


# Natro-Tac™ T-50

## 1: Identification

<b>Product identifier:</b>	Natro0Tac™ T-50	
<b>Other means of identification:</b>	Triallyl cyanurate in toluene	
<b>Supplier:</b>		NATROCHEM, Inc. P.O. Box 1205 Savannah, GA 31402-1205 912-236-4464
<b>Recommended use:</b>	Adhesives	
<b>Restrictions on use:</b>	Not applicable.	
<b>Emergency phone number:</b>	CHEMTREC (USA)	800-424-9300
	CHEMTREC (Int'l)	202-483-7616

## 2: Hazard(s) identification

<b>GHS classification:</b>	Flammable liquids – category 2 Acute toxicity, oral – category 4 Skin corrosion/irritation – category 2 Serious eye damage/irritation – category 2B Reproductive toxicity – category 2 Specific target organ toxicity, single exposure (respiratory tract irritation) – category 3 Specific target organ toxicity, single exposure (narcotic effects) – category 3 Specific target organ toxicity, repeated exposure – category 2 Aspiration hazard – category 1 Hazardous to the aquatic environment, acute hazard – category 2 Hazardous to the aquatic environment, chronic hazard – category 2
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## GHS label elements

**Signal word:**

DANGER

**Symbol(s):**



**Hazard statements:**

H225: Highly flammable liquid and vapour  
H302: Harmful if swallowed  
H304: May be fatal if swallowed and enters airways  
H315: Causes skin irritation  
H320: Causes eye irritation  
H336: May cause drowsiness or dizziness  
H361: Suspected of damaging fertility or the unborn child

<b>Hazards not otherwise classified:</b>	H373: May cause damage to organs (central nervous system) through prolonged or repeated exposure H411: Toxic to aquatic life with long lasting effects
<b>Precautionary statements:</b>	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.
<b>Prevention:</b>	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P260: Do not breathe fume/gas/mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response:</b>	P301+310+331: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. P303+361+353+332+313: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. P304+340+312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. P305+351+338+337+313: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. If eye irritation persists: Get medical advice/attention. P308+311: IF exposed or concerned: Call a POISON CENTER/doctor. P314: Get Medical advice/attention if you feel unwell. P330: Rinse mouth. P362+364: Take off contaminated clothing and wash it before reuse. P370+378: In case of fire: Use foam, CO <sub>2</sub> , dry powder or water fog to extinguish. P391: Collect spillage.
<b>Storage:</b>	P405: Store locked up. P403++233+235: Store container tightly closed in a well ventilated place. Keep cool.
<b>Disposal:</b>	Dispose of contents/container in accordance with applicable regulations.
<b>Supplemental information:</b>	Not applicable.

### 3: Composition

**Substance/mixture:** Mixture

Ingredient	Synonyms	CAS number	Concentration (%)
2,4,6-triallyloxy-1,3,5-triazine	Triallyl cyanurate, TAC	101-37-1	49.5-50.5
Toluene		108-88-3	49.5-50.5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

### 4: First-aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM, OR PHYSICIAN immediately; have SDS information available. Never give anything by mouth to an unconscious or convulsing person.

#### Description of necessary first aid measures

<b>Eye contact:</b>	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
<b>Inhalation:</b>	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
<b>Skin contact:</b>	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
<b>Ingestion:</b>	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

#### Most important symptoms/effects, acute and delayed.

##### Potential acute health effects

Irritation. Drowsiness and dizziness. Nausea. May cause lung damage if swallowed. Prolonged exposure may cause chronic effects.

#### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician:</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments:</b>	No specific treatment.
<b>Protection of first-aiders:</b>	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## 5: Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media:** Use dry chemical, CO<sub>2</sub>, water spray (fog), or foam.  
**Unsuitable extinguishing media:** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical:** Danger of decomposition under influence of heat. Vapour may cause flash fire. Vapours can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

**Hazardous thermal decomposition products:** In the event of a fire, hazardous decomposition products may include:

Carbon monoxide  
 Carbon dioxide  
 Allyl-alcohol  
 Hydro-cyanic acid  
 Other unidentified organic compounds

**Special protective actions for firefighters:** No action shall be taken involving any personal risk or without proper training.

