

MATERIAL SAFETY DATA SHEET
Star Nail International CORRECTOR PEN

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Acetone
Product Name : Corrector Pen
Uses : Industrial Solvent. Restricted to professional users.
Product Code : S1212, U8903, S1260

Company : Star Nail International, Inc.
29120 Avenue Paine
Valencia CA 91355

Preparation Date: 01/02/2014

Emergency Telephone Number
Chemtel (24hr) 1-800-255-3924

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Acetone	67-64-1	100.00%

Contains Benzene, CAS # 71-43-2.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odor : Clear. Liquid. Characteristic.

Health Hazards : Vapors may cause drowsiness and dizziness. Irritating to eyes.
Harmful: may cause lung damage if swallowed.

Safety Hazards : Extremely flammable. Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Environmental Hazards : Not classified as dangerous under EC criteria.

Health Hazards

Inhalation : Vapors may cause drowsiness and dizziness. Slightly irritating to respiratory system.

Skin Contact : Repeated exposure may cause skin dryness or cracking.

Eye Contact : Irritating to eyes.

Ingestion : Harmful: may cause lung damage if swallowed.

Other Information : Exposure may enhance the toxicity of other materials.
See Chapter 11 for details.

Signs and Symptoms : Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.

Aggravated Medical

Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes. Respiratory system. Skin.

Environmental Hazards : Not classified as dangerous under EC criteria.



4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

Eye Contact : Immediately flush eyes with large amounts of water for at least

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- 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.
- Ingestion** : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- Advice to Physician** : Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

- Flash point** : -18 °C / 0 °F (IP 170)
- Explosion / Flammability limits in air** : ca. 2.1 - 13 %(V)
- Auto ignition temperature** : 540 °C / 1,004 °F (ASTM D-2155)
- Specific Hazards** : Containers exposed to intense heat from fires should be cooled with large quantities of water. The vapor is heavier than air, spreads along the ground and distant ignition is possible.
- Extinguishing Media** : Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- Protective Equipment For Firefighters** : Wear full protective clothing and self-contained breathing apparatus. Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.
- Additional Advice** : All storage areas should be provided with adequate fire fighting facilities. Keep adjacent containers cool by spraying with water.



6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Observe all relevant local and international regulations.

- Protective measures** : Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Ventilate contaminated area thoroughly.
- Clean Up Methods** : For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
- Additional Advice** : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Vapour may form an explosive mixture with air. See Chapter 13 for information on disposal. U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Centre at (800) 424-8802.

7. HANDLING AND STORAGE

- General Precautions** : Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance on

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selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

- Handling** : Avoid inhaling vapour and/or mists. Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.
- Storage** : Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system. Bulk storage tanks should be diked (bunded).
- Product Transfer** : Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
- Recommended Materials** : For containers, or container linings use mild steel, stainless steel. For container paints, use epoxy paint, zinc silicate paint.
- Container Advice** : Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.
- Additional Information** : Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Acetone	ACGIH	TWA	500 ppm		
	ACGIH	STEL	750 ppm		
	OSHA	Z1 PEL	1,000 ppm	2,400 mg/m3	
	OSHA	Z1A TWA	750 ppm	1,800 mg/m3	
	OSHA	Z1A STEL	1,000 ppm	2,400 mg/m3	

- Additional Information** : Shell has adopted as Interim Standards the OSHA Z1A values that were established in 1989 and later rescinded.
- Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Provide adequate ventilation in storage areas. Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use.
- Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : If engineering controls do not maintain airborne concentrations to a level

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which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Where air- filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors [boiling point <65°C (149°F)] meeting EN371. Where respiratory protective equipment is required, use a full-face mask. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1920.134.

- Hand Protection** : Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739, AS/NZS:2161) made from the following materials may provide suitable chemical protection: Nitrile rubber. PVC. Viton.
- Eye Protection** : Chemical splash goggles (chemical monogoggles).
- Protective Clothing** : Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.
- Monitoring Methods** : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Examples of sources of recommended air monitoring methods are given below or contact supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of analytical Methods <http://www.cdc.gov/niosh/nmam/nmammenu.html> Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods <http://www.osha-slc.gov/dts/sltc/methods/toc.html> Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances <http://www.hsl.gov.uk/search.htm>

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Clear. Liquid.
- Odour : Characteristic.
- pH : Not applicable.
- Boiling point : 56 °C / 133 °F
- Flash point : -18 °C / 0 °F (IP 170)
- Explosion/Flammability : ca. 2.1 - 13 %(V)
limits in air
- Auto-ignition temperature: 540 °C / 1,004 °F (ASTM D-2155)
- Vapour pressure : 24.7 kPa at 20 °C / 68 °F
- Density : 790 - 792 kg/m³ at 20 °C / 68 °F (ASTM D-4052)
- Water solubility : at 20 °C / 68 °F Completely miscible.
- n-octanol/water partition: 0.2
coefficient (log Pow)
- Dynamic viscosity : 0.33 mPa.s at 20 °C / 68 °F
- Vapour density (air=1) : 2 at 20 °C / 68 °F
- Electrical conductivity : 20 µS/m at 20 °C / 68 °F (ASTM D-4308)
- Coefficient of expansion: 0.0014 / °C
- Dielectric constant : 21.4 at 20 °C / 68 °F
- Heat of vapourisation : 525 kJ/kg °C
- Refractive index : 1.359 at 20 °C / 68 °F (ASTM D-1218)
- Specific heat : 2.14 kJ/kg °C at 20 °C / 68 °F
- Saturated Vapour concentration (in air) : 590 g/m³ at 20 °C / 68 °F (estimated value(s))
- Thermal conductivity : 0.16 W/m °C at 20 °C / 68 °F

