

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TPO Primer
Product Type: Liquid
Manufacturer: NanoTech Materials, Inc.
21401 Park Row Drive #360
Katy, TX 77449
Email: info@nanotechmaterials.com
Telephone: 1-(888) 296-6266

2. HAZARDS IDENTIFICATION

GHS Label Elements

Hazard Pictograms:

Signal Word: Warning

Hazard Statements: H315: Causes skin irritation.
H317: May causes an allergic skin reaction. H319: Causes serious eye irritation.
H351: Suspected of causing cancer.
H335: Specific organ toxicity – single exposure (Category 3),
Central nervous system (CNS).
H336: Specific organ toxicity – single exposure (Category 3),
Central nervous system (CNS).
H373: Specific organ toxicity – repeated exposure (Category 2),
Central nervous system (CNS).
H412: Harmful to aquatic life with long lasting effects.

Hazard Classification

Carcinogenicity: Category 2, H351

Eye Irritation: Category 2A, H319

Skin Irritation: Category 2, H315

Skin Sensitizations: Category 1, H317

Specific Target Organ Toxicity (Single Exposure): [Respiratory system, Central nervous system] – Category 3, H335, H336

Specific Target Organ Toxicity (Repeated Exposure – Oral): [Liver, Blood] – Category 2, H373

Specific Target Organ Toxicity (Repeated Exposure – Inhalation): [Central nervous system] – Category 2, H373

Precautionary Statements

Prevention:	<p>P260: Do not breathe fumes/vapor or spray.</p> <p>P264: Wash hands and exposed skin thoroughly after handling. P271: Use only outdoors or in a well-ventilated area.</p> <p>P272: Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273: Avoid release to the environment.</p> <p>P280: Wear eye protection/face protection. Wear protective gloves.</p>
Response:	<p>P304 + P340 + P312: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P314: Get medical attention/advice if you feel unwell.</p> <p>P321: Specific treatment (see instructions on product label)</p> <p>P332 + P313: If skin irritation occurs: Get medical advice/attention.</p> <p>P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337 +P313: If eye irritation persists: Get medical advice/attention. P362: Take off contaminated clothing and wash before reuse.</p> <p>P363: Wash contaminated clothing before reuse.</p>
Storage:	<p>P403 + P233: Store in well ventilated place. Keep container tightly closed.</p> <p>P405: Wash contaminated clothing before reuse.</p>
Disposal:	P501: Disposal of contents/container to be specified in accordance with regulations.
General:	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
OSHA/HCS Status:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Hazards not otherwise classified:	Repeated exposure may cause skin dryness or cracking.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture:	Mixture
Other means of identification:	Not available
CAS Number:	Not available

Component	%	CAS Number
Methylene Chloride	79 wt%	75-09-2
Tetrachloroethylene	<1 wt%	127-18-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST-AID MEASURES

Skin:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
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Eyes:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion:	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
More important symptoms/effects, acute and delayed:	Eyes: May cause eye irritation. Skin: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. May cause skin irritation. Prolonged contact may lead to dryness of skin and dermatitis. Inhalation: Vapors that are inhaled may be irritating and CNS-depressant. Symptoms may include: nausea, headaches, dizziness, vertigo, unconsciousness to coma and death upon extended and severe exposure. Ingestion: Irritating to mouth, throat and stomach.
Indication of immediate medical attention and special treatment needed:	Notes to Physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Specific Treatments: No specific treatment. Protection of First Responders: No action shall be taken involving any personal risk suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5. FIRE-FIGHTING MEASURES

Lower Explosive Limit (LEL):	13% (V)
Upper Explosive Limit (UEL):	23% (V)
Suitable Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide (CO ₂).
Unsuitable Extinguishing Media:	No Data Available.
Unusual Fire and Explosion:	Drums may explode due to pressure buildup. DO NOT USE WELDING OR CUTTING TORCH ON DRUMS EVEN WHEN EMPTY.
Product of Combustion:	Decomposition products may include carbon monoxide, carbon dioxide, hydrogen chloride gas and traces of phosgene and chlorine.
Special Fire Fighting Procedures:	Water may be ineffective but may be used to keep fire exposed containers cool.

Protection of Firefighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be involving any personal risk or without suitable training. Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For First Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for Containment:
 Small Spill: Stop leak if without risk. Move containers from spill area. Absorb with an inert absorbent material and place in an closed metal container (USDOT if waste will be transported). Dispose of via a licensed waste disposal contractor.
 Large Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with inert, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Protective Measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Safe Storage Conditions: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

List	Components	CAS-No.	Type	Value
OSHA Z1	Methylene Chloride	75-09-2	PEL	25ppm

	Tetrachloroethylene	127-18-4	PEL	100ppm
ACGIH	Methylene Chloride	75-09-2	TWA	50 ppm
		75-09-2	STEL	125 ppm
	Tetrachloroethylene	127-18-4	TWA	25 ppm
			STEL	100 ppm

Engineering Controls:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Aluminum is not an acceptable material of construction for pipes, pumps or storage tanks.

Individual protection measures, such as Personal Protective Equipment**Hygiene:**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and Hand Protection:

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling product.

Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical-resistant gloves.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:**Physical state:**

Liquid

Color:

Clear amber, cream, or red

Odor:

Slightly irritating solvent odor

pH:

N/A

Melting point:	N/A
Boiling point:	104°F
Specific Gravity:	1.330 g/cm ³
Solubility in Water:	None
Vapor Pressure:	340mm HG
Vapor Density (AIR = 1):	2.9
VOC Content:	0 g/l (EPA Method 24)
Evaporation Rate:	14.5 (Butyl Acetate = 1)

10. STABILITY AND REACTIVITY

Reactivity:	No specific test data related to reactivity is available for this product or its ingredients.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Will not occur.
Conditions to Avoid:	Avoid direct sunlight or ultraviolet sources. Avoid open flames, welding arcs or other high temperature sources which may induce thermal breakdown.
Incompatible Materials:	Alkali metals, bases, amines, strong acids and bases, strong oxidizing agents, magnesium, vinyl compounds and prolonged contact with aluminum (liquid form only).
Hazardous Decompositions Products:	Hydrogen chloride and traces of phosgene and chlorine.
Possibility of Hazardous Reaction:	Under normal conditions of storage and use, hazardous reactions will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	CAS No	Result	Species	Dose	Value
Methylene chloride	75-09-2	LD50 Oral	Rat	> 2,000 mg/kg	—
		LD50 Dermal	Rat	> 2,000 mg/kg	—
		LC50	Rat	52,000 mg/m ³	—
Tetrachloroethylene	127-18-4	LD50 Oral	Rat	3,005 mg/kg	—
		LD50 Dermal	Rabbit	5,000 mg/kg	—
		LC50	Rat	28 mg/m ³	6 h

Irritation

Component	CAS No	Test	Species	Dose	Value
Methylene chloride	75-09-2	Skin	Rabbit	Irritating to skin	24 h
		Eye	Rabbit	Irritating to eyes	24 h
Tetrachloroethylene	127-18-4	Skin	Rabbit	Irritating to skin	4 h
		Eye	Rabbit	Mild eye irritation	24 h

Sensitization:	Tetrachloroethylene – may cause sensitization by skin contact (mouse).
Carcinogenic:	Limited evidence of carcinogenicity in animal studies.

IARC:	2A – Group 2A: Probably carcinogenic to humans (tetrachloroethylene).
NTP:	Reasonably anticipated to be a human carcinogen.
OSHA:	OSHA specifically regulated carcinogen (methylene chloride).
Reproductive Toxicity:	Not available
Teratogenicity:	Not available
Specific Target Organ Toxicity (single exposure):	May cause drowsiness or dizziness. May cause respiratory irritation.
Specific Target Organ Toxicity (repeated exposure):	Inhalation – May cause damage to organs through prolonged or repeated exposure. – Central nervous system (CNS) Oral – May cause damage to organs through prolonged or repeated exposure – Liver, blood.
Information on the likely routes of exposure:	Oral, Dermal, Inhalation

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component	CAS No	Result	Species	Dose	Exposure
Methylene chloride	75-09-2	LC50	Pimephales promelas (fathead minnow)	193 mg/l	96 h
		EC50	Daphnia magna (water flea)	Irritating to eyes	24 h
Tetrachloroethylene	127-18-4	LC50	Oncorhynchus mykiss (rainbow trout)	5 mg/l	96 h
		EC50	Daphnia magna (water flea)	7.5 mg/l	48 h
		EC50 (static)	Skeletonema costatum	> 16 mg/l	7 h

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:

Product: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

Empty containers or liners may retain some product residues.

Contaminated Packaging: Dispose of as unused product.

	DOT Classification	IMDG	IATA
UN Number	2810	2810	2810

UN Proper Shipping Name	Toxic Liquid, Organic NOS (Dichloromethane Solution)	Toxic Liquid, Organic NOS (Dichloromethane Solution)	Toxic Liquid, Organic NOS (Dichloromethane Solution)
Transport Hazard Classes	6.1	6.1	6.1
Packing Group	III	III	III
Environmental Hazards	Yes	Yes	Yes
Additional Information	—	EMS-No: F-A, S-A	—

Special Precautions for User:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
U.S. Federal Regulations:	United States Inventory (TSCA 8b): All components are listed or exempted.
DSL Status:	All components of this product are on the Canadian DSL list.
SARA 302 Components:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 311/312 Hazards:	Acute health hazard. Chronic health hazard.

14. REGULATORY INFORMATION

- **SARA 313 Components:**

The following components are subject to reporting levels established by SARA Title III, Section 313.

Methylene chloride: CAS # 75-09-2
Tetrachloroethylene: CAS # 127-18-4

- **PENN RTK:**

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)
Methylene chloride: CAS # 75-09-2
Tetrachloroethylene: CAS # 127-18-4

- **MASS RTK:**

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)
Methylene chloride: CAS # 75-09-2
Tetrachloroethylene: CAS # 127-18-4

- **NJ RTK:**

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
Methylene chloride: CAS # 75-09-2
Tetrachloroethylene: CAS # 127-18-4

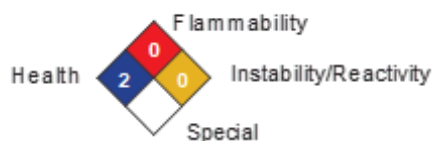
- **California Prop. 65 Components:**

WARNING! This product contains a chemical known to the State of California to cause cancer.
Methylene chloride: CAS # 75-09-2
Tetrachloroethylene: CAS # 127-18-4

Label for Supply:

15. OTHER INFORMATION

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

HMIS Rating

Health	2
Flammability	0
Physical Hazards	0

Hazard rating:

0 – Minimal

1 – Slight

2 – Moderate

3 – Serious

4 – Severe *Chronic health effect

History

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References: Not available

Disclaimer:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user.

All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.