Use water spray to cool unopened containers.

**Special protective equipment for firefighters:** Firefighters and others who may be exposed to products of combustion should wear full firefighting turn out gear (full bunker gear) and self-contained breathing apparatus (SCBA) operated in pressure-demand mode (MSHA/NIOSH approved or equivalent).

## 6: Accidental release measures

### Personal precautions, protective equipment, and emergency procedures

**For non-emergency personnel:** Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. No action shall be taken involving any personal risk or without suitable training.

**For emergency responders:** If specialized clothing is required to deal with the spillage, take note of any information in **Section 8** on suitable and unsuitable materials. See also the information immediately above in "For non-emergency personnel".

**Environmental precautions:** Avoid release to sewers, waterways, soil, or air. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

### Methods and materials for containment and cleaning up

**Small spill:** Eliminate all ignition sources. Use a non-combustible material to soak up the products and place into a container for later disposal. Cover with plastic sheet to prevent spreading. Collect spillage. Following product recovery, flush area with water. Prevent product

form entering drains. Do not allow material to contaminate groundwater system. Clean surface thoroughly to remove residual contamination.

**Large spill:**

Stop the flow of material if this is without risk. Dike the spilled material where this is possible.

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

## 7: Handling and storage

### Precautions for safe handling

**Protective measures:**

Put on appropriate personal protective equipment (see Section 8). Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity.

**Advice on general occupational hygiene:**

Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

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

See also Section 8 for additional information on hygiene measures. Flammable liquid storage. Do not handle or store near an open flame, heat, or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink, and animal feedstuffs.

## 8: Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient	OSHA PEL	ACGIH TLV	NIOSH REL
Toluene	200 ppm TWA 300 ppm ceiling	20 ppm TWA	375 mg/m <sup>3</sup> TWA 100 ppm TWA 560 mg/m <sup>3</sup> STEL 150 ppm STEL

**Recommended monitoring procedures:**

If this product contains ingredients with exposure limits, personal, workplace atmosphere, or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Appropriate engineering controls:**

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls:**

Emissions from ventilation or work process equipment should be checked to ensure that they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures****Hygiene measures:**

Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory, and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection:**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: splash goggles.

**Skin protection****Hand protection:**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. When handling hot material, wear heat-resistant gloves that are able to withstand the temperature of molten product.

**Body protection:**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection:**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection:**

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

**9: Physical and chemical properties****Appearance****Physical state:**

Liquid

**Color:**

Colourless

**Odor:**

Sweet. Pungent.

**Odor threshold:**

Not available.

<b>pH:</b>	Not available.
<b>Melting/freezing point:</b>	Not available.
<b>Boiling point and range:</b>	Not available.
<b>Flash point:</b>	Not available.
<b>Evaporation rate:</b>	Not available.
<b>Flammability:</b>	Not available.
<b>Flammability or explosive limits:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Vapor density:</b>	Not available.
<b>Relative density:</b>	Not available.
<b>Solubility:</b>	Not available.
<b>Partition coefficient: n-octanol/water:</b>	Not available.
<b>Auto-ignition temperature:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Not applicable.

## 10: Stability and reactivity

<b>Reactivity:</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability:</b>	This product is stable.
<b>Possibility of hazardous reactions:</b>	Risk of polymerization triggered by exothermic reaction above 60°C
<b>Conditions to avoid:</b>	Heat, flames, and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Avoid temperatures in excess of 50°C for longer periods. Refer to protective measures listed in <b>Sections 7 and 8</b> .
<b>Incompatible materials:</b>	Reactive or incompatible with the following materials: Acids Strong oxidizing materials Alkalis
<b>Hazardous decomposition products:</b>	In the event of a fire, hazardous decomposition products may include: Carbon monoxide Carbon dioxide Allyl-alcohol Hydro-cyanic acid Other unidentified organic compounds