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Evaporation rate	(nBuAc=1) : 5.6 (ASTM D 3539, nBuAc=1) 2 (DIN 53170, di-ethyl ether=1)
Surface tension	: 22.8 mN/m at 20 °C / 68 °F
Molecular weight	: 58.08 g/mol

10. STABILITY AND REACTIVITY

Stability	: Stable under normal conditions of use.
Conditions to Avoid	: Avoid heat, sparks, open flames and other ignition sources.
Materials to Avoid	: Strong oxidising agents.
Hazardous Decomposition Products	: None expected under normal use conditions.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on product testing.
Acute Oral Toxicity	: Low toxicity: LD50 >2000 mg/kg , Rat Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Acute Dermal Toxicity	: Low toxicity: LD50 >2000 mg/kg , Rabbit
Acute Inhalation Toxicity	: Low toxicity: LC50>5000 ppm / 1 hours, Rat High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Skin Irritation	: Not irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.
Eye Irritation	: Irritating to eyes.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation to the respiratory system.
Sensitisation	: Not a skin sensitiser.
Repeated Dose Toxicity	: Low systemic toxicity on repeated exposure.
Mutagenicity	: Not mutagenic.
Material	: Carcinogenicity Classification
Acetone	: ACGIH Group A4: Not classifiable as a human carcinogen.
Reproductive and Developmental Toxicity	: Causes slight foetotoxicity. Effects were seen at high doses only.
Additional Information	: Exposure may enhance the toxicity of other materials. May potentiate the peripheral neurotoxicity of n-hexane, and the liver and kidney toxicity of some chlorinated hydrocarbons such as carbon tetrachloride.

12. ECOLOGICAL INFORMATION

Acute Toxicity	
Fish	: Low toxicity: LC/EC/IC50 > 1000 mg/l
Aquatic Invertebrates	: Low toxicity: LC/EC/IC50 > 1000 mg/l
Algae	: Low toxicity: LC/EC/IC50 > 1000 mg/l
Microorganisms	: Low toxicity: LC/EC/IC50 > 1000 mg/l
Mobility	: If product enters soil, it will be mobile and may contaminate groundwater. Dissolves in water
Persistence/degradability	: Readily biodegradable.
Bioaccumulation	: Not expected to bioaccumulate significantly.

13. DISPOSAL CONSIDERATIONS

Material Disposal	: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Container Disposal	: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.
Local Legislation	: Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

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Acetone (67-64-1) 100.00% Listed.

Benzene (71-43-2) 0.005% Listed

Pennsylvania Right-To-Know Chemical List

Acetone (67-64-1) 100.00% Environmental hazard.
Listed.

Benzene (71-43-2) 0.005% Special hazard.
Environmental hazard.
Listed.

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SECTION I Chemical Product and Company Identification

Cuticle Oil **Cuticle Oil Pen** Chemical Family: Toiletries

Manufacturer/Distributor/Importers: Star Nail International, Inc.
29120 Avenue Paine
Valencia, CA 91355

Emergency Phone: (813) 248-0573 or (800) 255-3924

Date prepared: 1/2/2014

SECTION II Potentially Hazardous Ingredients

Chemical Identity	%	CAS Number	OSHA (PEL)	Exposure Limits in Air	
				ACGIH (TLV)	OSHA(STEL)
Mineral Oil	73-85%	8012-95-1	5mg/m3	5mg/m3	10mg/m3

SECTION III Hazard Identification

HMIS Rating Scale: 0 = Minimal 1 = Slight 2 = Moderate 4 = Severe

This Products Rating: Health: 0 Flammability: 1 Reactivity: 0

Material Appearance: Various Colors Oil

Primary Route of Entry: Inhalation _ Skin X Ingestion X

Ingredient(s) Listed as Cancer Causing Agents?:

NTP - no LARC Monographs - no OSHA - no

Target Organs Affected: none

Short Term Effect:

Inhalation: n/a

Eyes: may cause slight stinging if product gets into open eyes.

Skin: n/a

Signs and Symptoms of Over-Exposure: n/a

Medical Conditions Generally Aggravated by Exposure: n/a

SECTION IV **First Aid Measures**

Eye Contact: Flush eyes with large amounts of warm water.

Skin Contact: Wash with soap and water.

