

Material Safety Data Sheet

Conforms to ANSI Z400.5-2004 Standard (United States, Canada)

1. Product and company identification

Produce Name: 600 Etching Filler
Material uses: For cathodic protection
Supplier/Manufacturer: Polyguard Products
3801 South Interstate 45
Ennis, TX 75119
Tel (800)0 541-4994
In case of emergency: CHEMTREC, US: +1-800-424-9300 International: +1-703-527-3887

2. Hazards identification

Physical state: Liquid
Odor: Hydrocarbon (strong)
OSHA/HCS status: This material is considered hazardous by the OSHA Hazardous Communication Standard. (29 CFR 1910.1200)
Emergency Overview: **DANGER!**
EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIALS THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD- CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Keep away from heat sparks and flame. Avoid exposure-obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Potential acute health effects: No known significant effects or critical hazards.
Inhalation:
Ingestion: May be harmful if swallowed.
Skin: Irritating to skin. May cause sensitization by skin contact.
Eyes: Irritating to the eyes
Potential Chronic effects Contains material that can cause target organ damage.
Chronic effects: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects No known significant effects or critical hazards

Target organs Contains material which causes damage to the following organs: Kidneys, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens, or cornea

Over- exposure signs/symptoms
Inhalation: No specific data.
Ingestion: No specific data.
Skin: Adverse symptoms may include the following:
Irritation
Redness

2. Hazards identification

Eyes: Adverse symptoms may include the following:
Pain or irritation
Watering
Redness

Medical Condition aggravated by overexposure: Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

United States			
Name		CAS number	%
Toluene		108-88-3	60-100
Methyl Ethyl Ketone		78-93-3	1-5
Solvent Naptha (petroleum), medium aliphatic		64742-88-7	1-5
Carbon Black		1333-86-4	1-5

Canada			
Name		CAS number	%
Toluene		108-88-3	60-100
Methyl Ethyl Ketone		78-93-3	1-5
Solvent Naptha (petroleum), medium aliphatic		64742-88-7	1-5
Carbon Black		1333-86-4	1-5

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 to the environment and hence require reporting in this section.

4. First aid measures

Eye contact: Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention.

Skin contact: In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product:	Extremely flammable material. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Extinguishing media	
Suitable:	Use dry chemical, CO ₂ , water spray (fog) or foam.
Not suitable:	Do not use water jet.
Hazardous thermal decomposition products:	Decomposition products may include the following materials: Carbon Dioxide Carbon Monoxide
Special protective equipment for firefighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions:	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. Shut off all ignition sources. No flares, smoking or flames in a hazardous area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental Precaution:	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).
Method of clean up	
Small spill:	Stop leak if without risk. Move containers from spilled area. Use spark-proof tools and explosion proof equipment. 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, and confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion proof equipment. 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

Handling:	: Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only adequate ventilation. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
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7. Handling and storage

Storage:

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed till ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Product name Toluene	United States Exposure limits NIOSH REL (United States, 12/2001) STEL: 560 mg/m ³ 15 minute(s) STEL: 150 ppm 15 minute(s) TWA: 375 mg/m ³ 10 hour(s) OSHA PEL Z 2(United States, 11/2006) AMP: 500 ppm 10 minute(s) CEIL: 300 ppm TWA: 200 ppm 8 hour(s) ACGIH TLV (United States, 1/2007) TWA: 20 ppm 8 hour(s)
Methyl Ethyl Ketone	ACGIH TLV (United States, 1/2007) TWA: 20 ppm 8 hour(s) ACGIH TLV (United States, 1/2007) STEL: 885 mg/m ³ 15 minute(s) STEL: 300 ppm 15 minutes(s) TWA: 590 mg/m ³ 8 hour(s) TWA: 200 ppm 8 hour(s) NIOSH REL (United States, 12/2001) STEL: 885 mg/m ³ 15 minute(s) STEL: 300 ppm 15 minute(s) TWA: 590 mg/m ³ 10 hour(s) TWA: 200 ppm 10 hour(s) OSHA PEL (United States, 11/2006) TWA: 590 mg/m ³ 8 hour(s) TWA: 200 ppm 8 hour(s)
Solvent naptha (petroleum), medium aliphatic	Manufacturer (United States) TWA: 100 ppm 8 hour(s). All forms.
Carbon Black	ACGIH TLV (United States, 1/2007) TWA: 3.5 mg/m ³ 8 hour(s) NIOSH REL (United States, 12/2001) TWA: 3.5 mg/m ³ 10 hour(s) TWA: 0.1 mg of PAHs/cm ³ 10 hour(s) OSHA PEL (United States, 11/2006) TWA: 3.5 mg/m ³ 8 hour(s)
Product name Toluene	Canada Exposure limits CA Alberta Provincial (Canada, 10/2006). Skin 8 hrs OEL: 50 ppm 8 hour(s) CA British Columbia Provincial (Canada, 7/2007). TWA: 20 ppm 8 hour(s) CA Ontario Provincial (Canada, 3/2007). TWAEV: 50 ppm 8 hour(s) CA Quebec Provincial (Canada, 12/2006). Skin TWAEV: 50 ppm 8 hour(s).

