

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

PRODUCT NAME -----> **Methyl Acrylate, Inhibited**
10-20ppm MEHQ; 200ppm PTZ

PRODUCT NUMBERS-----> 194504, 194601

CHEMICAL NAME OR SYNONYMS --->Acrylic Acid, Methyl Ester
2-Propenoic acid, methyl ester
Methyl-2-propenoate

CAS-NO: 96-33-3

CHEMICAL FAMILY: Ester

RECOMMENDED USE: Manufacture of substances. Laboratory chemicals.
USES ADVISED AGAINST: No information available

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE**
SOMERSET, NJ 08873

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Flammable liquids (Category 2)

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Dermal (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Skin sensitization (Category 1)

Specific target organ toxicity - single exposure (Category 3) Respiratory System

Acute aquatic toxicity (Category 2)

Chronic aquatic toxicity (Category 3), H412

GHS Label elements, including precautionary statements



Pictogram

Signal word **Danger**

Hazard statement(s)

- H225 Highly flammable liquid and vapor.
- H301 Toxic if swallowed.
- H312 + H332 Harmful in contact with skin or if inhaled
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H401 Toxic to aquatic life.
- H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

- P210 Keep away from heat/sparks/open flames/hot surfaces. - 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.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P311 Call a POISON CENTER or doctor/ physician.

P322 Specific measures (see supplemental first aid instructions on this label).
 P330 Rinse mouth.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

3. INGREDIENTS

Ingredient	CAS No.	% by Wt. Range	CLASSIFICATION
Methyl Acrylate EC-No.202-500-6 Index-No.607-034-00-0	96-33-3	>99.5	Flammable liquids (Category 3) Acute toxicity, Oral (Category 4) Acute toxicity, Inhalation (Category 4) Acute toxicity, Dermal (Category 4) Skin irritation (Category 2) Eye irritation (Category 2A) Skin sensitization (Category 1) STOT-SE (Category 3) Respiratory Acute aquatic toxicity (Category 2) Chronic aquatic toxicity (Category 3)
Monomethyl Ether of Hydroquinone (MEHQ) (Mequinol) EC-No.205-769-8 Index-No.604-044-00-7	150-76-5	10-38ppm	Acute toxicity, Oral (Category 4), Eye irritation (Category 2A), Acute aquatic toxicity (Category 3), Chronic aquatic toxicity (Category 3)
Phenothiazine (PTZ) EC-No.202-196-5	92-84-2	200ppm	Acute toxicity , oral (Category 4) Skin Sensitization (Category 1) STOT-RE, oral (Category 2) Acute aquatic toxicity (Category 3) Chronic aquatic toxicity (Category 3)

4. FIRST-AID PROCEDURES

Emergency and First Aid Procedures:

Inhalation: Methyl Acrylate

****FIRST AID-** Remove from exposure to fresh air, restore breathing use oxygen if needed. Keep warm and quiet. Immediately notify a physician.

Eye Contact (Splash): Methyl Acrylate

****FIRST AID-** Immediately flush eyes with water for 15 minutes. Hold eyelids open for complete irrigation. Remove contact lenses, if worn, after initial flushing. Immediately take to a physician.

Skin Contact(Splash): Methyl Acrylate

****FIRST AID-** Wash affected area with soap and large amounts of water. Remove contaminated clothing. Consult a physician if irritation persists.

Ingestion: Methyl Acrylate

****FIRST AID-** Patient should be made to drink large amounts of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician or poison control center, treat symptomatically.

5. FIRE FIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL.

FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.

VAPOR-AIR MIXTURES ARE EXPLOSIVE.

Flash Point: 27°F TCC
Auto-ignition Point: 779°F

LEL %:2.1
UEL %:14.5

SUITABLE EXTINGUISHING MEDIA: - Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other-->

CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.