## 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

**Conclusion/summary:** Harmful if swallowed. May enter lungs if swallowed or vomited.

Ingredient	Result	Species	Dose	Exposure
Toluene	LD <sub>50</sub> oral	Rat	2.6 g/kg	-
	LD <sub>50</sub> dermal	Rabbit	14.1 mL/kg	-
	LC <sub>50</sub> inhalation	Rat	8000 mg/L	4 hours
Triallyl cyanurate	LD <sub>50</sub> oral	Rat	753 mg/kg	-
	LD <sub>50</sub> dermal	Rabbit	>2000 mg/kg	-
	LC <sub>50</sub> inhalation	Rat	>0.333 mg/L	1 hour

#### Irritation/corrosion

##### Conclusion/summary

**Skin:** Toluene: causes skin irritation  
TAC: No skin irritation (Rabbit, 4h)

**Eyes:** Toluene: causes eye irritation  
TAC: No eye irritation (Rabbit)

**Respiratory:** No known significant effects or critical hazards.

#### Sensitization

##### Conclusion/summary:

**Skin:** Toluene: not assigned  
TAC: Does not cause skin sensitization (Guinea pig)

**Respiratory:** Toluene: not assigned

#### Mutagenicity:

**Conclusion/summary:** Toluene: not assigned  
TAC: negative

#### Carcinogenicity

**Conclusion/summary:** No known significant effects or critical hazards.

##### Classification

Ingredient	OSHA	IARC	NTP
Toluene	-	3	-
Triallyl cyanurate	-	-	-

##### Carcinogen classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: [Known/Reasonably anticipated] to be a human carcinogen

OSHA: +

Not listed/regulated: -

#### Reproductive toxicity

**Conclusion/summary:** Toluene: May damage fertility or the unborn child. May adversely affect the developing fetus. Avoid contact while pregnant/nursing.

#### Teratogenicity

**Conclusion/summary:** No known significant effects or critical hazards.

#### Specific target organ toxicity (single exposure)

May cause drowsiness or dizziness.

#### Specific target organ toxicity (repeated exposure)

May cause damage to organs (central nervous system) through prolonged or repeated exposure.

#### Target organs

Contains material which may cause damage to the following organs:



upper respiratory tract, eyes.

#### **Aspiration hazard**

May be fatal if swallowed and enters airways.

**Information on the likely routes of exposure:** Routes of entry anticipated: oral, dermal, inhalation.

### **Potential acute health effects**

Irritation. Drowsiness and dizziness. Nausea. May cause lung damage if swallowed. Prolonged exposure may cause chronic effects.

### **Symptoms related to the physical, chemical, and toxicological characteristics**

No information.

### **Delayed and immediate effects and also chronic effects from short- and long-term exposure**

#### **Short-term exposure**

Irritation. Drowsiness and dizziness. Nausea. May cause lung damage if swallowed. Prolonged exposure may cause chronic effects.

#### **Long-term exposure**

May cause damage to organs (central nervous system) through prolonged or repeated exposure.

### **Potential chronic health effects**

<b>General:</b>	Toluene has been reported to decrease immunological responses and cause recordable hearing loss in laboratory animals. Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication.
<b>Carcinogenicity:</b>	No known significant effects or critical hazards.
<b>Mutagenicity:</b>	No known significant effects or critical hazards.
<b>Teratogenicity:</b>	No known significant effects or critical hazards.
<b>Developmental effects:</b>	No known significant effects or critical hazards.
<b>Fertility effects:</b>	No known significant effects or critical hazards.

### **Numerical measures of toxicity**

#### **Acute toxicity estimates**

Not available.