Inhalation: n/a

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting or diarrhea. Do not induce vomiting. If spontaneous vomiting occurs place victims head below knees. See medical attention immediately.

SECTION V **Fire Fighting Measures**

Flash Point: Open Cup: 166°C(331°F) (Cleveland)

Flammable Limits in Air % n/a- LEL: n/a, UEL: n/a

Extinguishing Media: Water Spray _ Dry Chemical X
Carbon Dioxide X Foam _

Fire Fighting Procedure: Use NIOSH approved self-contained breathing apparatus and complete protective clothing.

SECTION VI **Accidental Release Measures**

Spill and Leak Procedures: Collect with absorbent material and place into trash container.

SECTION VII **Handling and Storage**

Handling: Keep container closed when not in use.

Storage: Store at room temperature. Keep container closed when not in use. Keep away from heat, sparks and/or open flames.

SECTION VIII **Exposure Controls and Personal Protection**

This product is a skin cream oil and does not require Exposure controls.

SECTION IX **Physical and Chemical Properties**

Water Solubility: Insoluble in cold water.

Appearance: Clear -Various colors

Physical Form: Oily liquid

%/Wt. Volatiles: 0 %

pH: n/a

Odor: Light floral fragrances

Specific Gravity: (H₂O = 1): 0.85 - 0.88

Smoke Point: 210°C

Melting Point: n/a

Vapor Pressure (mm Hg): 1.0 mmHg @20°C (68°F)

Vapor Density: (Air =1): >1

Evaporation Rate: (H₂O) - 1) n/a

SECTION X Stability and Reactivity

Chemical Stability: This product is stable under the recommended storage conditions.

Conditions to avoid: Avoid excess heat and open flame & strong oxidizing conditions. No storage in temperatures above 35°C

Contact with Materials to avoid: Avoid chlorine, fluorine and other strong oxidizers

Hazardous Decomposition Products: none

Hazardous Polymerization: will not occur.

SECTION XI Toxicological Information

	LD50(Oral Rat)	LC50 (Inhal. Rat)
Mineral Oil	>5000mg/kg	n/a

Ingestion: May cause gastrointestinal irritation, nausea, vomiting or diarrhea.

Eyes: Minimal eye irritation may result from short-term contact with liquid, mist and/or vapor.

Dermal: n/a

Inhalation: n/a

Overexposure: n/a

Chronic Effects: n/a

Carcinogenity: Not listed as a carcinogen by IARC, NTP, OSHA, or ACGIH

Target Organs: n/a

SECTION XII Ecological Information

Ecotoxicity NE

SECTION XIII Disposal Considerations

Waste Disposal: Dispose of absorbed material in accordance with local, state and federal regulations.

SECTION XIV Transport Information

Road Transport:		Maritime Transport:	
Class:	n/a	UN Number:	n/a
Packaging Group:	n/a	Class:	n/a
Label:	n/a	Packaging Group:	n/a
UN Number:	n/a	Label:	n/a

Air Transport:

ID No. n/a

Class: n/a

Packaging Group: n/a

Packaging instr.: n/a

SECTION XV **Regulatory Information**

Labeling: n/a

Symbol: n/a

Indication of Danger: n/a

Risk Phrases: n/a

Safety Phrases: n/a

SECTION XVI **Other Information**

IMPORTANT NOTICE: The information presented herein is based on experimental data submitted by the manufacturers of the raw materials and is considered scientifically correct, however, no warrant or representation, express or implied, is made as to the accuracy or suitability of this information for application to the purchaser's intended purpose or for consequences of its use. Use these materials only as directed. If you have any questions regarding the proper interoperation of this sheet or the meaning of any terms used, we strongly urge you to speak with your physician. For further information concerning product safety and proper use, call the number listed on the front of the MSDS.

*These Products Are Designed and Formulated for Professional Salon Use.
They Must be Used with Adequate Ventilation and in Accordance with Manufacturers Instructions.*

Abbreviations Used:

NE = Not Established
NKn = Not Known
n/a = Not Applicable
C = Ceiling Limit
TS = Trade Secret
EST = Estimated
N/DA = No Data Available
NTP = National Toxicology Program
IRAC = International Agency for Research on Cancer
CHEMTREC = Chemical Transportation Emergency Center
OSHA = Occupational Safety and Health Administration

IPA = Isopropyl Alcohol (Rubbing Alcohol)
mm Hg = Millimeters of Mercury
PEL = Permissible Exposure Limit
TLV = Threshold Limit Value
STEL = Short Term Exposure Limit
NEGL = Negligible
NF = None Found
CAS = Chemical Abstract Service Number
NR = Not Required

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME: Glacial Methacrylic Acid
PRODUCT NAME: Primer Pen
TRADE NAME/PRODUCT CODE: 0000
PRODUCT USE: Organic Process Chemical
MANUFACTURER: Star Nail International, Inc.
ADDRESS: 29120 Avenue Paine
Valencia, CA 91355
24 HR. EMERGENCY TELEPHONE: CHEMTEL: 1-800-255-3924
PREPARATION/UPDATE DATE: 01/02/2014
PRINT DATE: 2/4/14
MSDS ID: M13-01