ADVICE FOR FIREFIGHTERS: Shut off source. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Wear NIOSH approved self contained breathing apparatus with full face-piece and pressure demand for exposure to vapors or products of combustion and in confined spaces.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Flammable liquid; isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Vapors are heavier than air and can travel considerable distance to a source of ignition and flashback. Rapid uncontrolled polymerization can cause explosion. Containers that rupture explosively, due to polymerization, may auto-ignite.

COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE MEASURES > Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

METHODS FOR CONTAINMENT AND CLEAN UP > Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent such as clay or silica in spill area. If an odor or acidity problem exists, add lime or sodium bicarbonate. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent. Remove contaminated soil to remove contaminated trace residues. Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Flush with water to remove trace residue. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations. Keep all nonessential people away. Caution: Spontaneous polymerization can occur if material is released or mixed with incompatibles.

7. HANDLING AND STORAGE

PERSONAL PRECAUTIONARY MEASURES > This material presents a fire hazard. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid prolonged or repeated contact with eyes, skin and clothing. Do not take internally.

HANDLING INFORMATION > Maintain contact with atmosphere of 5-21% oxygen. Do not use inert atmosphere as blanket. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close container.

STATIC HAZARD> Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information

refer to OSHA Standard 29CFR 1910.106 “Flammable and Combustible Liquids” and National Fire Protection Association (NFPA 77) “Recommended Practice on Static Electricity”.

CONDITIONS FOR SAFE STORAGE Store in closed containers away from direct sunlight. Do not store above 100°F. Store large quantities only in buildings designed to comply with OSHA 1910.106.

Avoid storage under an oxygen free atmosphere. An air space is required above the liquid in all containers.

Keep containers tight and upright to prevent leakage. Do not store with incompatible materials. Keep containers closed when not in use.

CONTAINER WARNINGS > Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

EXPOSURE GUIDELINES:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Methyl Acrylate	96-33-3	99.5min.	2ppm TLV(ACGIH) 10ppm TWA(OSHA) 10ppm TWA(NIOSH) 250ppm (IDLH)
Monomethyl Ether of Hydroquinone (MEHQ) (Mequinol)	150-76-5	10-38ppm	5mg/m ³ TWA (ACGIH) 5mg/m ³ TWA (NIOSH)
Phenothiazine (PTZ)	92-84-2	200ppm	5mg/m ³ TWA (ACGIH) 5mg/m ³ TWA (NIOSH)

Key: (PEL) = Permissible Exposure Limit OSHA
 (TLV) = Threshold Limit Value OSHA & ACGIH
 (STEL) = Short Term Exposure Limit ACGIH
 (WEEL) = USA. Workplace Environmental Exposure Levels
 (TWA) = Time Weighted Average
 CAS = Chemical Abstracts Registry Number

IDLH = Immediate Danger to Life and Health
N.E. =None Established

EXPOSURE GUIDELINES > Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS > Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION > For vapor concentrations 1 to 10 times TLV or PEL an air purifying NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times TLV or PEL, in confined areas, and/or where vapor concentrations are unknown use a approved positive pressure full face-piece supplied air respirator.

BODY CLOTHING> Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

SKIN PROTECTION > Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Butyl Rubber chemical resistant gloves.

EYE/FACE PROTECTION > Use safety eyewear with splash guards, goggles with face shield. Shower and eyewash should be easily accessible to the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE, COLOR AND ODOR: Clear, colorless liquid with pungent odor.

Odor Threshold----- > 14ppb

pH----- > No data available

Molecular Weight----- > 86.1

Melting/Freezing Point)----- > -75 °C (-103 °F)

Boiling Point (°F)----- > 175

Specific Gravity----- > .9567@25°C

Vapor Pressure----- > 68mmHg20°C

Vapor Density (air=1)----- > 2.97

Water Solubility----- > 6%

Partition Coefficient n-Octanol/Water-> log Pow: 0.74

Evaporation Rate (Butyl Acetate=1)----> <3.5

Flash Point----- > -3 °C (27 °F) CC
Upper Flammability Limit-----> 14.5% (V)
Lower Flammability Limit-----> 2.1% (V)

Auto-Ignition Temperature----- > 779°F
Decomposition Temperature-----> No data available
Viscosity-----> No data available
Explosive Properties-----> No data available
Oxidizing Properties----- > No data available

Other Information: No data available

10. STABILITY AND REACTIVITY INFORMATION

CHEMICAL STABILITY> Unstable () Stable (X) This product is considered stable under specified conditions of storage , shipment and use. Must be equilibrated with an atmosphere containing 5-8% (by volume) oxygen for inhibitor to function.

