## MATERIAL SAFETY DATA SHEET FOR COATINGS, RESINS, AND RELATED MATERIALS DATE OF PREPARATION - 01-03-2009 Prepared by: Compliance Dept.

#### SECTION I - PRODUCT IDENTIFICATION

- MANUFACTURER:Munro ProductsDISTRIBUTOR:9150 Clarence Center RoadClarence Center, NY 14032
- INFORMATION:
   716/741-9450

   EMERGENCY:
   CHEMTREC® 1-800-424-9300

PRODUCT CLASS:ACRYLIC RESIN (TRADE SECRET)TRADE NAME:BathWorks DIY Refinishing Kit (Part A Base Color)

CODE:

F LINE - LEAD FREE 2000/BASE COLOR (PART A)

#### **SECTION II - HAZARDOUS INGREDIENTS**

COMMON NAME						CAS #			
WEIGHT	ACGIH TLV/TWA (PPM)	ACGIH TLV/STEL (PPM)	OSHA PEL/TWA (PPM)	OSHA PEL/STEL (PPM)	OSHA CEILING (PPM)	SKIN DESIG- NATION	LD50 gr/kg	INHALATION LC50 (PPM/hr)	VAPOR PRESSURE (mm Hg@20 C)
(A) XYLENE			1	DIMETHYL BEI	NZENE			CAS# 1330-	20-7
0-1	100	150	100	150	NE	NO	4.3(2)	5000/4	5.1
METHYL N-A	MYL KETONE		:	2-HEPTANONE				CAS# 110-4	3-0
15-19	50	NE	100	NE	NE	NO	1.7(2)	NA	2.14
(A) ETHYLEN	e glycol Ma	ONOETHYL ET	THER 2	2-ETHOXYETH	anol acetat	E		CAS# 111-1	5-9
13-24	5	NE	100	NE	NE	YES	2.9(2)	NA	2
(A) ETHYLEN	e glycol Ma	ONOETHYL ET	THER 2	2-ETHOXYETH	ANOL ACETAT	E		CAS# 112-0	17-2
3-6	25~	NE	5	NE	NE	YES	2.4(2)	NA	0.29

-As recommended by manufacturer

- NA Not available
- NE Not established
- (1) Acute Oral LD 50 Rabbit
- (3) Dermal LD 50 Rabbit
- (A) SARA 313 REPORTABLE

(B) - Contains a SARA 313 reportable material which may include xylene, toluene, and ethylbenzene. Percent may vary due to the distillation process.

Care should be taken when sanding pigmented paints. Airborne nuisance particles have an ACGIH TLV for total dust of

#### **SECTION III - PHYSICAL DATA**

VOL PERCENT VOLATILE - 47-57 SPECIFIC GRAVITY - 1.01-1.33 WEIGHT PER VOL - 8.43-11.13 lbs./gal. BOILING RANGE - 135-192 C or 278-381 F VOC OF MATERIAL - 421-508 g/l or 3.51-4.24 lbs./gal FREEZING POINT - NAP pH - NAP EVAPORATION RATE - Slower than Ether COEFFICIENT OF WATER/OIL NAP ODOR AND APPEARANCE - Liquid w/Solvent ODOR THRESHOLD - .05 PPB PHYSICAL STATE - Viscous Liquid VAPOR DENSITY - Heavier than Air

#### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

#### DANGER! – FLAMMABLE VAPORS MAY CAUSE FLASH FIRE

Sensitivity to Static Discharge - Grounding/Bonding required Extinguishing Media - Dry Chemical, Foam or CO2 Flash Point 27 C or 80 F TCC LEL 0.9% Autoignition Temperature 379 C/715 F UEL 8.5%

UNUSUAL FIRE AND EXPLOSION HAZARDS – Keep away from heat, sparks and flame. Do not smoke. Extinguish all pilot lights and turn off all sources of ignition, including heaters, fans, and other nonexplosion proof electrical equipment, during use and until all vapors are gone. Vapors may ignite explosively. Vapors may spread long distances, and beyond closed doors. Prevent build up of vapors by maintaining a continuous flow of fresh air.

SPECIAL FIREFIGHTING PROCEDURES – Self contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode. In case of fire, use CO2, Dry Chemical, Foam or other approved method for treating a Class B fire. Summon professional firefighters. During a fire, toxic gases and smoke are irritants present from decomposition/combustion. Closed container may explode when exposed to extreme heat.