8. Exposure controls/personal protection

Methyl Ethyl Ketone	CA Alberta Provincial (Canada, 10/2006). 8 hrs OEL: 200 ppm 8 hour(s) 15 min OEL: 300 ppm 15 minute(s). CA British Columbia Provincial (Canada, 7/2007). TWA: 50 ppm 8 hour(s) STEL: 100 ppm 15 minute(s). CA Ontario Provincial (Canada, 3/2007). TWAEV: 200 ppm 8 hour(s) STEV: 300 ppm 15 minute(s). CA Quebec Provincial (Canada, 12/2006). TWAEV: 50 ppm 8 hour(s). STEV: 100 ppm 15 minute(s)
Carbon Black	CA Alberta Provincial (Canada, 10/2006). 8 hrs OEL: 3.5 mg/cm ³ 8 hour(s) CA British Columbia Provincial (Canada, 7/2007). TWA: 3.5 mg/cm ³ 8 hour(s) CA Ontario Provincial (Canada, 3/2007). TWAEV: 3.5 mg/cm ³ 8 hour(s) CA Quebec Provincial (Canada, 12/2006). TWAEV: 3.5 mg/cm ³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or other biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or duct concentrations below any lower explosive limits. Use explosion- proof ventilation equipment.

Hygiene measure:

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.

Personal protection

Eyes

Safety glasses

Skin

Overall

Respiratory

A respirator is not needed under normal and intended conditions of use.

Hands

Hydrocarbon solvent resistant gloves.

HMIS Code/Personal protective equipment:

B

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state:	Liquid
Flash Point:	Open cup -8.33 C (17 F) [Cleveland]
Flammable limits:	Lower: 1.2 % Upper: 9%
Color:	Black
Odor:	Hydrocarbon (strong)
Boiling point/ Condensation point:	41 C (105.8F)
Relative density:	0.9
Vapor pressure:	20.3kPa (152 mm Hg)
Vapor density:	3.5 [Air=1]
Evaporation rate:	4.5 (Ether(anhydrous)=1)
VOC:	718 (g/l)
Solubility:	Partially soluble in the following materials: cold water and hot water

10. Stability and reactivity

Stability:	This product is stable.
Hazardous polymerization Conditions to avoid	Under normal conditions of storage and use, hazardous polymerization will not occur. Avoid all possible sources of ignition (sparks or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. Avoid exposure- obtain special instructions before use.
Materials to avoid Hazardous decomposition Conditions of reactivity:	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Flammable in the presence of the following materials or conditions: open flames, sparks and static discharges, heat and shocks and mechanical impacts.

11. Toxicological information

Acute Toxicity Product/ingredient name	Species	Dose	Result	Exposure
Toluene	Rabbit	14100 uL/kg	LD50 Dermal	-
	Rat	636 mg/kg	LD50 Oral	-
Methyl Ethyl Ketone	Rabbit	6480 mg/kg	LD50 Dermal	-
	Rat	2737 mg/kg	LD50 Oral	-
Carbon Black	Rabbit	>3 g/kg	LD50 Dermal	-
	Rat	> 15400 mg/kg	LD50 Oral	-

Inhalation:	No known significant effects or critical hazards
Ingestion:	May be harmful if swallowed
Skin:	Irritating to skin. May cause sensitization by skin contact.
Eyes:	Irritating to eyes.

