

# MATERIAL SAFETY DATA SHEET • MSDS



## SECTION 1 • PRODUCT IDENTIFICATION

<b>TRADE NAME</b>	<b>TECHNOVIT 4000, LIQUID 2</b>
<b>ANAMET PRODUCT NUMBER</b>	<b>232-L2</b>
<b>CHEMICAL NAME</b>	
<b>MANUFACTURER / SUPPLIER'S NAME</b>	ANAMET
<b>ADDRESS</b>	P.O. Box 538 BOUCHERVILLE, QUÉBEC, J4B 6Y2
<b>TELEPHONE NO.</b>	(450) 646-1290
<b>EMERGENCY TELEPHONE NO.</b>	CANUTEC (613)-996-6666

## SECTION II • COMPOSITION / INFORMATION ON COMPONENTS

Chemical characterization Description	CAS number	%	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Hohere Methacrylsaurester.	---	50-75	Not available.	Not available.
Methyl Methacrylate.	80-62-6	25-50	Not available.	Not available.
Styrene.	100-42-5	5-10	Not available.	Not available.
N, N-dimethyl-p-toluidine.	99-97-8	<1	Not available.	Not available.

**NOTE:** Ingredients are listed on the TSCA Inventory of Chemical Substances. Those not identified are non-hazardous.

## SECTION III • PHYSICAL / CHEMICAL CHARACTERISTICS

<b>Boiling point in °C</b>	101 °C (213.8°F)	<b>Vapor pressure (mm Hg)</b>	47mbar @ 20 °C (68°F)
<b>Melting point in °C</b>	Not determined	<b>Vapor density (Air = 1)</b>	Not available.
<b>Density (Water = 1)</b>	1.0	<b>Evaporation rate (Butyl acetate= 1)</b>	Not available.
<b>Solubility in water</b>	Not miscible		
<b>Appearance and odor</b>	Light green/blue liquid / characteristic odor.		

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## SECTION IV • FIRE / EXPLOSION HAZARD

Flash point	Approx. 15 °C (59°F).		
Flammable limits	<b>LEL</b>	2.1 %	<b>UEL</b> 12.5 %
Extinguishing media	Carbon dioxide, extinguishing power, alcohol foam. Do not use water or water jet.		
Special fire fighting procedures	MSHA/NIOSH approved self-contained breathing apparatus recommended and suitable protective clothing should be worn in fire conditions. Keep fire exposed containers cool by spraying water. Take precautionary measures against static charge.		
Unusual fire and explosion hazards	Formation of toxic gases is possible during heating or in case of fire.		

## SECTION V • REACTIVITY

Stability	Stable.
Conditions to avoid	Not available.
Incompatibility	Not available.
Hazardous decomposition products	No decomposition if used and stored according to specification.
Hazardous Polymerization	If stored longer than recommended and /or recommended temperature, product may polymerize generating heat.

## SECTION VI • TOXICOLOGICAL PROPERTIES OF PRODUCT

### A - SUGGESTED FIRST AID

Eyes	Irrigate with eyewash solution or clean water, holding the eyelids apart for at least 20 minutes. Obtain medical attention.
Skin	Remove contaminated clothing. Wash skin immediately with water and soap for at least 20 minutes. If symptoms (irritation or blistering) occur obtain medical attention.
Inhalation	Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention.
Ingestion	Do not induce vomiting. Obtain medical attention immediately.

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## B – TOXICOLOGICAL INFORMATION

**PRIMARY ENTRY ROUTES:** Inhalation, ingestion, skin, and eye contact.

### • SHORT TERM EXPOSURE

<b>Eyes</b>	Liquid or high concentrations of vapor or mist can cause severe eye irritation.
<b>Skin</b>	Liquid or vapor can irritate the skin.
<b>Inhalation</b>	Vapor or mist can irritate the nose, throat and lungs. Symptoms such as sore throat, coughing, chest pain, shortness of breath and difficult breathing may occur.
<b>Ingestion</b>	Liquid may cause burning of the mouth, throat and digestive tract with abdominal pain, nausea, vomiting, diarrhea, thirst, weakness, shock (collapse) and death. Permanent damage could result.

### • LONG TERM EXPOSURE

<b>Carcinogenicity</b>	Styrene is listed by IARC as a Group 2B carcinogen.
<b>Teratogenicity, Mutagenicity and other reproductive effects</b>	Not available.
<b>Skin Sensitization</b>	The product is a skin sensitization (allergy).
<b>Respiratory tract sensitization</b>	This product is a respiratory sensitizer.
<b>Synergistic materials</b>	Not available.