#### **SECTION V - HEALTH HAZARD DATA**

#### ACUTE EFFECTS OF OVEREXPOSURE:

EYES – Corneal burns are possible but damage is usually reversible. Can cause severe irritation, redness, tearing, blurred vision. Can cause severe injury - damage reversible.

INGESTION – HARMFUL IF SWALLOWED . Can cause gastrointestinal irritation, abdominal pain, nausea, vomiting and diarrhea. Small amounts of the liquid aspirated into the respiratory system during ingestion or from vomiting, may cause bronchiopneumonia or pulmonary edema. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal. May cause signs of nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue.)

INHALATION – Excessive inhalation of vapors can cause nasal and respiratory irritation. Inhalation can cause CNS depression including fatigue, weakness, headache, dizziness, nausea, vomiting, unconsciousness, coma, respiratory failure and death.

SKIN – Can be absorbed in toxic amounts, especially from prolonged or repeated exposure. Prolonged or repeated contact can cause moderate irritation, defatting, and dermatitis. Skin contact of high concentrations of vapor may cause irritation and toxic effects, including CNS depression, lung, liver and kidney injury. Symptoms include headache nausea, vomiting and dizziness. This product has produced fetotoxic and teratogenic effects in laboratory animals when inhaled or absorbed through the skin. Pregnant women should avoid exposure to this product.

#### CHRONIC EFFECTS OF OVEREXPOSURE:

- Chronic overexposure to iron oxide fumes or dusts has been associated with x-ray changes of the lungs, however, it does not result in illness. Changes are due to a benign lung condition called siderosis or iron pigmentation (applicable to topcoats containing iron oxide pigments).

– Overexposure to this material or its components may cause the following effects in laboratory animals and/or humans: liver abnormalities, kidney damage, lung damage, anemia, eye damage, cardiac abnormality, cardiovascular system damage, blood disorders, menstrual and fertility disorders, testicular damage, birth defects which may include: fetotoxicity, embryotoxicity, infertility and fetal malformations.

NOTICE! Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

PER CALIFORNIA'S PROPOSITION 65 - WARNING: This product contains a chemical known by the state of California to cause cancer, birth defects or reproductive harm.