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

FOR MONOMER:

ITEM	CHEMICAL NAME	CAS NUMBER:	WT/WT %
01	Methacrylic acid	79-41-4	60.0-100.0
02	Other ester adducts	NA	0.0-2.0

ITEM	ACGIH		OSHA		Company		Recommendation	SKIN
	TLV-TWA	TLV-STEL	PEL TWA	PEL CEILING				
01	20 ppm	NE	20 ppm	NE	20 ppm	NE	NE	
02	NE	NE	NE	NE	NE	NE	NE	

Note this material contains an inhibitor (HQ, MEHQ, BHT, etc) at <1%. The type and amount meet product specifications. Contact manufacturer for exact concentration and details on inhibitor level maintenance.

See Section 16 for Abbreviations.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

WARNING:

For Monomer:

Physical Hazards:



Unstable/Reactive upon depletion of inhibitor. **Check inhibitor levels periodically.**

Acute:

Eyes:

Material can cause corrosion to eyes and permanent eye injury.

Skin:

Material can cause corrosion to skin. Harmful if absorbed through the skin.

Inhalation:

Inhalation of vapor or mist can cause irritation of nose, throat, and lungs. May cause burns resulting in permanent damage.

Ingestion:

May be harmful if swallowed. May cause severe and permanent damage to throat, mouth and stomach.

Chronic:

Prolonged or repeated overexposure at near lethal concentrations can cause kidney damage liver damage.

CARCINOGENICITY:

None of the other components of this material are listed by IARC or ACGIH as carcinogens.

PRIMARY ROUTES OF ENTRY:

Inhalation, Skin, or Eyes.

SECTION 4 - FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

EYES:

If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. Call a physician immediately.

INGESTION:

If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give anything by mouth to an unconscious person. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. Get medical attention immediately. *NOTE: This is a corrosive material. Do not administer any other first aid before obtaining the advice of a physician.*

INHALATION:

Remove to fresh air. Seek immediate medical attention.

SKIN:

IMMEDIATELY get under a safety shower. Remove contaminated clothing. Wash with soap and water. Immediate medical attention is required.

CLOTHING:


Remove contaminated clothing and wash thoroughly before reuse.

TREATMENT:

Treat symptoms conventionally, after thorough decontamination.

Notes to physician: This material will have corrosive effects in which case it may not be advisable to induce vomiting. Acute effects can include mucosal damage and severe laryngeal edema associated with corrosive agents.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT:	152.6° F, 67 ° C	
FLAMMABLE LIMIT, AIR VOL% LOWER:	NE	
UPPER:	NE	
AUTOIGNITION TEMPERATURE:	NE	
EXTINGUISHER METHOD:	Chemical foam, carbon dioxide, dry chemical.	
FIRE AND EXPLOSION HAZARDS:	High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during a runaway polymerization. Use a water spray or fog to reduce or direct vapors. Water may not be effective in actually extinguishing a fire involving this product.	
SPECIAL FIRE FIGHTING PROCEDURES:	Explosion hazard. Do not enter fire area without proper protection. Fight fire from a safe location. Heat/impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk of burns/injuries. Structural firefighters must wear SCBAs and full protective equipment.	
SENSITIVE TO MECHANICAL IMPACT:	No.	
SENSITIVE TO STATIC DISCHARGE:	No.	

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE:

Before cleaning any spill or leak, individuals involved must wear appropriate Personal Protective Equipment (e.g., goggles, gloves). Deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g. sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Maximize ventilation (open doors and windows) and secure all sources of ignition. Place into appropriate closed container(s) for disposal in accordance with local, state and federal regulations. Wash all affected areas with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

SECTION 7- HANDLING AND STORAGE

PRECAUTIONS FOR HANDLING:

Use local explosion-proof ventilation with a minimum capture velocity of 100 ft/min (30 m/min) at point of material release. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Hygienist. Observe precautions found on label. Do NOT use localized heat source such as band heaters to heat/melt product. Do NOT use steam. Thaw frozen drums by placing them in a heated room up to 40°C/104°F for 48 hours.

PRECAUTIONS FOR STORAGE:

Store containers in a cool, dry location, away from direct sunlight, heat, sparks, flame, other light sources, or sources of intense heat. Keep container closed after each use. Ground and bond all containers when transferring. **Check inhibitor levels periodically**, adding to the bulk material if needed. Maintain at a minimum, the original headspace in the product container and do not blanket or mix with oxygen-free gas as it renders the product ineffective.

