

## SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

#### Product identifier

Chemical Name

N,N-Dimethyl-p-Toluidine

Product Name / Trade Name

RT-LTA (Low Temperature Additive)

CAS No.

99-97-8

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

Identified Use(s)

Low temperature additive for industrial flooring resins.

Uses Advised Against

None

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

Company Identification

Res-Tek, Inc.

110 Riverside Drive

Cartersville, Georgia 30120

United States of America

Telephone

1-888-737-8351 / 1-770-427-4034

#### Emergency telephone number

CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)

Flam liq. 4, Acute tox, oral 3, Acute tox, Inhal. 3, Acute tox, Derm 3, STOT – repeated exposure 2, Acute aqu. Tox. 3

Target Organs

Skin, Lungs, Liver, Central Nervous System, Blood.

#### Label elements

##### Hazard Symbol



##### Signal Word(s)

**DANGER**

##### Hazard Statement(s)

Combustible liquid

Toxic if swallowed, in contact with skin, or inhaled

May cause damage to organs through prolonged or repeated exposure

Harmful to aquatic life with long lasting effects

##### Precautionary Statement(s)

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe mist/vapors/ sprays. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release into the environment. Wear protective gloves/eye protection/face protection. IF SWALLOWED: immediately call a poison control center or doctor. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get Medical advice / Attention if you feel unwell. Rinse Mouth. Remove / Take off immediately any contaminated clothing. Wash Contaminated clothing before reuse. In case of fire: Use Water, Carbon Dioxide, polymer foam, alcohol for extinction. Store in a well ventilated place. Keep container tightly closed. Store in a well-ventilated place, keep container cool. Keep

stored locked up. Dispose of contents/container in accordance to all regulations.

**Other hazards**

No data available.

**Additional Information**

None

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients	%W/W	CAS No.	Hazard Statement(s)
N,N-Dimethyl-p-Toluidine	>99	99-97-8	Flam liq. 4; H227
N-Methyl-p-Toluidine	0.5 - 0.7	623-08-5	Acute tox, oral 3 H301
N,N-Dimethyl-o-Toluidine	<0.1	609-72-3	Acute tox, Inhal. 3 H331
N,N-Dimethyl-m-Toluidine	<0.1	121-72-2	Acute tox, Derm 3 H311
p-Toluidine	absent	106-49-0	STOT – repeated exposure 2; H373 Acute aqu. Tox. 3; H402

For full text of H phrases see section 16.

**Additional Information** - None

## SECTION 4: FIRST AID MEASURES



**Description of first aid measures**

**General**

Immediately flush area with copious amounts of water. When exposed to vapors, immediately remove victim to fresh air.

**Moderate Exposure**

Remove from exposure. Breathe a lot of fresh air. Remove contaminated shoes and discard. Remove contaminated clothing and wash before re-use. Wash affected areas with abundant amounts of cool, soapy water.

**Extensive Exposure**

May aggravate cardiovascular conditions, respiratory conditions or skin conditions. Remove to clean area and immediately notify physician

**Inhalation**

This material may cause high methemoglobin levels in the blood. Symptoms include: headaches, dizziness, bluish lips and fingernails. Administer oxygen as needed.

**Skin Contact**

Immediately wash with a lot of soap and water. Seek medical attention if symptoms persist.

**Eye Contact**

Irrigate thoroughly with water. Seek medical attention if symptoms persist.

**Ingestion**

Harmful if swallowed. Consult physician. Harmful if swallowed. Target organs: liver, central nervous system, blood, skin. Consult physician.

**Note to Physician**

The presence of this material in the body leads to methemoglobin formation, which, in sufficient levels, causes cyanosis. This is reversed spontaneously after termination of exposure. Treat cyanosis with supportive measures such as bed rest and oxygen inhalation. Thoroughly cleanse the entire contaminated area of the body. If extensive cyanosis is present treat with methylene blue and vitamin B-12.

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

This product is rapidly absorbed through the skin. Inhalation is an important route of entry into the body. It is irritating to eyes, skin and mucous membranes. Symptoms include: dizziness, headache, & nausea. Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or

**Routes of entry:**

**Potential Health Effects:**

Inhalation  
Skin  
Eyes  
Ingestion

longer.

Skin absorption, inhalation.

Toxic if inhaled. May cause respiratory tract irritation.  
Toxic if absorbed through skin. May cause skin irritation.  
May cause eye irritation.  
Toxic if swallowed.

## SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media**

-Suitable Extinguishing Media

-Unsuitable Extinguishing Media

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

**Advice for fire-fighters**

Extinguish with Water, Carbon Dioxide, polymer foam, alcohol. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide..  
None anticipated.

Combustible material. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Fire may cause evolution of nitrogen oxides. Decomposes when heated to form highly irritating vapors. Flash point 83°C / 181°F.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Avoid inhalation of vapors. Avoid skin contact with material. May flash back.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**Environmental precautions**

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

**Additional Information**

Wear protective breathing apparatus and avoid breathing vapors. Wear skin protective and shoe protective equipment. Ventilate area. Small spills may be absorbed with diatomaceous earth. Vacuum up puddles or absorb with diatomaceous earth, or oil absorbing material and pick up for disposal. Keep in suitable, closed containers for disposal.

Contain spillages with sand, earth or any suitable adsorbent material. Do not allow to enter drains, sewers or watercourses.

Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery. If possible prevent water running into sewers.

None

## SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling**

Material darkens on exposure to air, light and moisture. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep out of direct sunlight. Keep container tightly closed. Avoid contact with skin and eyes. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands and exposed skin after use. Avoid inhalation of vapor or mist. Do not breathe dust / fume / gas / mist / vapors / spray. Take measures to prevent the buildup of electrostatic charge. Contaminated work clothing should not be allowed out of the workplace. Work in well ventilated zones or use proper respiratory protection. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.

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

- Storage temperature Store in a cool, dry place out of direct sunlight. Store in tightly sealed drums. Open carefully. Protect from air, light and moisture.
- Incompatible materials Strong oxidising agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		WEEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
N,N-Dimethyl-p-Toluidine	99-97-8	0.5 ppm	-	-	-	Skin, Inhalation

- STEL: Short Term Exposure Limit; IFV = Inhalable Fraction & Vapor

### Exposure controls

#### Appropriate engineering controls

Work in well ventilated zones or use proper respiratory protection.

#### Personal protection equipment

##### Eye/face protection



Wear protective eyewear (goggles, face shield, or safety glasses).

##### Skin protection (Hand protection/ Other)



Gloves (BuButyl rubber. Polyethylene. Chlorinated polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Check with protective equipment manufacturer's data. Gloves should be changed regularly to avoid permeation problems.

##### Respiratory protection



In case of inadequate ventilation wear a full face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges in combination with engineering controls. If the respirator is the sole means of protection, use a full face supplied air respirator.respiratory protection.

##### Thermal hazards

Not normally required.

### Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Liquid
Color.	Colorless to yellow. Darkens on exposure to air and moisture.
Odor	Sweet
Odor Threshold (ppm)	Not available.
pH (Value)	Not available.
Melting Point (°C) / Freezing Point (°C)	-25 °C ( -13 °F)
Boiling point/boiling range (°C):	211 °C (411 °F)
Flash Point (Closed Cup, °C)	76°C ( 168 °F)
Evaporation Rate	> 1 (Butyl acetate = 1)
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	1.21 % vol to 7% vol
Vapour pressure (mmHg)	0.178 at 25 °C (77 °F)
Vapour Density (Air=1)	5.42 (Air = 1)

# RT-LTA (Low Temperature Additive)

Density (g/ml)	0.937 at 25 °C (77 °F) (7.82 lb/gal @ 25 °C)
Specific Gravity	0.937
Solubility (Water)	455 mg/L at 25 °C (77 °F)
Solubility (Other)	Not available.
Partition Coefficient (n-Octanol/water)	log Pow: 2.81 OECD
Auto Ignition Point (°C)	425 °C (797 °F)
Decomposition Temperature (°C)	Not available.
Kinematic Viscosity (mm <sup>2</sup> /s)	2.24 at 25 °C (77 °F)
Dynamic Viscosity (mPa.s)	1.7 at 25 °C (77 °F)
Explosive properties	Not available.
Oxidizing properties	Not available.
<b>Other information</b>	100% VOC

## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	No data available..
<b>Chemical stability</b>	Stable. Avoid excessive heat.
<b>Possibility of hazardous reactions</b>	Not to be expected.
<b>Conditions to avoid</b>	Product can oxidize at elevated temperatures. Avoid static discharge. Flammable vapors can be released at elevated temperatures.
<b>Incompatible materials</b>	Strong oxidizers. Strong acids.
<b>Hazardous decomposition product(s)</b>	Decomposition products depend upon temperature, air supply and the presence of other materials.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes:** Inhalation, Skin Contact, Ingestion.