Product ingredients appear on the following carcinogenic listings: (X) IARC (X) NTP () OSHA () None of the above.	PERSONAL PROTECTIVE EQUIPMENT – Do not get in eyes, on skin, or on clothing. Use solvent resistant safety eyewear with splash guards. Solvent impermeable gloves, clothing, and boots should be worn to prevent skin contact.		
PRIMART ROUTE(S) OF ENTRY (X) SKIN (X) BREATHING (X) SWALLOWING	SECTION IX - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS		
FIRST AID         IN CASE OF SKIN CONTACT       - Wash area thoroughly with soap and water. Remove soiled clothing. Get medical assistance if irritation persists. Wash clothing before reuse.         IN CASE OF EYE CONTACT       - Flush with large amounts of water for at least 15 minutes. Get medical	Keep container tight and upright to prevent leakage. Keep container closed when not in use. Do not store above 49 C/120 F. Do not transfer contents to bottles or other unlabeled containers. Containers of this material may be hazardous when emptied because they retain product residues (vapor, liquid, and/or solid). When empty, may contain explosive vapors. Do not cut, puncture or weld on or near this container.		
assistance.	All hazard precautions given in this data sheet must be observed for empty containers.		
IF SWALLOWED – GET MEDICAL ATTENTION IMMEDIATELY. DO NOT induce vomiting. Aspiration of material into lungs can cause chemical pneumonitis which may be fatal.	<b>IMPORTANT!</b> – This product may be blended with other products prior to use. Read all warnings and precautions on the MSDSs and labels of all products being blended as the combination may contain the		
IF INHALED – If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, summon medical assistance immediately. If breathing ceases, restore using approved CPR techniques and summon medical help immediately.	hazards of each component. NON-WARRANTY – Any recommendation of Munro contained herein covering use utilization, chemical or physical properties and other qualities of the products sold is believed reliable; however, Munro makes no warranty or representation with respect thereto. Use of application of any Munro products is at the		
SECTION VI - REACTIVITY DATA	discretion of the Buyer without liability or obligation whatsoever of Munro.		
HAZARDOUS POLYMERIZATION STABILITY - Stable - Will NOT occur	FOR INDUSTRIAL USE ONLY – This product is for use by professional, trained personnel using proper equipment, and is not intended for sale to, or use by the general public.		
CONDITIONS TO AVOID AND INCOMPATIBILITIES			
<ul> <li>Avoid heat, sparks and fiame.</li> <li>Can react vigorously, even violently, with oxidizing materials.</li> </ul>	SECTION X - SHIPPING DATA		
<ul> <li>Additional incompatible Materials:</li> <li>Acids, oxidizing materials, alkalis, nitrates, strong alkalis, hydrazine, calcium hypochlorite, performic acid and bromine pentafluoride.</li> <li>HAZARDOUS DECOMPOSITION PRODUCTS (Including Thermal Decomposition)</li> </ul>	D.O.T. PROPER SHIPPING NAME: PaintI.M.O. SHIPPING NAME: PaintD.O.T. LABEL(S) REQUIRED: Flammable LiquidI.M.O. CLASS NUMBER: 3D.O.T. HAZARD CLASS: 3, Flammable LiquidI.M.O. UN NUMBER: UN 1263D.O.T. UN/NA ID NUMBER: UN 1263I.M.D.G. PAGE NUMBER: 3372PACKING GROUP: IIIIII		
	F LINE - LEAD FREE 10-24-85 R. 02-26-86 R.08-19-88		
SECTION VII - SPILL OR LEAK PROCEDURES			
SMALL SPILL – Absorb liquid on inert material such as paper, vermiculite, floor absorbent, and transfer to hood.	THE INFORMATION CONTAINED HEREIN IS INFORMATION RECEIVED FROM OUR RAW MATERIAL		
LARGE SPILL – Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until cleanup has been completed. Stop spill at source, contain area of spill to prevent spreading, pump liquid to salvage tank.	TAKEN AS A WARRANTY OR REPRESENTATION FOR WHICH MUNRO ASSUMES LEGAL RESPONSIBILITY.		
Remaining liquid may be absorbed with inert material such as sand, clay, earth, or floor absorbent, and shoveled into containers with non-sparking tools. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify the proper authorities as required that a spill has occurred.	TUB REFINISHING, INC. DBA MUNRO PRODUCTS		
WASTE DISPOSAL METHOD – Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations. Do not incinerate closed containers.			
SECTION VIII - PROTECTIVE EQUIPMENT			
VENTILATION/RESPIRATORY PROTECTION – Use only with adequate ventilation. Maintain continuous flow of fresh air. Do not breathe vapors, spray mists, or sanding dusts. Wear appropriate properly fitted respirator (NIOSH?MSHA approved) during and after application unless air monitoring demonstrates vapor and particulate levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Engineering or administrative controls should be implemented to reduce exposure. Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).			

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VAPOR DENSITY: Heavier than Air

#### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

#### DANGER! – FLAMMABLE VAPORS MAY CAUSE FLASH FIRE

SECTION I - PRODUCT IDENTIFICATION	FLASH POINT: 24 F TCC LEL: 1.10
MANUFACTURER: Munro Products DISTRIBUTOR: 9150 Clarence Center Road Clarence Center NV 14032	EXTINGUISHING MEDIA: Dry Chemical or Foam
INFORMATION:         716/741-9450           EMERGENCY:         CHEMTREC® 1-800-424-9300	Extinguish all pilot lights and turn off all sources of ignition including heaters, fans and other non- explosion-proof electrical equipment, during use and until all vapors are gone. Vapors may ignite explosively. Vapors may spread long distances and beyond closed doors. Prevent build up of vapors by maintaining a continuous flow of fresh air.
PRODUCT CLASS:       MODIFIED RESIN CATALYST (TRADE SECRET)         TRADE NAME:       BathWorks DIY Refinishing Kit (Part B Base Hardener)	SPECIAL FIREFIGHTING PROCEDURES : Self contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode. In case of fire use CO2, Dry Chemical
CODE:     Base Hardner (Part B)	Foam or other approved method for treating a Class B fire. Summon professional firefighters. During a fire, toxic gases and smoke are irritants present from decomposition/combustion. Closed container may explode when exposed to extreme heat.
SECTION II - HAZARDOUS INGREDIENTS	
	SECTION V - HEALTH HAZARD DATA
ACGIH OSHA VAPOR	EFFECTS OF OVEREXPOSURE (ACUTE):
WEIGHT         TLV         PEL         PRESSURE           %         (PPM)         (mm Hg@20 C)	EYES: Liquid aerosols or vapors of the product are irritating and can cause tearing, reddening, blurred
(A) XYLENE DIMETHYL BENZENE 3 150 150 10	vision, and swelling accompanied by a stinging sensation and maybe a feeling like that of fine dust in the eyes.
ETHYL ACETATE         ETHYL ACETATE           21         400         400         86	SKIN: Isocyanates react with skin protein and moisture and can cause irritation. Symptoms of skin irritation may be reddening, swelling, rash, scaling or blistering. Solvents can penetrate the skin causing effects similar to those identified under acute breathing symptoms. Some persons may develop skin
TOLUENE METHYL BENZINEACETATE	sensitization from skin contact. Cured material is difficult to remove.
CELLOS OLVE ACETATE     2 ETHOXYETHYLETHANOATE       25     NE     100     2	BREATHING: Excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and even asphyxiation. May also cause tightness in the chest. Isocyanate vapors or mist at concentrations above the suggested TLV car
ALIPHATIC POLYCYTE BIURET OF 1,6 HEXAMETHYLENE DISCTE 41 0.02 0.02 0	irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting nonspecific bronchial hyperreactivity can respond to
*Values given are in mg/M3 Care should be taken when sanding pigmented paints. Airborne nuisance particulates have an ACGIH TLV of total dust = 10mg/M3	the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis with flu-like symptoms (e.g. fever, chills) has also been reported.
This material does not contain intentionally added ingredients which are base on compounds of antimony, arsenic, cadmium, lead, mercury, selenium, or water soluble barium.	SWALLOWING: INGESTION IS HARMFUL and can cause a burning sensation, nausea, vomiting, and diarrhea. Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract.
	ADDITIONAL EFFECTS OF OVEREXPOSURE (CHRONIC)
	- Loss of appetite and a bad taste may be noted at high concentrations of years.
WEIGHT I EN GALLON. 0.33 EDS VOLONIE FENGENT VOLATILE. 04	- Narcotic effects have been noted.
BOILING RANGE: 168-382 F VOC OF MATERIAL: 588 gms/1	- Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause diseases of the lungs.
EVAPORATION RATE: Slower than Ether	

- May cause injury to kidneys, liver, and lungs.

- Allergic skin or respiratory reaction may occur in some individuals. Respiratory sensitivity results in asthmatic-like symptoms or subsequent exposure even below the TLV. Skin sensitivity results in allergic

dermatitis which may include rash, itching, hives and swelling of extremities. In those who have developed a skin sensitization these symptoms can develop as a result of contact with very small amounts of liquid material or even as a result of vapor-only exposure.

- High vapors may result in central nervous system depression.

- Hemorrhages into various vital organs have been noted.

- Coma may result from overexposure.

- As a result of previous repeated overexposure or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which include: chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in sever cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent.

WARNING! Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

WARNING! Harmful or fatal if swallowed. Harmful if inhaled or absorbed through skin. Overexposure may cause blood disorders. Based on tests with laboratory animals, overexposure may cause reproductive disorders and birth defects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Asthma and any other respiratory disorders (bronchitis, emphysema, hyperactivity), skin allergies, eczema.

Product ingredients appear on the following carcinogenic listings:

() IARC () NTP () OSHA (X) None of the above

PRIMARY ROUTES OF ENTRY: (X) SKIN (X) BREATHING (X) SWALLOWING

#### FIRST AID:

IN CASE OF SKIN CONTACT: Wash area thoroughly with soap and water. Remove soiled clothing. Get medical assistance if irritation persists. Wash clothing before reuse.

IN CASE OF EYE CONTACT: Flush with large amounts of water for at least 15 minutes. Get medical assistance.

IF SWALLOWED: GET MEDICAL ATTENTION IMMEDIATELY. DO NOT induce vomiting. Aspiration of material into lungs can cause chemical pneumonitus which may be fatal.

IF INHALED: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, summon medical assistance immediately. If breathing ceases, restore using approve CPR techniques and summon medical help immediately. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic.