SECTION 7- HANDLING AND STORAGE CONTINUED

Product freezes at 15°C/59°F. Improper thawing can result in violent polymerization. DO NOT remove any material if stock is frozen or partially frozen. Mix during and after thawing to properly distribute inhibitor. Do not allow the temperature of this material to fall below the freezing point. Store in cool place. Keep away from direct sunlight. Limit indoor storage to approved areas equipped with automatic sprinklers. Minor deviations (7C/13F) above the recommended temperature (see below) are acceptable for short periods of time (one week) for material in transit. Store material in containers made of stainless steel, glass, aluminum, or polyethylene. **Storage at temperatures between 18°- 40°C/64°- 104°F.**

INDUSTRIAL HYGIENE PRACTICES:

This material is **corrosive**. This material is a potential skin sensitizer. Avoid prolonged contact with the product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while handling product.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**VENTILATION:**

Refer to Section 7 regarding the ventilation requirements for working with this product. Use explosion-proof local exhaust at processing equipment, including buffers, sanders, grinders and polishers. High temperature processing equipment should be well ventilated.

RESPIRATORY PROTECTION:

A respirator should be worn whenever workplace conditions warrant a respirators use. None required if airborne concentrations are maintained below the exposure limit listed in Section 2. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134 or other appropriate governing standard.

EYE PROTECTION:

Depending on the use of this product, splash or safety glasses may be worn. If necessary, refer to U.S. OSHA 29 CFR §1910.133, or other appropriate governing standard. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

PROTECTIVE GLOVES:

Chemical-resistant gloves should be worn whenever this material is handled. Butyl rubber or Neoprene gloves may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. If necessary, refer to U.S. OSHA 29 CFR §1910.138, or other appropriate governing standards.

OTHER PROTECTIVE EQUIPMENT:

Wear chemical resistant apron and/or boots for protecting against chemicals as appropriate. If necessary, refer to appropriate governing standards. An eyewash station and a safety shower are recommended.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid.
ODOR:	Pungent.
pH:	2.0-2.2
ODOR THRESHOLD:	ND
BOILING POINT:	162°C/323.6°F
FREEZING POINT:	15°C/59°F
VISCOSITY:	1.300 mPa.s at 25°C/77°F.
SPECIFIC GRAVITY (H₂O=1):	NA
VAPOR PRESSURE:	1.2932 hPa at 25°C/77°F.
PERCENT VOLATILE W/W%:	100%
VAPOR DENSITY (AIR=1):	>1
EVAPORATION RATE (BuAc =1):	<1
SOLUBILITY IN WATER:	Completely soluble.
COEFFICIENT OF WATER/OIL DISTRIBUTION:	NA

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	High temperatures, localized heat sources (example drum or band heaters) oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.
INCOMPATIBILITY (MATERIALS TO AVOID):	Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers.
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of Carbon when burned.
HAZARDOUS POLYMERIZATION:	MAY OCCUR: X WILL NOT OCCUR:
STABILITY:	Unstable/Reactive upon depletion of inhibitor.

SECTION 11- TOXICOLOGICAL PROPERTIES

TARGET ORGANS:

For Methacrylic Acid: None Listed.

TOXICITY DATA:

For Methacrylic Acid:

Acute oral toxicity, rat	LD ₅₀	2,210 mg/kg
Acute inhalation toxicity, rat	LC ₅₀	7.1 mg/l, 4H
Acute dermal toxicity, rabbit	LD ₅₀	>2,000 mg/kg
Skin irritation, rabbit		Corrosive
Eye irritation, rabbit		Corrosive
Sensitization		NOT a contact sensitizer

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY:

For Methacrylic Acid:

Rainbow trout	LC ₅₀	85 mg/l, 96H
Algae	EC ₅₀	0.6 mg/l, 96H
Daphnia magna	EC ₅₀	>130 mg/l, 48H

ENVIRONMENTAL FATE:

For Methacrylic Acid: Elimination information (persistence and degradability)
 Biodegradability: aerobic
 86 %
 Stable to hydrolysis at pH 3,7, 11.
 Readily biodegradable, according to appropriate OECD test.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

After addition of excess inhibitor, dispose waste material in accordance with Federal, State, and Local regulations.



DISPOSAL OF EMPTY CONTAINERS:

Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual material, associated with empty containers. Dispose of all empty containers properly, in accordance with Federal, State and Local regulations.

SECTION 14 - TRANSPORTATION

DOT/UN SHIPPING NAME:	METHACRYLIC ACID, STABILIZED
DOT/UN CLASS:	8
NA/UN NUMBER:	UN 2531
PACKING GROUP:	II
LABEL:	Corrosive
IMDG CLASS:	
IMDG PG:	
CERCLA RQ:	

SECTION 15 - REGULATORY INFORMATION



SARA Reporting Requirements:	NA	 
SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.	
TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.	
CERCLA Reportable Quantity (RQ):	NA	
Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR.	
Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.	
State Regulatory Information:	This product may contain components that are covered under specific state criteria.	

