

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **PORC-A-FIX**

Product Use : Porcelain touch-up glaze.

Chemical Family : Mixture. Solvent thinned paint.

Manufacturer part no. : PORC-A-FIX

Supplier's name and address:
G.F. Thompson Company Ltd.
 620 Steven Court
 Newmarket, ON, Canada
 L3Y 6Z2

Manufacturer's name and address:
 Refer to Supplier

Information Telephone # : Monday to Friday, 7:30 am to 5:00 pm, Eastern Standard Time:
 (905) 898-2557
 (800) 499-3673 (toll free)

24 Hr. Emergency Tel # : (905) 252-4793

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). WHMIS classification:
 Class B3 (Combustible Liquids);
 Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
 Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15.

WHMIS symbols required on a supplier label:



Emergency Overview : White liquid. Solvent odour.
 Danger. Flammable liquid and vapour. May be ignited by open flames and sparks. May be harmful or fatal if swallowed. If solvents separate into a top layer and are ingested, ingestion could cause aspiration of the chemical into the lungs. May be harmful if inhaled. May cause respiratory irritation. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Could result in pulmonary edema (fluid accumulation). May cause eye and skin irritation. Possible birth defect hazard - contains material that may cause birth defects, based on animal data. Possible cancer hazard - contains material which may cause cancer.

Note: Materials such as rags used with this product may begin to burn by themselves.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

- Inhalation* : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
- Skin* : May cause moderate skin irritation. May be absorbed through the skin.
- Eyes* : May cause mild to moderate irritation.
- Ingestion* : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. If solvents separate into a top layer and are ingested, ingestion could cause aspiration of the chemical into the lungs. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Effects of long-term (chronic) exposure

- : Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Prolonged overexposure may cause liver and kidney effects. If dusts are formed, inhalation may cause adverse lung effects. Pneumoconiosis, or "dusty lung" disease, may result from chronic exposure to any dust.

Carcinogenic status

- : Possible cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards

- : May cause birth defects. See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

- : See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
titanium dioxide	13463-67-7	10.00 - 30.00
Xylene	1330-20-7	10.00 - 30.00
Kaolin	1332-58-7	10.00 - 30.00
Ethylbenzene	100-41-4	3.00 - 7.00
Cobalt 2-ethylhexanoate	136-52-7	0.10 - 0.25

SECTION 4 - FIRST AID MEASURES

Inhalation

- : Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.

Skin contact

- : For skin contact, wash with soap and water while removing contaminated clothing. If irritation persists, seek prompt medical attention. Wash contaminated clothing before reuse.

Eye contact

- : For eye contact, flush with running water for at least 15 minutes. If irritation persists, seek prompt medical attention.

Ingestion

- : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Notes For Physician

- : Treat symptomatically. This product is a CNS depressant.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability

- : Flammable liquid and vapour. This material may be ignited by heat, sparks and direct flame. Vapours may be heavier than air and may collect in confined and low-lying areas. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Risk for spontaneous combustion if substantial quantities of product are left on porous organic materials (cotton waste or rag). Used rags or other cleaning materials may begin to burn by themselves if improperly discarded.

Oxidizing properties

- : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

- : May be sensitive to static discharge. Not expected to be sensitive to mechanical impact.

Suitable extinguishing media

- : Dry chemical, foam, carbon dioxide and water fog. Do not use water jet, as this may spread burning material.

Special fire-fighting procedures/equipment

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

- : Carbon oxides; Aldehydes; Hydrocarbons; Other unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions

- : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Refer to protective measures listed in sections 7 and 8. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up.