#### **SECTION VI - REACTIVITY DATA**

POLYMERIZATION: May occur if in contact with moisture or other materials which react with isocyanates. May occur at temperatures over 400 F (204 C).

STABILITY: Stable

MATERIALS TO AVOID: Excess heat and/or oxidizing materials. Avoid contact with water, alcohols, amines, strong bases, metal compounds, or surface active materials. In addition Chlorosulfonic acid.

If container is exposed to high heat, it can be pressurized and possibly rupture explosively. Isocyanates react slowly with water to form CO2 gas. This gas can cause sealed containers to expand and possibly rupture explosively.

HAZARDOUS DECOMPOSITION: May decompose into fumes containing carbon monoxide, carbon dioxide, oxides of nitrogen, traces of HCN and HDI.

#### SECTION VII - SPILL OR LEAK PROCEDURES

SMALL SPILL: Absorb liquid on inert material such as paper, vermiculite, floor absorbent, and transfer to hood.

LARGE SPILL: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area or spill until clean-up has been completed. Stop spill at source, contain area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be absorbed with inert materials such as sand, clay, earth, or floor absorbent, and shoveled into containers with non-sparking tools. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify the proper authorities as required that a spill has occurred.

WASTE DISPOSAL METHOD: Allow volatile portion of evaporate in hood being sure to allow sufficient time for vapors to completely clear hood duct work. Dispose of contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations. Do not incinerate closed containers.

#### SECTION VIII - PROTECTIVE EQUIPMENT

VENTILATION/RESPIRATORY PROTECTION : Use only adequate ventilation. Maintain continuous flow of fresh air. Do not breathe vapors, spray mists, or sanding dusts. Wear appropriate, properly fitted respirator (NOSH/MSHA approved) during and after application unless air monitoring demonstrates vapor, mist and particulate levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Engineering or administrative controls should be implemented to reduce exposure. Proved sufficient mechanical (general/local exhaust) ventilation to maintain exposure below TLV(s).

PERSONAL PROTECTIVE EQUIPMENT: Do not get in eyes, or skin, or on clothing. Use solvent resistant safety eyewear with splash guards. Contact lenses should not be worn. Solvent impermeable gloves, clothing, and boots are recommended to prevent skin contact. In addition a respirator that is recommended or approved for use in isocyanate containing environments should be used. A positive pressure air supplied respirator (TC 19C NIOSH/MSHA) is recommended.

### SECTION IX - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

Keep closure tight and upright to prevent leakage. Keep container closed when not in use. Do not store above 120F. Do not transfer contents to bottles or other unlabeled containers.

Containers of this material may be hazardous when emptied because they retain product residues (vapor, liquid, and/or solid). All hazard precautions given in this data sheet must be observed.

IMPORTANT! This product must be blended with other products prior to use. Read all warnings and precautions on the labels of all products being blended as the combination may contain the hazards of each component.

NON WARRANTY: The information presented herein, while not guaranteed, is to the best of our knowledge true and accurate. Nor warranty or guarantee expressed or implied is made regarding the performance of any product since the manner of use is beyond our control. No suggestion for product use nor anything contained herein shall be construed as a recommendation for its use in infringement of any existing patent, and Munro assumes no responsibility or liability for operations that do infringe any such patents.