Carcinogenicity Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Toluene	A4	3	-	-	-	-
Methyl Ethyl Ketone	A4	2B	-	+	-	-

12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name

Product/ingredient name	Test	Species	Exposure	Results
Toluene	-	Daphnia	48 Hrs	Acute EC50 19600 ug/L
	-	Daphnia	48 Hrs	Acute EC50 6000 ug/L
	-	Crustaceans	48 Hrs	Acute LC50 15.5 ppm
	-	Fish	96 hours	Acute LC50 15.53 to 17.16 mg/L
	-	Fish	96 hours	Acute LC50 15.53 to 17.16 mg/L
Methyl Ethyl Ketone	-	Fish	96 hours	Acute LC50 13 7.3 ug/L
	-	Fish	48 Hrs	Acute LC50 > 520000 ug/L

13. Disposal considerations

Waste disposal:

The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. The material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled materials and runoff and contact with soil, waterways, drains and sewers.

Disposal shall be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8; EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transportation information

AERG: 127

Regulatory Information:	UN Number	Proper Shipping Name	Classes	PG *	Label	Additional Information
DOT Classification	UN 1139	Coating Solution	3	II	Flammable liquid	-
TDG Classification	UN 1139	Coating Solution	3	II	Flammable liquid	-
IMDG Class	UN 1139	Coating Solution	3	II	Flammable liquid	-
IATA-DGR Class	UN 1139	Coating Solution	3	II	Flammable liquid	-

PG*: Packing group

15. Regulatory information

United States

HCS Classification Flammable liquid
Irritating material
Sensitizing material
Carcinogen
Target organ effects

U.S. Federal regulations **United States Inventory (TSCA 8b):** All components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous substances: Toluene, Methyl Ethyl Ketone, and Carbon Black.
SARA 311/312 MSDS distribution chemical inventory- hazard identification: Toluene; fire hazard, immediate (acute) health hazard, Delayed (chronic) health hazard; Methyl Ethyl Ketone; Fire hazard, immediate (acute) health hazard, Delayed(chronic) health hazard.
Clean Water Act (CWA) 307: Toluene
Clean Water Act (CWA) 311: Toluene
Clean Air Act (CCA) 112 accidental release prevention: no products were found.
Clean Air Act (CCA) 112 regulated flammable substance: no products were found.
Clean Air Act (CCA) 112 regulated toxic substances: no products were found.

SARA 313

	Product name	CAS Number	Concentration
Form R- Reporting requirements	Toluene	108-88-3	60-100 %
Supplier notification	Methyl Ethyl Ketone	78-93-3	1-5 %
	Toluene	108-88-3	60-100 %
	Methyl Ethyl Ketone	78-93-3	1-5 %

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substance disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substance: The following components are listed: Toluene, Methyl Ethyl Ketone, and Carbon Black.
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: Toluene, Methyl Ethyl Ketone, and Carbon Black.
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: The following components are listed: Toluene, Methyl Ethyl Ketone.
New York Toxic chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: Toluene, Methyl Ethyl Ketone, and Carbon Black.
Rhode Island Hazardous Substance: None of the components are listed.

15. Regulatory information

California Prop 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Toluene	No	Yes	No	7000 µg/day (ingestion) 13000µg/day (inhalation)
Carbon Black	Yes	No	No	No
Silica Crystalline, quartz	Yes	No	No	No

Canada

WHMIS (Canada) : Class B-2 Flammable liquid
: Class D-2A Material causing other toxic effects (Very Toxic).
: Class D-2B Material causing other toxic effects (Toxic).

Canadian Lists

CEPA Toxic substance: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Toluene, Methyl Ethyl Ketone
Alberta Designated Substances: None of the components are listed
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.
All components are listed or exempted.

Canada Inventory

This product has been classified in accordance with the hazardous criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International list

This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Austria (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969)

16. Other information

Label Requirements

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD- CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Hazardous Material Information System (USA)

		*2	HAZARD RATING
Health			
Fire Hazard		3	4- Extreme
Physical Hazard		0	3- Serious
Personal Protection		B	2- Moderate
			1- Slight
			0- Minimal

See section 8 for more detailed information of personal protection.

The customer is responsible for determining the PPE code for this material.

16. Other information

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

Health: 2
Flammability: 3
Instability: 0

References

Special:
ANSI Z400.5, MSDS standard, 2004.-Manufacturer's Material Safety Data Sheet- 29CFR Part 1910.1200 OSHA MSDS Requirements.- 49 CFR Table List of Hazardous Materials, UN #, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No.2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "ingredient Disclosure List"- Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

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Version:

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Notice to Reader

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.