POSSIBILITY OF HAZARDOUS RERACTIONS> Vapors may form explosive mixtures with air.

CONDITIONS TO AVOID--> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame.

INCOMPATIBLE MATERIALS--> Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide, aldehydes, ethers and azides.

HAZARDOUS DECOMPOSITION PRODUCTS--> Hazardous polymerization may occur. Fumes, Smoke, Carbon Monoxide and other decomposition products where combustion is not complete.

HAZARDOUS POLYMERIZATION --> May occur (X) Will not occur ()
Uncontrolled polymerization can cause rapid evolution of heat and increased pressure which can result in violent rupture of storage vessels or containers.

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

Effects of overexposure:

Eye> Severe burns and possible with irritation, burning, pain, watering and/or change of vision. Possible loss of vision;

Skin> Can cause burns which may be delayed with redness, swelling, itching, burning o blistering.;

Inhalation> Irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.

Ingestion> Can severely irritate mouth, throat, and stomach. Methyl Acrylate is very toxic by ingestion.

Chronic: Single oral doses of 280mg/kg methyl acrylate in rabbits resulted in death characterized by difficult breathing, bluish color to the skin and mucous membranes, convulsions, and hypothermia. Chronic exposure to methyl acrylate has injured lungs, liver and kidneys in experimental animals. In 24 month inhalation study, rats exposed to 15, 45, and 135ppm exhibited changes of the olfactory epithelium of the nasal mucosa and of the cornea were noted.

Medical Conditions Aggravated by Exposure> Skin contact may aggravate an existing dermatitis. Chronic disease of eyes or respiratory tract.

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	 Oral LD50(Rat)	 Skin LD50(Rabbit) 	Inhalation LC50
Methyl Acrylate	 227-300mg/kg	 1200mg/kg	 1000ppm/4hrs
Monomethyl Ether of Hydroquinone	 N.D.	 2000mg/kg	
Phenothiazine (PTZ)	 1370mg/kg	 2000mg/kg	 N.D.

MUTAGENIC EFFECTS: Mixed results in vitro and in vivo.

CARCINOGEN STATUS:

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Methyl acrylate)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

REPRODUCTIVE TOXICITY: This product did not cause developmental toxicity in rats after inhalation exposure at 25, 50 or 100ppm for 6 hours per day, during days 6 to 20 of gestation.

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System)

Inhalation - May cause respiratory irritation.

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System)

no data available

ASPIRATION HAZARD:

No data available

ADDITIONAL INFORMATION:

RTECS: AT2800000

12. ECOLOGICAL INFORMATION

DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS

May be dangerous if it enters water intakes.

Notify local health and pollution control officials.

Notify operators of nearby water intakes.

AQUATIC TOXICITY: Methyl Acrylate exhibits moderate acute toxicity to fish.

LC50 96-hour Fish (Trout) 3.4ppm

LC50 96-hour Fish (Sheepshead Minnow) 1.1ppm

LC50 96-hour Fish (Goldfish) 5ppm

EC50 48-hour Water Flea (Daphnia) 2.6ppm

LC50 96-hour Algae 7ppm

WATERFOWL TOXICITY: No data available

PERSISTENCE AND DEGRADABILITY: Result: 90 - 100 % - Readily biodegradable.

Methyl Acrylate was confirmed to be significantly degradable in the Japanese MITI biodegradability screening test. Atmospheric photochemical degradation (half-life) is estimated to be 14.5 hours. Volatization half-lives of 6.8hours and 3.2 days for river and pond, respectively.