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MATERIAL SAFETY DATA SHEET FOR COATINGS, RESINS, AND RELATED MATERIALS DATE OF PREPARATION - 01-03-2009 Prepared by: Compliance Dept.					electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. SPECIAL FIREFIGHTING PROCEDURES AND PRECAUTIONS: Full protective equipment, including self-contained breathing apparatus, should be used. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion		
		SEC	CTION I - PRODUCT II	DENTIFICATION			
MANUFA	CTURE	ז:	Munro Products		SECTION V - HEALTH HAZARD DATA		
DISTRIB	DISTRIBUTOR: 9150 Clarence Center Road			Center Road	EFFECTS OF OVEREXPOSURE (ACUTE)		
<b>INFORMATION:</b> 716/741-9450			716/741-9450		Irritation of the respiratory tract or central nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma.		
EMERGE	ENCY:		CHEMIREC <sup>®</sup> 1-	800-424-9300	SKIN AND EYES: Irritant.		
PRODUC	CT CLAS	S:	RESIN ADHESIVE		ADDITIONAL EFFECTS OF OVEREXPOSURE (CHRONIC):		
	NAME:		SR1003	uid Primer	Permanent central nervous system changes can occur due to solvent overexposure. May cause system, liver, skin, eyes.		
OODL.			0111000		MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Respiratory allergies. Chronic		
		SEC	CTION II - HAZARDOUS	INGREDIENTS	- DRIMARY ROLITES OF ENTRY. Dermal Inhalation Indection		
COMMON							
COMMON	INAME		OCCUPATIONAL		INHALATION: Move person to fresh air. Restore breathing. Treat systematically. Consult a physician.		
WEIGHT %	LEL %	VAPOR PRESSURE	EXPOSURE LIMITS		EYES: Flush immediately with large amounts of water for at least 15 minutes. Consult a physician.		
TOLUENE 75	1.3	22/20 C	100 ppm 375 mg/m3		SKIN: Wash affected skin areas with soap and water. Remove contaminated clothing. Consult a physician if irritation persists.		
1-BUTANOL			200 ppm (TWA-OSHA)		INGESTION: Drink one or two glasses of water to dilute. Do not induce vomiting. Consult a physician or poison control center immediately.		
<5	1.4	4.2/20 C 1	50 ppm 150 mg/m3 Ceiling (TWA-ACGIH) 00 ppm 330 mg/m3 (TWA-OSHA)				
2-BUTOXY E	THANOL				SECTION VI - REACTIVITY DATA		
<5	1.1	0.6/20 C	25 Mm 120 mg/m3 (Skin) (Skin) (TWA-ACGIH)		HAZARDOUS POLYMERIZATION: Will not occur. STABILITY: Stable		
			50 mm 240mg/m3 (Skin) (Skin)		INCOMPATIBILITY (Materials to avoid): Strong acids and bases, halogens, ammonia.		
ETHYL ALCO <5	HOL 3.3	44/20 C	1900 mg/m3 1000 ppm (TWA-ACGIH & OSHA)		CONDITIONS TO AVOID: High Temperatures.		
					SECTION VII - SPILL OR LEAK PROCEDURES		
			SECTION III - PHYSI	CAL DATA	STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources		
VOLUME P	ERCENT VC	LATILE:	90	BOILING RANGE: 165-256 F	<ul> <li>(flares, flames including pilot lights, electrical sparks). Avoid breathing vapors. Use self-contained breathing equipment. Ventilate area. Continue and remove with inert absorbent material and non-</li> </ul>		
SOLUBLE:	No			EVAPORATION RATE: Slower, than Ether	sparking tool.		
WEIGHT PE	R GALLON	: 7.4 lk	DS	VAPOR DENSITY: Heavier than Air	DISPOSAL OF CONTENTS: Disposal should be done in accordance with Federal, State and Local regulations. Use licensed hazardous waste disposal concern.		
		SECTION	N IV - FIRE AND EXPLO	SION HAZARD DATA	- SECTION VIII - PROTECTIVE EQUIPMENT		
FLASH POI	NT: 35	F TCC		LEL: 1.1	VENTILATION: Sufficient ventilation, in pattern and volume, should be provided to keep the air		
EXTINGUIS	HING MED	A: Foa	um, Alcohol Foam, CO2. Drv	Chemical, Water Fog, and Halon 1211.	contaminant concentration below applicable exposure limits. Heavy solvent vapors should be removed from the lower levels of work area and all imition sources (non-explosion proof equipment) about he		
UNUSUAL	FIRE AND	EXPLOSION	N HAZARDS: Keep o	containers tightly closed. Isolate from heat,	eliminated if flammable/air mixtures will be encountered.		

RESPIRATORY PROTECTION: Use approved chemical/mechanical filters designed to remove a combination of particulates and organic vapor in open and restricted ventilation areas. Use approved airline type respirators or hoods in confined area.

PROTECTIVE GLOVES: Use neoprene or rubber gloves to prevent skin contact.

OTHER PROTECTIVE EQUIPMENT: Use protective cream if skin contact is likely. Use disposable or impervious clothing if work clothing contaminations likely.

HYGIENIC PRACTICES: Wash hands before eating, smoking or using the wash room. Do not smoke in any chemical handling storage area. Food or beverages should not be consumed anywhere this product is handled or stored.

