



Safety Data Sheet

NatureFlexx 509

1. Supplier and Substance Identification

1.1 Product Information

Product name: NatureFlexx 509
Chemical Name: Acetyl tributyl citrate (ATBC)
REACH registration No.: 01-2119457265-36-0003
CAS-Number: 77-90-7
EC-number: 201-067-0

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

General use: Chemical basic material.
For industrial purposes only.
Identified uses: Industrial use:
Manufacture/formulation

1.3 Details of the supplier of the safety data sheet

Supplier:
The Chemical Company
44 Southwest Avenue
Jamestown, RI 02835 USA
Phone : 401.423.3100
Fax : 401.423.3102
Email : info@thechemco.com
Web : www.thechemco.com

1.4 Emergency telephone number

For Chemical Emergency
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2. Hazard Identification

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2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP) This mixture is classified as not hazardous.

Classification according to Directive 67/548/EEC or 1999/45/EC This preparation is classified as not hazardous.

2.2 Label elements

Labelling (67/548/EEC or 1999/45/EC)

R phrase(s): not applicable

S phrase(s): not applicable

2.3 Other hazards

No risks worth of mention

3. Composition /Information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterization: C20 H34 O8

CAS-Number: Tributyl O-acetylcitrate

EC-number: 77-90-7

RTECS-Number: 201-067-0

TZ8330000

4. First Aid Measures

4.1 Description of first aid measures

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. If you feel unwell, seek medical advice.

In case of skin contact: Thoroughly wash skin with soap and water. Seek medical attention if irritation persists.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of eye irritation consult an ophthalmologist.

After swallowing: Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person.

In the event of discomfort seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media:

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Water fog, foam, extinguishing powder, carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Combustible.

In case of fire may be liberated: carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. Wear protective equipment.

Additional information: Hazchem-Code: -

Do not allow fire water to penetrate into surface or ground water.

6. Accidental Release Measures

6.3 Methods and material for containment and cleaning up

Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance.

6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

7. Handling and Storage

7.1 Precautions for safe handling

Advices on safe handling: Provide good ventilation and/or an exhaust system in the work area. Avoid contact with the substance. Wear personal protection equipment.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Store container tightly closed in a dry and cool place. Store only in original container.

Hints on joint storage: Keep away from strong bases and oxidizing agents.

Storage class: 10 = Combustible liquids, unless storage class 3

7.3 Specific end use(s)

No information available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

DNEL/DMEL: Systemic effects:

DNEL Long-term, workers, dermal: 2 mg/kg bw/d mg/kg bw/d.

DNEL Long-term, workers, inhalative: 7.04 mg/m³.

DNEL Long-term, consumers, oral: 1 mg/kg bw/d.

DNEL Long-term, consumers, dermal: 1 mg/kg bw/d.

DNEL Long-term, consumers, inhalative: 1.74 mg/m³.

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PNEC: PNEC water (freshwater): 0.022 mg/L.
PNEC water (marine water): 0.0022 mg/L.
PNEC sediment (freshwater): 41.5 mg/kg dw.
PNEC sediment (marine water): 4.15 mg/kg dw.
PNEC soil: 8.29 mg/kg soil dw.
PNEC sewage treatment plant: 100 mg/L.
Secondary poisoning:
PNEC oral predators: 1050 mg/kg feed.

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area. Personal protection equipment

Occupational exposure controls

Respiratory protection: When vapours form:
Use filter type ABEK according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber - Layer thickness: 0.11 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Change contaminated clothing. Wash hands before breaks and after work.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state: liquid, slightly viscous
Odor: weakly sweet, herbaceous
Odor threshold: no data available
pH value: no data available
Melting point/freezing point: (ASTM D97-02) -57 °C (1013 hPa)
Initial boiling point and boiling range: (OECD 103) 331 °C (976.4 hPa)
Flash point/flash point range: (EU A.9) 1017 hPa 217.9 °C (c.c.)
Evaporation rate: no data available
Flammability: combustible
Explosive properties: not explosive.
Vapours can form explosive mixtures with air.
Explosion limits: no data available no data available
Vapour pressure: at 25 °C: 0.000494 hPa (calculated)
Vapour density: no data available
Density: at 20 °C: 1.0528 g/cm³ (OECD 109)
Solubility: soluble in: Alcohol and ether
Water solubility: at pH 6,7-6,8 4.49 mg/L (OECD 105)
Partition coefficient: n-octanol/water: at 40 °C: at pH 7.1 4.86 log P(o/w) (OECD 117)
An appreciable bioaccumulation potential is to be expected (log P(o/w) >3).
Auto-ignition temperature: not self-igniting
Thermal decomposition: no data available

Viscosity, dynamic: no data available
Viscosity, kinematic: at 20 °C: 40.40 mm²/s (OECD 114)
Explosive properties: not explosive.
Vapours can form explosive mixtures with air.
Oxidizing characteristics: no data available

9.2 Other information

Additional information: Molecular weight: 402.5 g/mol
Surface tension (22 °C) - 4 mg/L: 54.6 mN/m (OECD 115).
Refraction index (25 °C): 1.4408

10. Stability and Reactivity

10.1 Reactivity

10.2 Chemical Stability

Product is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Protect against heat /sun rays.