RISK STATEMENTS:	R34 - Causes burns. R36/37/38 – Irritating to eyes, respiratory system and skin. R41 - Risk of serious damage to the eyes. R43 – May cause sensitization by skin contact
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SAFETY STATEMENTS:	S2 – Keep out of reach of children S3 – Keep in a cool place. S7 – Keep container tightly closed. S9 – Keep container in a well-ventilated place. S16 – Keep away from sources of ignition – No Smoking. S20/21 – When using do not eat or drink or smoke. S24/25 - Avoid contact with skin and eyes. S29 – Do not empty into drains. S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection. S38 - In case of insufficient ventilation, wear suitable respiratory equipment.
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SECTION 16 - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH:	3	 
FLAMMABILITY:	2	
REACTIVITY:	2	
PERSONAL PROTECTIVE EQUIPMENT:	Gloves and Safety Glasses or Chemical Splash Goggles.	

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD IDENTIFICATION RATING:

HEALTH:	3
FLAMMABILITY:	2
REACTIVITY:	2

SECTION 16 - OTHER INFORMATION CONTINUED

ABBREVIATIONS:

NA	Not Applicable	ND	Not Determined
NE	Not Established		
ppm	parts per million	G	Gallon
mg	Milligram	L	Liter
gm	Gram	mol	Mole
kg	Kilogram	μ	Micro
mm	Millimeter	p	Pico
Pa	Pascals		
LC	Lethal Concentration	LD	Lethal Dose
TC	Toxic Concentration	TD	Toxic Dose
BOD	Biological Oxygen Demand	COD	Chemical Oxygen Demand
Lo	Lowest	ThOD	Theoretical Oxygen Demand
TLm	Threshold Limit		
DOC	Dissolved Organic Carbon		
H	Hours	M	Months
D	Days	Y	Years
W	Weeks		

ACGIH American Conference of Governmental Industrial Hygienist

CPR Controlled Product's Regulation

DSL Canadian Domestic Substances List

NDSL Canadian Non-domestic Substance List

IARC International Agency for Research for Cancer

NOEL No Observed Effect Level

NOAEL No Observed Adverse Effect Level

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

TLV Threshold Limit Value

THIS MATERIAL SAFETY DATA SHEET IS PREPARED IN COMPLIANCE WITH FEDERAL REGULATIONS (29 CFR 1910.1200) CANADIAN WHMIS REGULATIONS, ANY APPLICABLE STATE AND LOCAL REGULATIONS SHOULD BE CONSULTED. THE ABOVE INFORMATION MAY BE BASED IN PART ON INFORMATION PROVIDED BY COMPONENT SUPPLIERS AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OF THESE DATA, THE RESULTS TO BE OBTAINED FROM THE USE OF THE MATERIAL, OR THE HAZARDS CONNECTED WITH SUCH USE. SINCE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL AND WITH WHICH WE MAY BE UNFAMILIAR, AND SINCE DATA MADE AVAILABLE SUBSEQUENT TO THE DATE HEREOF MAY SUGGEST MODIFICATION OF THE INFORMATION, WE ASSUME NO RESPONSIBILITY FOR THE RESULT OF ITS USE. THIS INFORMATION AND MATERIAL IS FURNISHED ON THE CONDITION THAT THE PERSON RECEIVING IT SHALL MAKE HIS/HER OWN DETERMINATION AS TO THE SUITABILITY OF THE MATERIAL FOR HIS/HER PARTICULAR PURPOSE AND ON THE CONDITION THAT HE/SHE ASSUME THE RISK OF HIS/HER USE THEREOF.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME: Methacrylate Monomer

PRODUCT/TRADE NAME: Tip Seam Blender/ Glue Debonder

PRODUCT USE: Organic Process Chemical

MANUFACTURER: Star Nail International, Inc.
ADDRESS: 29120 AVENUE PAINE
 VALENCIA, CA 91355

24 HR. EMERGENCY TELEPHONE: CHEMTEL 1-813-248-0573

PREPARATION/UPDATE DATE: 01/02/2014
PRINT DATE: 6/4/14
MSDS ID: M27-00

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER:	WT/WT %
01	Ethyl Methacrylate Monomer	97-63-2	60.0-100.0
02	Trade Secret	NA	0.0-10.0

ITEM	ACGIH		OSHA		Company Recommendation	SKIN
	TLV-TWA	TLV-STEL	PEL TWA	PEL CEILING		
01	NE	NE	NE	NE	100 ppm	NE
02	NE	NE	NE	NE	100 ppm	NE

Note this material contains an inhibitor (HQ, MEHQ, etc) at <1%. The type and amount meet product specifications. Contact manufacturer for exact concentration and details on inhibitor level maintenance.

See Section 16 for Abbreviations.



SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:**WARNING:**

For Monomer:

Physical Hazards:		Unstable/Reactive upon depletion of inhibitor. Check inhibitor levels periodically.
Acute Hazards:	Ingestion:	Causes irritation, a burning sensation of the mouth, throat and respiratory tract and abdominal pain.
	Eyes:	Eye contact may cause irritation with discomfort, tearing, or blurring of vision.
	Inhalation:	High concentrations irritant to the respiratory tract and may cause dizziness, headache and anesthetic effects.
Chronic Hazards:	Skin:	May cause skin irritation and can cause skin sensitization.
		None Listed.