## 12: Ecological information

### Toxicity

Ingredient	Result	Species	Exposure
Toluene	EC50 5.46-9.83 mg/L	Daphnia – <i>daphnia magna</i>	48 hours
	LC50 6.86-8.48 mg/L	Fish – <i>oncorhynchus gorbuscha</i>	96 hours
Triallyl cyanurate	LC50 7.05 mg/L	Fish – <i>danio rerio</i>	96 hours
	EC50 40 mg/L	Daphnia – <i>daphnia magna</i>	48 hours
	IC50 10.52 mg/L	Algae – <i>desmodesmus subspicatus</i>	72 hours
	NOEC 2.50 mg/L	Algae – <i>desmodesmus subspicatus</i>	72 hours
	EC50 > 1000 mg/L	Activated sludge	3 hours

### Persistence and degradability

Ingredient	Aquatic half-life	Photolysis	Biodegradability
Triallyl cyanurate	-	-	Not readily (9%, 28d)

### Bioaccumulative potential

Ingredient	LogP <sub>ow</sub>	BCF	Potential
Triallyl cyanurate	-	9.94	unlikely
Toluene	2.73	-	-

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>):

TAC: 2.6

Other adverse effects:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 13: Disposal considerations

**Disposal methods:**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**Disposal should be in accordance with applicable regional, national, and local laws and regulations.**

**Refer to Sections 6, 7, and 8 for additional information on accidental release measures, handling and storage, and exposure controls.**

## 14: Transport information

	DOT	IMDG	IATA
UN number	UN1993	Not regulated.	Not regulated.
UN proper shipping name	Flammable liquid, n.o.s. (contains toluene)	-	-
Transport hazard class(es)	3	-	-
Packing group	II	-	-
Environmental hazards	Yes	No.	No.
Marine pollutant substances	Yes	Not applicable.	Not applicable.
Additional information	-	-	-

**Special precautions for user:** Protect from thermal radiation. Protect from heat. As cool as possible.

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**

Not available.

## 15: Regulatory information

### Inventory status

<b>United States inventory (TSCA 8b):</b>	All components are listed or exempted.
<b>Australia inventory (AICS):</b>	All components are listed or exempted.
<b>Canada inventory (DSL):</b>	All components are listed or exempted.
<b>China inventory (IECSC):</b>	All components are listed or exempted.
<b>Europe inventory (REACH):</b>	All components are listed or exempted.
<b>Japan inventory (ENCS):</b>	All components are listed or exempted.
<b>Korea inventory (KECI):</b>	All components are listed or exempted.
<b>New Zealand inventory (NZIoC):</b>	All components are listed or exempted.
<b>Philippines inventory (PICCS):</b>	All components are listed or exempted.

### United States

#### US Federal regulations:

##### *SARA Title III*

#### Section 302 – Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or are regulated but present in negligible concentrations.

**Section 311/312 – Hazard Categories:**

Ingredient	Immediate	Delayed	Fire	Pressure	Reactivity
Toluene	yes	yes	yes	no	no
TAC	yes	no	no	no	no

**Section 313 – Toxic Chemicals:**

Toluene

***Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Reportable Quantity (RQ)***

The components of this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

**US State regulations:**

Ingredient	NJ RTK	MA RTK	PN RTK	CA Prop. 65
Toluene	Listed	Listed	Listed	Listed
TAC	-	-	-	Not listed

**16: Other information****Hazardous Material Identification System (USA)**

<b>HEALTH</b>	*	<b>2</b>
<b>FLAMMABILITY</b>		<b>3</b>
<b>REACTIVITY</b>		<b>0</b>
<b>PERSONAL PROTECTION</b>		

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1901.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the Nation Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J.Keller 800-327-6868.

\* - chronic effects

The customer is responsible for determining the PPE code for this material.

**Key to abbreviations:**

ATE	Acute toxicity estimate
BCF	Bioconcentration factor
GHS	Globally Harmonized System of classification and labeling of chemicals
IATA	International Air Transport Association
IBC	Intermediate bulk container
IMDG	International Maritime Dangerous Goods
LogPow	Logarithm of the octanol/water partition coefficient
MARPOL 73/78	International convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978. (MARPOL = marine pollution)
UN	United Nations

**Disclaimer:**

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