



The Chemical Company
19 Narragansett Avenue
Jamestown, RI 02835
Phone: (401) 423- 3100

Material Safety Data Sheet

1. Supplier and Substance Identification

PRODUCT NAME Nature-Flexx 509
CAS # 77-90-7
CHEMICAL NAME Acetyltri-n-butyl Citrate
CHEMICAL FAMILY Ester
MOLECULAR WEIGHT 402.5
MOLECULAR FORMULA $C_{20}H_{34}O_8$

Contact Information:

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2. Composition / Information on ingredients

COMPONENTS Acetyltri-n-butyl Citrate
CAS# 77-90-7
% by wt 100
EXPOSURE LIMITS Not established

3. Hazard Identification

EMERGENCY OVERVIEW

A clear, oily liquid with essentially no odor. This product does not present an immediate concern for emergency personnel.

POTENTIAL HEALTH EFFECTS

EYES May cause slight irritation.
SKIN May cause slight irritation.
INGESTION May be harmful if ingested in sufficient quantities.
INHALATION High gas, vapor, or mist concentrations may be harmful if inhaled.
CHRONIC (CARCINOGEN) This material is not listed by IARC, NTP, or OSHA as a carcinogen.
TERATOGENICITY No data available.
MUTAGENICITY Negative for mutagenic activity in Ames testing and mouse lymphoma assay, both with and without metabolic activation.

4. First Aid Measures

EYES Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician.
SKIN Wash thoroughly after skin contact.
INGESTION If swallowed, do not induce vomiting. Get prompt medical attention.
INHALATION Remove from exposure. If not breathing, give artificial respiration and call a physician.

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5.Fire Fighting Measures

FLAMMABLE PROPERTIES	Flashpoint: 400°F (204°C) Method: COC
FLAMMABLE LIMITS	LEL: Not available UEL: Not available
AUTOIGNITION	Not available
COMBUSTION PRODUCTS	As with other organic materials, combustion will produce carbon monoxide and carbon dioxide.
EXTINGUISHING MEDIA	Foam, dry chemical, carbon dioxide (CO ₂), water spray.
FIREFIGHTING INSTRUCTIONS	Wear self-contained breathing apparatus and protective clothing. Normal firefighting procedures may be used.

6.Accidental Release Measures

Contain spilled liquid with sand or vermiculite and place in chemical waste container. Prevent runoff from entering drains, sewers, and streams.

7.Handling and Storage

HANDLING	Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.
STORAGE	This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container tightly closed.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS	Use with adequate ventilation. The use of local mechanical ventilation is recommended whenever this product is used in a confined space or heated above ambient temperature.
PERSONAL PROTECTIVE EQUIPMENT (PPE)	
EYES/FACE	Goggles or glasses with side shields.
SKIN	Clothing should be sufficient to minimize physical contact. Impermeable gloves recommended. (i.e., neoprene).
RESPIRATORY	The use of a NIOSH-approved organic vapor respirator is recommended whenever this product is used in a confined space or heated above ambient temperature. Air-purifying respirators must not be used in oxygen-deficient atmospheres.

9.Physical and Chemical Properties

APPEARANCE	Clear, oily liquid
ODOR	Essentially odorless
pH	Not available
PHYSICAL STATE	Liquid
VAPOR PRESSURE	0.8 mm Hg @170°C
VAPOR DENSITY	14.1
BOILING POINT	327°C (621°F)
FREEZING/MELTING POINT	-59°C (-75°F) (Pour point)
SOLUBILITY (WATER)	<0.1%
SPECIFIC GRAVITY	1.048 @ 25/25°C
EVAPORATION RATE	<1 (Butyl Acetate = 1)

10.Stability and Reactivity

HAZARDOUS DECOMPOSITION PRODUCTS

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STABILITY Stable
INCOMPATIBILITY Incompatible with oxidizing materials. As with other organic materials, combustion will produce carbon dioxide and carbon monoxide.
POLYMERIZATION Will not occur.

11. Toxicological Information

Toxic Effects:

Oral-rat: LD50 31,400 mg/kg
Oral-cat: LD50 >50 mL/kg
Intraperitoneal-mouse LD50: >4000 mg/kg
Other multiple dose toxicity:
Intraperitoneal-mouse TDLo: 12,600 mg/kg/14D-I

12. Ecological Information

No data available.

13. Disposal Consideration

Disposal must be in accordance with Federal, State, and Local regulations.

14. Transport Information

DOT SHIPPING CLASSIFICATION Synthetic Plastic Plasticizer
DOT HAZARD CLASS Non-Hazardous
UN NUMBER Not applicable
DOT HAZARD LABEL Not applicable
IMO Not listed

15. Regulatory Information

OSHA STATUS Non-Hazardous
SARA TITLE III Not applicable
CERCLA Not applicable

INVENTORIES

TSCA Yes
CANADA Yes (DSL)
EINECS 201-067-0
JAPAN 2-1327X
AUSTRALIA Yes
KOREA KE-00158
CHINA Yes (Part III)
PHILLIPPINES Yes
SWITZERLAND G-3300

16. Other Information

HMIS RATING:

Health 0
Flammability 1
Reactivity 0



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Personal Protection B
NFPA RATING:
Health 0
Flammability 1
Reactivity 0
Personal Protection Not available