#### SECTION IX - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store or use near heat or open flame. Store drum out of sun and away from heat. Keep closure tight and container upright to prevent leakage.

OTHER PRECAUTIONS: Drums of this material should be grounded and bonded when pouring. Do not puncture, drag or slide container. Empty drums should be reused. Do not get in eyes. Avoid skin contact. Prevent prolonged or repeated breathing of vapor or spray mists. Do not weld or flame-cut an empty drum.

NON WARRANTY: The information presented herein, while not guaranteed, is to the best of our knowledge true and accurate. Non warranty or guarantee expressed or implied is made regarding the performance of any product since the manner of use is beyond our control. No suggestion for product use nor anything contained herein shall be construed as a recommendation for its use in infringement of any existing patent, and Munro assumes no responsibility or liability for operations that do infringe any such patents.

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# MATERIAL SAFETY DATA SHEET

# **Trisodium Phosphate**

Section 01 - Chemical And Product And Company Information

Product Identifier	Trisodium phosphate
Product Use	Industrial chemical, textiles, water treatment
Supplier Name	ClearTech Industries Inc. 2302 Hanselman Avenue Saskatoon, SK. Canada S7L 5Z3
Prepared By	ClearTech Industries Inc. Technical Department Phone: (306)664-2522
Preparation Date	February 3, 2011
24-Hour Emergency Phone	306-664-2522



# Section 02 - Composition / Information on Ingredients

CAS Number	. Trisodium phosphate dodecahydrate	10101-89-0
Synonym (s)	.Sodium orthophosphate dodecahydrate	

# Section 03 - Hazard Identification

Inhalation	Material is irritating to mucous membranes and upper respiratory tract.
	Exposure can cause coughing, chest pains and difficulty breathing.



Skin Contact / Absorption	May cause moderate skin burns. May cause severe irritation, especially if skin is moist or wet.
Eye Contact	May cause eye burns. May cause permanent corneal injury. May cause severe eye irritation.
Ingestion	May cause burns of the mouth, throat and stomach. Aspiration in to the lungs may occur during ingestion or vomiting, resulting in lung injury.
Exposure Limits	Not available

# Section 04 - First Aid Measures

Inhalation	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention if difficulties persist.
Skin Contact / Absorption	Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
Eye Contact	Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention if symptoms persist.
Ingestion	Do not induce vomiting. Do not give anything by mouth to an unconscious person. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.



Additional Information...... Treat symptomatically. Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the feces with the diarrhea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity. Treatment should take into consideration both anionic and caution portion of the molecule. The following treatments should be considered for the specific group(s) of phosphate salts found in this product:

-All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcemia, so calcium levels should be monitored.

-Ammonium salts have a hypothetical risk of ammonia toxicity. In addition to calcium levels, ammonia and phosphate levels should be monitored.

-Potassium salts have a hypothetical risk of hyperkalemia which can cause cardiac arrhythmia. In addition to calcium levels, potassium and phosphate levels should be monitored. Also consider continuous EKG monitoring to detect hyperkalemia.

-Sodium salts have a hypothetical risk of hypernatremia. In addition to calcium levels, sodium and phosphate levels should be monitored.

# **Section 05 - Fire Fighting**

Conditions of Flammability..... Product does not burn

**Means of Extinction**...... Does not burn, use appropriate extinguishing media for surrounding fire.

Flash Point..... Not applicable

Auto-ignition Temperature..... Not applicable

Upper Flammable Limit ..... Not applicable

Lower Flammable Limit..... Not applicable

Hazardous Combustible Products... Under fire conditions, oxides of sodium and phosphorus.

Special Fire Fighting Procedures..... Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

Explosion Hazards..... Not available



# Section 06 - Accidental Release Measures

Leak / Spill	Wear appropriate personal protective equipment. Scoop up or vacuum spilled material and place in appropriate closed container. Flush area with water to remove any trace residue. Prevent material from entering sewers.
Deactivating Materials	Not available

# Section 07 - Handling and Storage

Handling Procedures	Avoid contact with eyes, skin and clothing. Avoid breathing in dust. Use with adequate ventilation. Wash thoroughly after handling. Potentially deadly carbon monoxide gas can form in enclosed area or tanks when alkaline products contain materials that contain sugars. Do not enter such areas until they have been well ventilated and carbon monoxide and oxygen levels have been determined safe. Continue to monitor atmosphere while personnel are in enclosure. Empty containers may contain hazardous product residues.
Storage Requirements	Store in a cool, dry, well-ventilated area. Keep containers tightly closed.