## SECTION VII • PRECAUTIONARY INFORMATION

### PERSONAL PROTECTIVE MEASURES

<b>Eye, face &amp; hands</b>	Safety spectacles/Full Face Shield. Wear suitable impervious (Neoprene) gloves. Gloves should be changed regularly and if excessive exposure has occurred.
<b>Respiratory protection</b>	Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely. A suitable mask with filter may be appropriate. In the event of formation of particularly high levels of vapor a self-contained breathing apparatus may be appropriate.
<b>Ventilation</b>	Provide adequate ventilation, including appropriate local extraction, to insure that the defined occupational exposure limit is not exceeded. Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.
<b>Hearing</b>	As needed in accordance with OSHA 1910-215.
<b>HMIS Ratings</b>	Health: 2 Flammability: 3 Reactivity: 2

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## SECTION VIII • SAFETY PRECAUTIONS IN CASE OF LEAKS OR SPILLS

<b>Spill or leak procedure</b>	Eliminate sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal of spillages. Prevent entry into drains. Adsorb spillages onto sand, earth or any suitable adsorbent material. Do not adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.
<b>Waste disposal</b>	Disposal should be in accordance with local, state, or national legislation. Incinerate under approved controlled conditions Decontaminate empty drums before recycling.

## SECTION IX • STORAGE AND HANDLING

<b>Storage</b>	Keep in a cool, well ventilated place. Keep away from sources of ignition-No Smoking. Keep away from heat and direct sunlight.
<b>Handling</b>	Avoid contact with skin and eyes. Avoid inhalation of high concentration of vapors. Use in well ventilated area. The vapor is heavier than air; beware of pits and confined spaces.
<b>Shipping classification</b>	<ul style="list-style-type: none"> <li>• <b>Dot Shipping Name:</b> Methyl Methacrylate monomer Stabilized.</li> <li>• <b>TDG/UN Ship. Names:</b> Methyl Methacrylate monomer Stabilized.</li> <li>• <b>UN Number:</b> UN1866</li> <li>• <b>Hazard Class:</b> 3</li> <li>• <b>Packing Group:</b> II</li> <li>• <b>TDG Exemption:</b> May be shipped as a LIMITED QUANTITY if container is 5L or less.</li> <li>• <b>Label:</b> Flammable Liquid.</li> <li>• <b>IATA Class:</b> 3</li> <li>• <b>IMDG Class:</b> 3</li> </ul>
<b>DOT Hazard class</b>	
<b>HMIS Ratings</b>	Health: 2 Flammability: 3 Reactivity: 2

## SECTION X • ECOLOGICAL INFORMATION

<b>Environmental Fate and Distribution</b>	Not available.
<b>Persistence and Degradation</b>	Not available.
<b>Toxicity</b>	Not available.
<b>Effect of effluent treatment</b>	Not available.



**SECTION XI • REGULATORY INFORMATION**

**• EC REGULATIONS:**

TSCA STATUS: On Toxic Substance Control Inventory.  
 CERCLA REPORTABLE QUANTITY: Styrene 1000 lbs (453.6 kg),  
 Methyl Methacrylate, 1000 lbs (453.6 kg).

SARA TITLE III

- Section 302 : None
- Section 311/312: Acute, fire, chronic.
- Section 313: Methyl Methacrylate, Styrene.

RCRA STATUS: Methyl Methacrylate, U162

**• CANADIAN REGULATIONS:**

WHMIS Classification: E Corrosive Liquid; B2, D2B.

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## **TERMINOLOGY**

**ACGIH:** American Conference of Governmental Industrial Hygienists

**CAS:** Chemical Abstract Service

**CFR:** Code of Federal Regulations (Transportation in U.S.A.)

**DOT:** Department of Transportation (USA)

**DSL:** Domestic Substance List

**IARC:** International Agency for Research and Cancer

**LC:** Lethal Concentration

**LD:** Lethal Dosage

**MSHA:** Mine Safety and Health Administration (USA)

**NIOSH:** National Institute for Occupational Safety and Health (USA)

**NTP:** National Toxicology Program (U.S.A.)

**OSHA:** Occupational Safety and Health Administration (USA)

**PEL:** Permissible exposure limit.

**STEL:** Short term exposure limit.

**TDG:** Transportation of Dangerous Goods

**TLV:** Threshold limits value.

**TSCA:** Toxic Substances Control Act

**TWA:** Time-weighted average

**USEPA:** United States Environmental Protection Agency

**WHMIS:** Workplace Hazardous Materials Information System