10.5 Incompatible materials

Strong bases and oxidizing agents

10.6 Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide and carbon dioxide
Thermal decomposition: no data available

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity:

LD50 Rat, oral: > 31500 mg/kg

LD50 Rabbit (male) dermal: > 2000 mg/kg

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Specific symptoms in animal studies: Rabbit, Not an irritant

Eye damage/irritation: Based on available data, the classification criteria are not met. Specific symptoms in animal studies: Rabbit, slightly irritant.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Based on available data, the classification criteria are not met. Specific symptoms in animal studies: guinea pig, not sensitising.

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

In-vitro: Negative in the Ames test. (without metabolic activation, OECD 471). In-vivo:

Chromosomal aberrations: negative (OECD 475).

Carcinogenicity: Based on available data, the classification criteria are not met. NOAEL Rat, oral: 300 mg/kg bw/d.

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

Developmental toxicity/teratogenicity Rat, oral: 50 mg/kg bw/d. Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

NOAEL Rat oral: ≥ 1000 mg/kg/d (OECD 408).

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

Other information: Bioaccumulative potential Rat, oral: No evidence of bioaccumulation.

12. Ecological Information

12.1 Toxicity

Aquatic toxicity: Algae toxicity:

EC50 *Desmodesmus subspicatus* (green algae): 11.5 mg/L/72 h (OECD 201)

Bacterial toxicity:

EC10 Respiratory inhibition test, applied on activated sludge: > 1000 mg/L/3 h (OECD 209)

Daphnia toxicity:

Daphnia magna (Big water flea):

EC50: > 1 mg/L/24 h (OECD 202) NOEC: > 1.11 mg/L/21 d (OECD 202)

Fish toxicity:

Lepomis macrochirus (bluegill):

LC50: $> 38 < 60$ mg/L/96 h (OECD 203)

NOEC: 10 mg/L/96 h (OECD 203)

12.2. Persistence and degradability

Further details: Biodegradability:

In water: 82%/28 d. Inherently biodegradable (OECD 302).

In soil: The product is completely biodegradable. (EPA OPPTS 835.3300).

Distribution of substance:

Air: 27.8% Water: 18.1%

Soil: 28.0%

Sediment: 26.1%

In fish, Aerosol, particles: irrelevant

Photolysis at 25 °C: 50%/26.6 h (calculated, EPIWIN (v 4.0), AOPWIN (v 1.92)).

Hydrolysis at 25 °C, pH 8:

Half-life time 139.4 d (calculated, EPIWIN (v 4.0), HYDROWIN (v 2.00)).

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):

Bioaccumulation sediment (marine water):

Bioconcentration factor (BCF): 31.57 (calculated, EPWIN (v 4.0), BCFBAF (v 3.00)). Significant bioaccumulation potential is not to be expected.

12.4 Mobility in soil

log K_{oc}: 4.271 (OECD 121).
Henry constant (H) at 1013 hPa/ 25 °C: 4,434 Pa m³/mol (calculated).

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal Consideration

13.1 Waste treatment methods

Product

Waste key number: 07 07 99 = Wastes from the MFSU of fine chemicals and chemical products not otherwise specified

MFSU = manufacture, formulation, supply and use Recommendation: Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

14. Transport Information

14.1 UN number

ADR/RID, IMDG, IATA: not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA: not applicable

14.4 Packing group

ADR/RID, IMDG, IATA: not applicable

14.5 Environmental hazards

Marine pollutant: No

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

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

No data available

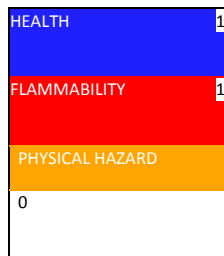
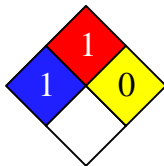
15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain
Hazchem-Code: -

National regulations - USA
TSCA Inventory: listed
TSCA HPV: not listed

Hazard rating systems: NFPA Hazard Rating: Health: 1 (Slight) Fire: 1 (Slight)
Reactivity: 0 (Minimal) HMIS Version III Rating:
Health: 1 (Slight)
Flammability: 1 (Slight)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor
National regulations - Canada DSL: listed



15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment has been carried out.

16. Other Information

Further information

Reason of change: Changes in section 1: REACH registration No.
Changes in section 2: Classification, Labeling
Changes in section 8: DNEL and PNEC values
Changes in section 9: Physical and chemical properties
Changes in section 11: Toxicological information
Changes in section 12: Ecological information
General revision

Date of first version: 2014-4-3

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Disclaimer:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other

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