CARCINOGENICITY:

None of the components of this material are listed by IARC, NTP, OSHA, or ACGIH as carcinogens.

PRIMARY ROUTES OF ENTRY:

Inhalation, Skin or Eyes.


SECTION 4 - FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

EYES:	If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.
INGESTION:	If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give anything by mouth to an unconscious person. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. Get medical attention immediately.
INHALATION:	Remove to fresh air. Seek immediate medical attention.
SKIN:	If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the effected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.
CLOTHING:	Remove contaminated clothing and wash thoroughly before reuse.
TREATMENT:	Treat symptoms conventionally, after thorough decontamination.



SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT:	19 ° C, 67° F	
FLAMMABLE LIMIT, AIR VOL% LOWER:	1.8	
	UPPER:	Saturation concentration.
AUTOIGNITION TEMPERATURE:	411 ° C, 771 ° F	
EXTINGUISHER METHOD:	Chemical foam, carbon dioxide, dry chemical, water spray.	
FIRE AND EXPLOSION HAZARDS:	High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during a runaway polymerization. Use a water spray or fog to reduce or direct vapors. Water may not be effective in actually extinguishing a fire involving this product.	
SPECIAL FIRE FIGHTING PROCEDURES:	This product is a flammable liquid. When involved in a fire, this product may ignite readily and decompose to produce carbon oxides. Vapors of this product are heavier than air and may travel to a source of ignition and flash back to a leaking or open container. Do not enter fire area without proper protection. Fight fire from a safe location. Heat/impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk of burns/injuries. Structural firefighters must wear SCBAs and full protective equipment.	
SENSITIVE TO MECHANICAL IMPACT:	No.	
SENSITIVE TO STATIC DISCHARGE:	Yes.	

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE:

Before cleaning any spill or leak, individuals involved must wear appropriate Personal Protective Equipment (e.g., goggles, gloves). Deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g. sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Maximize ventilation (open doors and windows) and secure all sources of ignition. Place into appropriate closed container(s) for disposal in accordance with local, state and federal regulations. Wash all affected areas with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

SECTION 7- HANDLING AND STORAGE

PRECAUTIONS FOR HANDLING:	Use local explosion-proof ventilation with a minimum capture velocity of 100 ft/min (30 m/min) at point of material release. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Hygienist. Observe precautions found on label.
PRECAUTIONS FOR STORAGE:	Store containers in a cool, dry location, away from direct sunlight, heat, sparks, flame, other light sources, or sources of intense heat. Keep container closed after each use. Ground and bond all containers when transferring. Check inhibitor levels periodically , add to the bulk material if needed. Maintain at a minimum, the original 2-inch headspace in the product container. Do not blanket or mix with oxygen-free gas as it renders the inhibitor ineffective.
INDUSTRIAL HYGIENE PRACTICES:	Avoid contact with skin, eyes, clothing, and prolonged contact with the product. Use good personal hygiene and housekeeping. After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while handling product.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION:	Refer to Section 7 regarding the ventilation requirements for working with this product. Use explosion-proof local exhaust at processing equipment, including buffers, sanders, grinders and polishers. High temperature processing equipment should be well ventilated.
RESPIRATORY PROTECTION:	A respirator should be worn whenever workplace conditions warrant a respirators use. None required if airborne concentrations are maintained below the exposure limit listed in Section 2. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134 or other appropriate governing standard.
EYE PROTECTION:	Depending on the use of this product, splash or safety glasses may be worn. If necessary, refer to U.S. OSHA 29 CFR §1910.133, or other appropriate governing standard. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.
PROTECTIVE GLOVES:	If anticipated that prolonged & repeated skin contact will occur during use of this product, wear chemical resistant gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR §1910.138, or other appropriate governing standards.
OTHER PROTECTIVE EQUIPMENT:	No special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate governing standards. An eyewash station and a safety shower are recommended.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

For Ethyl Methacrylate:

APPEARANCE:	Clear, colorless liquid.
ODOR:	Acrid, ester-like.
pH:	ND
ODOR THRESHOLD:	ND
BOILING POINT:	118 ° C, 246 ° F
FREEZING POINT:	< -50 ° C
VISCOSITY:	NE
SPECIFIC GRAVITY (H₂O=1):	NE
VAPOR PRESSURE:	20 mm/Hg @ 20 ° C, 68 ° F
PERCENT VOLATILE W/W%:	NE
VAPOR DENSITY (AIR=1):	3.94
EVAPORATION RATE (BuAc =1):	NE
SOLUBILITY IN WATER:	0.5% @ 20 ° C, 68 ° F
COEFFICIENT OF WATER/OIL DISTRIBUTION:	NE

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Temperatures above 21° C, 70° F, localized heat sources (example drum or band heaters) oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.
INCOMPATIBILITY (MATERIALS TO AVOID):	Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers. Material has strong solvent properties and can soften paint and rubber.
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of Carbon when burned.
HAZARDOUS POLYMERIZATION:	MAY OCCUR: X WILL NOT OCCUR:
STABILITY:	Unstable/Reactive upon depletion of inhibitor.

