








# Material Safety Data Sheet

<b>WHMIS</b>  	<b>Protective Clothing</b>    	<b>TDG Road / Roll</b> 
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## Section 1. Product Identification and Uses

Product Name	<b>423-98-1</b>	CI#	Not applicable.
Synonym	Gel Coat	DSL	Yes.
Chemical Name	Not applicable.	CAS #	Not applicable.
Chemical Formula	Not applicable.	Code	Not available.
Chemical Family	Unsaturated polyester resin.	Molecular Weight	Not applicable.
Supplier	Produits Chimiques Citadel 3391, route 157 Notre-Dame du Mont-Carmel, Qué G0X 3J0	Manufacturer	PRODUITS CHIMIQUES CITADEL 3391 Rte 157, Mont-Carmel, P.Q.
Material Uses	GEL COAT		

## Section 2. Hazardous Ingredients

Name	CAS #	% by Weight	LC <sub>50</sub> /LD <sub>50</sub>
1) Styrene (monomer)	100-42-5	30-60	ORAL (LD <sub>50</sub> ) mg/kg: Acute: 5000 (Rat). GAS (LC <sub>50</sub> ) ppm : Acute: 2800 (Rat) (4 hour(s)).
2) Methyl Methacrylate	80-62-8	1-5	ORAL (LD <sub>50</sub> ) mg/kg: Acute: 7900 (Rat). VAPOR (LC <sub>50</sub> ) ppm : Acute: 3750 (Rat) (4 hour(s)).
3) Amorphous fumed silica	112945-52-5	1-5	ORAL (LD <sub>50</sub> ) mg/kg: Acute: 5000 (Rat).








## Section 3. Physical Data

Physical State and Appearance	Liquid (Viscous liquid.)	Odor	Irritant.
pH (1% Soln/Water)	Not available.	Taste	Not available.
Odor Threshold	The highest known value is 0.1 ppm (Styrene (monomer))	Color	White.
Volatility	30-60		
Evaporation Rate	>1 (Methyl Methacrylate). [Butyl acetate.]		
Melting Point	Not available.		
Boiling Point	The lowest known value is 100°C (212°F) (Methyl Methacrylate). Weighted average: 142.8°C (289°F)		
Specific Gravity	1.1 - 1.3		
Vapor Density	The highest known value is 3.59 (Air = 1) (Styrene (monomer)). Weighted average: 3.47 (Air = 1)		
Vapor Pressure	The highest known value is 4.5 mm of Hg (@ 20°C) (Styrene (monomer)).		
LogK <sub>ow</sub>	Not available.		
Ionicity (Surface Active Agent)	Not available.		
Critical Temperature	Not available.		
Instability Temperature	Not available.		
Conditions of Instability	Stable under normal conditions.		
Dispersion Properties	Not available.		
Solubility	Insoluble in water.		

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### Section 4. Fire and Explosion Data

The Product is:	Flammable.
Auto-ignition Temperature	
Products of Combustion	These products are carbon oxides (CO, CO <sub>2</sub> ) and water.
Flash Points	32°C (Styrene)
Flammable Limits	1.1 % - 6.1 % (Styrene)
Extinguishing Media	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemicals, CO <sub>2</sub> , alcohol foam or water spray. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Flammability of the Product	Highly flammable in presence of open flames and sparks. Slightly flammable to flammable in presence of heat.
Risks of Explosion	Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive to explosive in presence of open flames and sparks.

### Section 5. Reactivity

Stability	The product is stable.
Hazardous Decomposition Products	Not available.
Degradability	Not available.
Products of Degradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Corrosivity	No specific information is available in our database regarding the corrosivity of this product in presence of various materials.
Reactivity	No specific information is available in our database regarding the reactivity of this material in presence of various other materials.
Instability Temperature	Not available.
Conditions of Instability	Stable under normal conditions.

### Section 6. Toxicological Properties

Routes of Entry	Eye contact. Ingestion. Inhalation.
TLV	<p>Styrene (monomer) (ppm) TWA: 100 CEIL: 125 (ppm) TWA: 420 CEIL: 525 (mg/m<sup>3</sup>)</p> <p>Methyl Methacrylate TWA: 50 (ppm) TWA: 75 (ppm)</p> <p>Consult local authorities for acceptable exposure limits.</p>
Toxicity to Animals	<p><b>WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.</b></p> <p>Acute oral toxicity (LD50): &gt; 5000 mg/kg (Rat) (Calculated value for the mixture). Acute toxicity of the gas (LC50): 2800 ppm (Rat) (Styrene (monomer)). Acute toxicity of the vapor (LC50): 3750 ppm (Rat) (Methyl Methacrylate).</p>

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**Acute Effects on Humans**

Slightly dangerous to dangerous in case of skin contact (sensitizer), of eye contact (irritant), of inhalation. Very slightly to slightly dangerous in case of skin contact (irritant, permeator). Severe over-exposure can result in death. Can be fatal if inhaled or ingested. This product may irritate eyes and skin upon contact.

**Chronic Effects on Humans.****Synergetic Products (Toxicologically)****Skin Irritation/Corrosivity****Sensitization****Carcinogenic Effects****Toxicity to Reproductive System****Teratogenic Effects****Mutagenic Effects****Section 7. Preventive Measures****Small Spill and Leak**

Absorb with an inert material and put the spilled material in an appropriate waste disposal. If necessary: **Neutralize the residue with a dilute solution of sodium carbonate.**

**Personal Protective Equipment**

Splash goggles. Lab coat. Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (disposable, vinyl). Wear appropriate respirator when ventilation is inadequate.

**Large Spill and Leak**

Flammable liquid.

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. **Neutralize the residue with a dilute solution of sodium carbonate.**

**Protective Clothing**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Engineering Controls**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Precautions**

Keep locked up. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.








**Storage**

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

**Handling****Waste Disposal****Special Shipping Information****Continued on Next Page**

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**Section 8. First Aid Measures**

<b>Eye Contact</b>	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.
<b>Skin Contact</b>	If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
<b>Slight Inhalation</b>	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
<b>Slight Ingestion</b>	Remove dentures if any. Watch for an obstruction in the victim's mouth. Remove if possible what is causing the obstruction but do not force fingers or a hard object between the victim's teeth. Have conscious person drink several glasses of water or milk. Seek immediate medical attention. DO NOT induce vomiting.

**Section 9. MSDS Preparation**

References Not available.

No additional remark.

Validated by Produits Chimiques Citadel on 2005-03-01.

Verified by Produits Chimiques Citadel.

Printed 2005-03-01.

**Produits chimiques Citadel: (819) 374-5808**Responsible  
Name /  
Telephone No.:**Classification**

TDG Road / Rail TDG CLASS 3: Flammable liquid.

UN 1866 resin solution, PG III

WHMIS WHMIS CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).  
WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

*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. Fina*