - 1.4
Source: FORCHEM OY FIN-90101 OULU

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4.3 Toxicity to Aquatic Plants e.g. Algae

Species: Selenastrum capricornutum (Algae)
Endpoint: biomass
Exposure period: 72 hour(s)
Unit: **Analytical monitoring:** no
NOEC: 100
EC10: 100 - 200
EC50: 100 - 200
Method: OECD Guide-line 201 "Algae, Growth Inhibition Test"
Year: 1993 **GLP:** yes
Test substance: as prescribed by 1.1 - 1.4
Source: FORCHEM OY FIN-90101 OULU

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4.4 Toxicity to Microorganisms e.g. Bacteria

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4.5 Chronic Toxicity to Aquatic Organisms

4.5.1 Chronic Toxicity to Fish

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4.5.2 Chronic Toxicity to Aquatic Invertebrates

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TERRESTRIAL ORGANISMS

4.6.1 Toxicity to Soil Dwelling Organisms

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4.6.2 Toxicity to Terrestrial Plants

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4.6.3 Toxicity to other Non-Mamm. Terrestrial Species

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4.7 Biological Effects Monitoring

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4.8 Biotransformation and Kinetics

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4.9 Additional Remarks

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5.1 Acute Toxicity

5.1.1 Acute Oral Toxicity

Type: LD50
Species: rat
Sex:
Number of
Animals:
Vehicle:
Value: 4800 mg/kg bw
Method: other
Year: GLP:
Test substance: no data
Remark: Method unknown.
Source: FORCHEM OY FIN-90101 OULU

5.1.2 Acute Inhalation Toxicity

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5.1.3 Acute Dermal Toxicity

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5.1.4 Acute Toxicity, other Routes

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5.2 Corrosiveness and Irritation

5.2.1 Skin Irritation

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5.2.2 Eye Irritation

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5.3 Sensitization

Type:
Species:
Number of
Animals:
Vehicle:
Result:
Classification:
Method:
Year: GLP:
Test substance:
Remark: Turpentine is a sensitising substance. It may cause
allergenic dermatitis in skin contact.
Source: FORCHEM OY FIN-90101 OULU

5.4 Repeated Dose Toxicity

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5.5 Genetic Toxicity 'in Vitro'

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5.6 Genetic Toxicity 'in Vivo'

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5.7 Carcinogenicity

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5.8 Toxicity to Reproduction

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5.9 Developmental Toxicity/Teratogenicity

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5.10 Other Relevant Information

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5.11 Experience with Human Exposure

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6. References

date: 19-FEB-2000
Substance ID: 91770-80-8

- (1) VKI (Water Quality Institute, Denmark), study no. 308067/488
19.5.1995/MK.
- (2) VKI (Water Quality Institute, Denmark) Study No. 308069/488
cate 19.5.1995/MK
- (3) VKI (Water Quality Institute, Denmark) Study No. 308061/488
date 19.5.1995/KIO

7.1 Risk Assessment

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