SECTION 11- TOXICOLOGICAL PROPERTIES

TARGET ORGANS:

For Ethyl Methacrylate Monomer: None Listed.

REPRODUCTIVE:

For Ethyl Methacrylate Monomer: No information available.

TOXICITY DATA:

This product has NOT been tested on animals to obtain toxicology data. There is toxicology data for the components of the product, which is found in scientific literature. Some of this data is presented below.

For Ethyl Methacrylate Monomer:

Dermal Rabbit	LD ₅₀ :	>10,000 mg/kg.
Inhalation Rat	LC ₅₀ :	8300 ppm/4H.
Intraperitoneal Mouse	LD ₅₀ :	1369 mg/kg.
Intraperitoneal Rat	LD ₅₀ :	1223 mg/kg.
Oral Rat	LD ₅₀ :	13468 mg/kg.

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY:

For Monomer: There is no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. There is ecological data for the components of the product, which is found in scientific literature. Some of this data is presented below.

For Ethyl Methacrylate Monomer:

Daphnia Magna	EC ₅₀ :	> 66 mg/L/48H.
Rainbow Trout	LC ₅₀ :	100 mg/l/96H.
Algae	EC ₅₀ :	>0.70 mg/L/72H.

ENVIRONMENTAL FATE:

For Ethyl Methacrylate Monomer:

Biodegradation: Inherently biodegradable 79% in 28 days.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

When discarded it is a characteristic hazardous waste by the EPA under RCRA with the reportable quantity (RQ) of 1000 pounds (40 CFR Part 302) for the ethyl methacrylate monomer. After addition of excess inhibitor, dispose waste material in accordance with Federal, State, and Local regulations.

DISPOSAL OF EMPTY CONTAINERS:

Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual flammable material, associated with empty containers. Dispose of all empty containers properly, in accordance with Federal, State and Local regulations.

SECTION 14 - TRANSPORTATION

DOT/UN SHIPPING NAME:	ETHYL METHACRYLATE, STABILIZED, SOLUTION
DOT/UN CLASS:	3
NA/UN NUMBER:	UN 2277
PACKING GROUP:	II
LABEL:	Flammable Liquid
IMDG CLASS:	3
EmS:	3-07
CERCLA RQ:	For Ethyl Methacrylate Monomer: 1000 lb.



SECTION 15 - REGULATORY INFORMATION

SARA Reporting Requirements:	Yes
SARA Threshold Planning Quantity:	There are specific Threshold Planning Quantities for the components of this product.
TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
CERCLA Reportable Quantity (RQ):	Yes
Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR.
Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.
State Regulatory Information:	This product may contain components that are covered under specific state criteria.

RISK STATEMENTS: R11 – Highly Flammable
R36/37/38 – Irritating to eyes, respiratory system and skin.
R43 – May cause sensitization by skin contact

SAFETY STATEMENTS: S3 – Keep in a cool place.
S7 – Keep container tightly closed.
S9 – Keep container in a well ventilated place.
S16 – Keep away from sources of ignition – No Smoking.
S20 – When using do not eat or drink.
S 29 – Do not empty into drains.
S33 – Take precautionary measures against static discharges.
S37/39 – Wear suitable gloves and eye/face protection.

SECTION 16 - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) RATING:

HEALTH:	2
FLAMMABILITY:	3
REACTIVITY:	2
PERSONAL PROTECTIVE EQUIPMENT:	Gloves and Safety Glasses or Chemical Splash Goggles.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD IDENTIFICATION RATING:

HEALTH:	2
FLAMMABILITY:	3
REACTIVITY:	2

SECTION 16 - OTHER INFORMATION

ABBREVIATIONS:

NA	Not Applicable	ND	Not Determined
NE	Not Established		
ppm	parts per million	G	Gallon
mg	Milligram	L	Liter
gm	Gram	mol	Mole
kg	Kilogram	μ	Micro
mm	Millimeter	p	Pico
Pa	Pascals	c	cento
LC	Lethal Concentration	LD	Lethal Dose
TC	Toxic Concentration	TD	Toxic Dose
BOD	Biological Oxygen Demand	COD	Chemical Oxygen Demand
Lo	Lowest	ThOD	Theoretical Oxygen Demand
TLm	Threshold Limit	IC	Inhibitory Concentration
DOC	Dissolved Organic Carbon		
H	Hours	M	Months
D	Days	Y	Years
W	Weeks		

ACGIH American Conference of Governmental Industrial Hygienist

CPR Controlled Product's Regulation

DSL Canadian Domestic Substances List

NDSL Canadian Non-domestic Substance List

IARC International Agency for Research for Cancer

NOEL No Observed Effect Level

NOAEL No Observed Adverse Effect Level

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

TLV Threshold Limit Value

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