BIOACCUMULATION: The log n-octanol/water partition coefficient for methyl acrylate is 0.74. This suggests a low potential to bio-accumulate.

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS > Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time

of disposition. Dispose in accordance with all applicable disposal regulations. Incinerate under controlled conditions in a permitted facility.

CONTAMINATED PACKAGING: Dispose of as unused product

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: D001.

DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

USDOT Shipping Name----- > Methyl Acrylate, Inhibited
USDOT Hazard Classification-----> 3 (Flammable Liquid)
USDOT Label Codes----- > 3
USDOT ID Number----- > UN1919
USDOT Package Code----- > II
Emergency Response Guide----- > 129P
Marine Pollutant----- > No

IMDG

UN number: 1919 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: METHYL ACRYLATE, STABILIZED
Marine pollutant: No

IATA

UN number: 1919 Class: 3 Packing group: II
Proper shipping name: Methyl acrylate, stabilized

15. REGULATORY INFORMATION

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355)- Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65)- Listed Methyl Acrylate CAS 96-33-3

SECTION 311/312: Hazard Categorization (40 CFR 370)- Acute Health Hazard, Fire Hazard, Reactive Hazard

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4)- Not Listed

Reportable Quantity - None

SECTION 101(14) Reportable Quantity: None

Massachusetts Right To Know Components

Methyl acrylate CAS-No.96-33-3

Mequinol CAS-No.150-76-5

Phenothiazine CAS-No.92-84-2

Pennsylvania Right To Know Components

Methyl acrylate CAS-No.96-33-3

Mequinol CAS-No.150-76-5

Phenothiazine CAS-No.92-84-2

New Jersey Right To Know Components

Methyl acrylate CAS-No.96-33-3

Mequinol CAS-No.150-76-5

Phenothiazine CAS-No.92-84-2

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA (Toxic Substance Control Act)

Methyl Acrylate CAS 96-33-3, Mequinol CAS-No.150-76-5 and Phenothiazine CAS-No. 92-84-2 are listed on the TSCA Inventory.

Methyl Acrylate FDA Indirect Food Contact Approvals:

21CFR175.105, 21CFR175.300, 21CFR175.360, 21CFR177.1010, 21CFR177.2420, 21CFR179.45

International Inventories:

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes

<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

16. OTHER INFORMATION:

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=2
HMIS RATINGS (SCALE 0-4): Health=3 Fire=3 Reactivity=2 PPE=H

Date of preparation-> March 29, 2000

Revision Number----> 1.6

Revision Content----> Section 15: added International Inventories & FDA Citations

Revision Date-----> September 27, 2017

Prepared by-----> T.G. Fenstermaker, Jr.

Acronyms:

ACGIH - American Conference of Governmental Industrial Hygienists
 AIHA - American Industrial Hygiene Association
 ANSI - American Nation Standards Institute
 API - American Petroleum Institute
 CERCLA - Comprehensive Emergency Response, Compensation, and Liability Act
 DOT - U.S. Department of Transportation
 EPA - U.S. Environmental Protection Agency
 HMIS - Hazardous Materials Information System
 IARC - International Agency For Research On Cancer
 MSHA - Mine Safety and Health Administration
 NFPA - National Fire Protection Association
 NIOSH - National Institute of Occupational Safety and Health
 NOIC - Notice of Intended Change (Proposed change to ACGIH TLV)
 NTP - National Toxicology Program
 OPA - Oil Pollution Act of 1990
 OSHA - U.S. Occupational Safety & Health Administration
 PEL - Permissible Exposure Limit (OSHA)
 RCRA - Resource Conservation and Recovery Act
 REL - Recommended Exposure Limit (NIOSH)
 SARA - Superfund Amendments and Reauthorization Act of 1986 Title III
 SCBA - Self-Contained Breathing Apparatus
 STEL - Short-Term Exposure Limit (generally 15 minutes)

- TLV - Threshold Limit Value
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average (8hr.)
- WHMIS - Canadian Workplace Hazardous Materials Information System

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