MATERIAL SAFETY DATA SHEET • MSDS

SECTION 1 • *PRODUCT IDENTIFICATION*

TRADE NAME	**TECHNOVIT 5000, HARDENER**
ANAMET PRODUCT NUMBER	**236-H**
CHEMICAL NAME	
MANUFACTURER / SUPPLIER'S NAME	ANAMET
ADDRESS	P.O. Box 538 BOUCHERVILLE, QUÉBEC, J4B 6Y2
TELEPHONE NO.	(450) 646-1290
EMERGENCY TELEPHONE NO.	**CANUTEC (613)-996-6666**

SECTION II • *COMPOSITION / INFORMATION ON COMPONENTS*

Chemical characterization Description	**CAS number**	**%**	**OSHA PEL (mg/m^3)**	**ACGIH TLV (mg/m^3)**
Methyl Methacrylate.	80-62-6	50-75	410	410
Epoxyacrylat.	---	10-25	---	---
(1-methyl1,2 ethanediyl) Bis [oxy (methyl-2, 1-ethanediyl)] diacrylate.	42978-66-5	0-5	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*

Boiling point in ºC	101 ºC (213.8°F)	**Vapor pressure (mm Hg)**	Not available.
Melting point in ºC	Not applicable	**Vapor density (Air = 1)**	Not available.
Density (Water = 1)	1.0	**Evaporation rate (Butyl acetate= 1)**	Not available.
Solubility in water	Insoluble.		
Appearance and odor	Colorless liquid / Characteristic Odor.		

SECTION IV • *FIRE / EXPLOSION HAZARD*

Flash point	10 ºC (50°F).			
Flammable limits	**LEL**	2.1%	**UEL**	12.5 %
Extinguishing media	Carbon dioxide, extinguishing power, water jet, alcohol resistant 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.			
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	Avoid temperatures above 350ºC (662°F). Potentially violent decomposition can occur above 350ºC. Generation of gas during decomposition can cause pressure in closed systems. Pressure build up can be rapid.
Incompatibility	Avoid bases, acids and oxidizing agents.
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
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. Symptoms of poisoning may even occur after several hours: therefore medical observation for at least 48 hours after the accident.

B – TOXICOLOGICAL INFORMATION

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

• SHORT TERM EXPOSURE

Inhalation	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.
Skin	Liquid or vapor can irritate the skin.
Eyes	Liquid or high concentrations of vapor or mist can cause severe eye irritation.
Ingestion	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

Carcinogenicity	Not established.
Teratogenicity, Mutagenicity and other reproductive effects	Not available.
Skin Sensitization	The product is a skin sensitization (allergy).
Respiratory tract sensitization	Respiratory sensitizer.
Synergistic materials	Not available.

SECTION VII • *PERSONAL PROTECTION MEASURES*

PERSONAL PROTECTIVE MEASURES

Eye, face & hands	Safety spectacles/Full Face Shield. Wear suitable impervious (Neoprene) gloves. Gloves should be changed regularly and if excessive exposure has occurred.
Respiratory protection	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.
Ventilation	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.
Hearing	As needed in accordance with OSHA 1910-215
HMIS Coding	Health: 2 Flammability: 3 Reactivity: 2

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

Spill or leak procedure	Eliminate sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal of spillages. Prevent entry into drains. Adsorb spillages with liquid-binding material (diatomite, universal binders, for small amounts of tissues). Do not adsorb onto sawdust or other combustible materials. Do not flush with water or aqueous cleansing agents. Transfer to a container for disposal or recovery. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.
Waste disposal	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*

Storage	Store in a cool (not above 25ºC (77°F). and in a well ventilated place. Keep away from sources of ignition-No Smoking. Keep away from heat and direct sunlight.
Handling	Avoid contact with skin and eyes. Avoid inhalation of high concentration of vapors. Use in well ventilated area. Take precautionary measures against static discharges.
Shipping classification **DOT Hazard class**	• **Dot Shipping Name:** Methyl Methacrylate Monomer Stabilized • **TDG/UN Shipping Names:** Methyl Methacrylate Monomer Stabilized • **UN Number:** UN1247 • **Hazard Class:** 3 • **Packing Group:** II • **TDG Exemption:** Not regulated. • **Label:** Corrosive Liquid • **IATA Class:** 3 • **IMDG Class:** 3
HMIS Coding	Health: 2 Flammability: 3 Reactivity: 2

SECTION X • *ECOLOGICAL INFORMATION*

Environmental Fate and Distribution	Not available.
Persistence and Degradation	Not available.
Toxicity	Harmful to aquatic organism, may cause long-term adverse effects in the aquatic environment.
Effect of effluent treatment	Not available.

SECTION XI • *REGULATORY INFORMATION*

• EC REGULATIONS:

TSCA STATUS: On Toxic Substance Control Inventory.
CERCLA REPORTABLE QUANTITY: Methyl Methacrylate, 1000 lbs.,
SARA TITLE III

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

RCRA STATUS: Methyl Methacrylate, U162

• CANADIAN REGULATIONS:

WHMIS Classification: E, B2 and 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