**Exposure symptoms:** Inhalation, skin contact and ingestion: Blue lips, fingernails and skin. Headache. Dizziness. Nausea. Confusion. Convulsions. Unconsciousness. Eye:

### Information on toxicological effects

Acute toxicity (estimated / calculated)

**Oral:** LD50: 980 mg/kg (rat), 139 mg/kg (mouse).  
**Dermal:** LD50: > 2000 mg/kg (rat).  
**Inhalation:** LC50: 800 mg/m<sup>3</sup>/2H (mouse). 1400 mg/m<sup>3</sup>/2H (rat).  
**Intraperitoneal:** 212 mg/kg (mouse).  
**Eye:** Lowest published toxic dose 100 mg/kg (rabbit). FHSA score 6.4/110, slightly irritating.  
**Remarks:** Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Olfaction: Ulcerated nasal septum. Lungs, Thorax, or Respiration: Dyspnea. Lungs, Thorax, or expiration: Respiratory stimulation.  
 Prolonged exposure not likely to cause significant skin irritation. May cause slight temporary eye irritation. Corneal injury is unlikely.  
 Did not cause allergic skin reactions when tested in guinea pigs.  
 Causes damage to organs through prolonged or repeated exposure: oral, Kidneys  
**Oral:** 1082 mg/kg (rat).  
**Intraperitoneal:** 135 mg/kg DNA damage (mouse).  
**Micronucleus:** 900 ul/L (Lung, hamster).

Corrosivity / Irritation

Sensitization

Repeated dose toxicity

Mutagenicity

Carcinogenicity		Possibly carcinogenic to humans (Group 2B).	
<b>NTP</b>	<b>IARC</b>	<b>ACGIH</b>	<b>OSHA</b>
No.	Yes.	Yes.	No.
Toxicity for reproduction		May also cause damage to organs through prolonged and repeated exposure (reproductive organs after oral exposure)	
Other information		None known.	

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity

Acute toxicity (estimated / calculated)

LC50/EC50/EL50/LL50 >100 mg/L (Fish)  
LC50, static test, 96 Hour, 48.9 mg/l (fathead minnow)  
LC50, semi-static test, 96 Hour, 110.55 mg/l (rainbow trout)  
LC50, static test, 48 Hour, 2,701 mg/l (water flea)  
EC50, static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l (green algae)

Long Term Toxicity

Not available.

### Persistence and degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Biodegradation rate may increase in soil and/or water with acclimation. 10-day Window: Pass. Biodegradation: 84.4 %. Exposure time: 28 d

### Theoretical Oxygen demand

1.94 mg/mg

### Biological oxygen demand (BOD)

Incubation Time	BOD
10 d	28%
20 d	61%
28 d	67%

### Partition Coefficient: n-octanol/water (log Kow):

2.79

### Bioaccumulative potential

Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

### Mobility in soil

Potential for mobility in soil is very high (Koc between 0 and 50).

### Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

### Partition Coefficient (Koc)

2.27 Estimation by liquid chromatography

### Other adverse effects

None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

### Additional Information

None known.

## SECTION 14: TRANSPORT INFORMATION

	<b>Land transport (U.S. DOT)</b>	<b>Sea transport (IMDG)</b>	<b>Air transport (ICAO/IATA)</b>
<b>UN number</b>	UN 2810	UN 2810	UN 2810
<b>Proper Shipping Name</b>	Toxic Liquid, Organic, N.O.S. (N,N-Dimethyl-p-Toluidine)	Toxic Liquid, Organic, N.O.S. (N,N-Dimethyl-p-Toluidine)	Toxic Liquid, Organic, N.O.S. (N,N-Dimethyl-p-Toluidine)
<b>Transport hazard class(es)</b>	6.1	6.1	6.1
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	No	No	No

Special precautions for user

None assigned

None assigned

None assigned

DOT Placard



Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

\* Reportable Quantity (RQ) substance

## SECTION 15: REGULATORY INFORMATION

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

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None			

SARA 311/312 - Hazard Categories:

☒ Fire ☐ Sudden Release ☐ Reactivity ☒ Immediate (acute) ☒ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None		

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)	TPQ (Pounds)
None	-----	-----	-----	-----

Proposition 65 (California):

Chemical Name	CAS No.	Typical %wt.	Hazards
N,N-Dimethyl-p-Toluidine	99-97-8	>99	Carcinogen

**⚠ WARNING** This product can expose you to chemicals, including N,N-Dimethyl-p-Toluidine, which is known to the state of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1 - 16.

Date of preparation: January 28, 2019

Hazard Statement(s) Listed in: SECTION 3

H227 Combustible liquid.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Additional Information: None.

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