Environmental precautions

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contaminated equipment (cotton waste or rags) must be cleaned immediately with water. Notify the appropriate authorities as required.
- Prohibited materials** : Do not use combustible absorbents, such as sawdust.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Use proper bonding and grounding techniques when transferring liquid. Avoid contact with incompatible materials. Risk for spontaneous combustion if substantial quantities of product are left on porous organic materials (cotton waste or rag). Used rags or other cleaning materials may begin to burn by themselves if improperly discarded. In order to prevent the risk of fire with all resins, good housekeeping standards must be maintained and the accumulation of dry residues, contaminated rags, etc. should be avoided. Store wiping rags containing this product in metal containers with tight lids. After use, put rags in water or lay flat to dry, then discard. Wash thoroughly after handling. Empty containers retain residue (liquid and/or vapour) and can be dangerous.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. Keep out of the reach of children.
- Incompatible materials** : Strong oxidizing agents; Acids; Bases.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
titanium dioxide	10 mg/m ³	N/Av	15 mg/m ³ (total dust)	N/Av
Xylene	100 ppm	150 ppm	100 ppm	N/Av
Kaolin	2 mg/m ³ (respirable)	N/Av	15 mg/m ³ (total dust); 5 mg/m ³ (respirable)	N/Av
Ethylbenzene	20 ppm	N/Av	100 ppm	N/Av
Cobalt 2-ethylhexanoate	0.02 mg/m ³ (as 'Cobalt')	N/Av	0.1 mg/m ³ (dust; fumes) (as 'Cobalt')	N/Av

- Ventilation and engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Confirmation of which type of respirator is most suitable for the intended application should be obtained from respiratory protection suppliers.
- Skin protection** : Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.
- Eye / face protection** : Safety goggles or glasses as appropriate for the job.
- Other protective equipment** : Other equipment may be required depending on workplace standards. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use. Do not take contaminated clothing home.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid.	Appearance	: white
Odour	: Solvent odour.	Odour threshold	: N/Av
pH	: N/Av		
Boiling point	: 125°C (257°F)	Specific gravity	: 1.12 - 1.16
Melting/Freezing point	: N/Av	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Solubility in water	: Insoluble.
Vapour density (Air = 1)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Volatile organic Compounds (VOC's)	: < 400 g/L (< 3.34 lbs/gal)	Volatiles (% by weight)	: 40 - 55 % (by volume)
Flash point	: 10°C (50°F)		
Flash point Method	: Pinsky Martens Closed Cup	Auto-ignition temperature	: N/Av
Lower flammable limit (% by vol.)	: N/Av	Upper flammable limit (% by vol.)	: N/Av
Flame Projection Length	: N/Av	Flashback observed	: N/Av
Absolute pressure of container	: N/Av	Viscosity	: 75 - 80 KU (approximately 679 - 844 mm2/sec)
General Information	: Note: On standing, this material separates into two layers. A thinner liquid top layer, and the thicker, viscous, bottom layer.		

Section 10: STABILITY AND REACTIVITY

Stability and reactivity	: Stable under the recommended storage and handling conditions prescribed. Risk for spontaneous combustion if substantial quantities of product are left on porous organic materials (cotton waste or rag). Used rags or other cleaning materials may begin to burn by themselves if improperly discarded. Refer to Section 7, HANDLING AND STORAGE, for additional information.
Hazardous polymerization	: Will not occur.
Conditions to avoid	: Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Keep out of direct sunlight. Avoid contact with incompatible materials. Store wiping rags containing this product in metal containers with tight lids.
Materials To Avoid And Incompatibility	: Strong oxidizing agents; Acids; Bases
Hazardous decomposition products	: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs	: Eyes, skin, respiratory system, digestive system, central nervous system.
Routes of exposure	: <i>Inhalation:</i> YES <i>Skin Absorption:</i> YES <i>Skin & Eyes:</i> YES <i>Ingestion:</i> YES
Irritancy	: Moderate eye irritant. Moderate skin irritant.
Toxicological data	: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC50(4hr)	LD50	
	inh. rat	(Oral, rat)	(Rabbit, dermal)
titanium dioxide	> 6820 mg/m³	> 25,000 mg/kg	> 10,000 mg/kg
Xylene	6350 ppm	3523 mg/kg	12,125 mg/kg
Kaolin	N/Av	> 5000 mg/kg	> 5000 mg/kg
Ethylbenzene	4000 ppm	3500 mg/kg	15,380 mg/kg
Cobalt 2-ethylhexanoate	> 10,000 mg/m3 / 1H	1220 mg/kg	> 5000 mg/kg

- Carcinogenic status** : Contains Titanium dioxide. Titanium dioxide is classified as possibly carcinogenic by IARC (Group 2B).
Contains Ethylbenzene. Ethylbenzene is classified as carcinogenic by IARC (Group 2B) and ACGIH (Category A3).
Contains cobalt compounds. Cobalt compounds are classified as possibly carcinogenic to humans by IARC (Group 2B). Contains: Cobalt 2-ethylhexanoate.
- Reproductive effects** : Not expected to cause reproductive effects.
- Teratogenicity** : This product contains Xylene. Xylene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : None known or reported by the manufacturer.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known or reported by the manufacturer.
- other important hazards** : See Section 2 for additional information.
- Conditions aggravated by overexposure** : Pre-existing skin, eye, respiratory and central nervous system disorders.

SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Contains: Xylene; Ethylbenzene; Cobalt 2-ethylhexanoate.

The acute toxicity of xylene is (ECOTOX):
Toxicity to fish - LC50/96h/rainbow trout = 8.2 mg/L
Toxicity to daphnia - EC50/48h/daphnia = 3.2 - 9.56 mg/L
Toxicity to algae - EC50/72h/algae = 3.2 - 4.9 mg/L

The acute toxicity of ethylbenzene is (OECD):
Toxicity to fish - LC50/96h/rainbow trout = 4.2 mg/L
Toxicity to daphnia - LC50/48h/daphnia = 1.81 mg/L
Toxicity to algae - EC50/96h/green algae = 3.6 mg/L


The acute toxicity of Cobalt 2-ethylhexanoate is (literature):
Toxicity to algae - EC50/72h/algae = 0.528 mg/L

Other ingredients present in this product are not classified as environmentally toxic.
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself. Contains: Xylene; Ethylbenzene.
Xylene is considered to be inherently biodegradable.
Ethylbenzene is considered to be inherently biodegradable.
- Bioaccumulation potential** : No data is available on the product itself. Contains: Xylene; Ethylbenzene.
The log Pow for Xylene is 3.12.
The log Pow for Ethylbenzene is 3.15.
- Other Adverse Environmental effects** : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.
- Methods of Disposal** : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1263	PAINT	3	II	
TDG Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				

SECTION 15 - REGULATORY INFORMATION

Labelling:

Danger. Flammable liquid and vapour This material may be ignited by heat, sparks and direct flame. May be harmful or fatal if swallowed. If solvents separate into a top layer and are ingested, ingestion could cause aspiration of the chemical into the lungs. May be harmful if inhaled. May cause respiratory irritation. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Could result in pulmonary edema (fluid accumulation). May cause eye and skin irritation. Possible birth defect hazard - contains material that may cause birth defects, based on animal data. Possible cancer hazard - contains material which may cause cancer.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Use proper bonding and grounding techniques when transferring liquid. Avoid contact with incompatible materials. Risk for spontaneous combustion if substantial quantities of product are left on porous organic materials (cotton waste or rag). Used rags or other cleaning materials may begin to burn by themselves if improperly discarded. In order to prevent the risk of fire, good housekeeping standards must be maintained and the accumulation of residues on contaminated rags, etc. should be avoided. Store wiping rags containing this product in metal containers with tight lids. After use, put rags in water or lay flat to dry, then discard. Wash thoroughly after handling. Store in a cool, dry, well ventilated area, away from heat and ignition sources.

FIRST AID: If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stopped, begin artificial respiration. Get medical attention. For skin contact, wash with soap and water while removing contaminated clothing. If irritation persists, seek prompt medical attention. For eye contact, flush with running water for at least 15 minutes. If irritation persists, seek prompt medical attention. If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

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.

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

SECTION 16 - OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 ECOTOX: U.S. EPA Ecotoxicology Database
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 LC: Lethal Concentration
 LD: Lethal Dose
 N/Ap: Not Applicable
 N/Av: Not Available
 NIOSH: National Institute of Occupational Safety and Health
 OECD: Organisation for Economic Co-operation and Development
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 RTECS: Registry of Toxic Effects of Chemical Substances
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

- References** :
1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2012.
 2. International Agency for Research on Cancer Monographs, searched 2012.
 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2012 (Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.

<p><u>Prepared for:</u> G.F. Thompson Co. Ltd. 620 Steven Court Newmarket, ON, Canada, L3Y 6Z2 Telephone: (905) 898-2557 Please direct all enquiries to G.F. Thompson.</p>	
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MSDS Preparation Date (mm/dd/yyyy)

: 12/01/2012

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