# **Section 08 - Personal Protection and Exposure Controls**

# Protective Equipment Eyes Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury. Respiratory NIOSH-approved respirator for dust should be worn, if needed. Gloves Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Clothing Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Footwear No special footwear is required other than what is mandated at place of work.

**Engineering Controls** 



Ventilation Requirements...... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other..... Emergency shower and eyewash should be in close proximity.

# **Section 09 - Physical and Chemical Properties**

Physical State S	Solid
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Odor and Appearance	Odorless, white granular powder
Odor Threshold	Not applicable
Specific Gravity (Water=1)	Not available
Vapor Pressure (mm Hg, 20C)	Not available
Vapor Density (Air=1)	Not available
Evaporation Rate	Not available
Boiling Point	Not available
Freeze/Melting Point	75°C
рН	11.8 (1% Solution @ 25°C)
Water/Oil Distribution Coefficient	Not available
Bulk Density	Not available
% Volatiles by Volume	Not available
Solubility in Water	Soluble
Molecular Formula	Na3PO4 12H2O
Molecular Weight	380.13

# Section 10 - Stability and Reactivity

Stability..... Stable

Incompatibility..... Strong acids, magnesium metal



Hazardous Products of Decomposition .. Oxides of phosphorus and sodium

Polymerization...... Will not occur

# Section 11 - Toxicological Information

Irritating to skin & respiratory area, extremely irritating to eyes.

Sensitization..... Not available

Chronic/Acute Effects...... Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Synergistic Materials..... Not available

Animal Toxicity Data..... LD<sub>50</sub>(Oral, Rat): 7400mg/kg

Carcinogenicity...... Not listed with IARC, NTP, ACGIH, or OSHA as a carcinogen.

Reproductive Toxicity..... Not available

Teratogenicity..... Not available

Mutagenicity..... Not available

# Section 12 - Ecological Information

Fish Toxicity..... EC<sub>50</sub>(96hr, Mosquitofish): 151mg/L

Biodegradability...... The resulting phosphate may persist indefinitely or incorporate into biological systems.

Environmental Effects..... Not available

# Section 13 - Disposal Consideration

Waste Disposal......Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.



# **Section 14 - Transportation Information**

**TDG Classification** 

Class	9
Group	III
PIN Number	UN3077
Other	Secure containers (full and/or empty) with suitable hold down devises during shipment.

# Section 15 - Regulatory Information

WHMIS Classification.....E

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS

# Section 16 - Other Information

**Note:** The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

## Attention: Receiver of the chemical goods / MSDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution<sup>®</sup> initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Material Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service or technical service department.



# **ClearTech Industries Inc. - Locations**

#### Corporate Head Office: 2302 Hanselman Avenue, Saskatoon, SK, S7L 5Z3 Phone: 306-664-2522 Fax: 306-665-6216

#### www.ClearTech.ca

Location	Address	Postal Code	Phone Number	Fax Number
Richmond, B.C.	12431 Horseshoe Way	V7A 4X6	604-272-4000	604-272-4596
Calgary, AB.	5516E - 40 <sup>th</sup> St. S.E.	T2C 2A1	403-279-1096	403-236-0989
Edmonton, AB.	11750 - 180 <sup>th</sup> Street	T5S 1N7	780-452-6000	780-452-4600
Saskatoon, SK.	2302 Hanselman Avenue	S7L 5Z3	306-933-0177	306-933-3282
Regina, SK.	555 Henderson Drive	S42 5X2	306-721-7737	306-721-8611
Winnipeg, MB.	340 Saulteaux Crescent	R3J 3T2	204-987-9777	204-987-9770
Mississauga, ON.	7480 Bath Road	L4T 1L2	905-612-0566	905-612-0575

# 24 Hour Emergency Number - All Locations - 306-664-2522

N FOR COAT DA	MATERIAL SAFETY DATA SHEET INGS, RESINS, AND RELATED MATERIALS TE OF PREPARATION - 01-03-2009 Prepared by: Compliance Dept.	AUTOIGNITION TEMPERATURE       : Not determined         EXTINGUISHING MEDIA: Water spray, dry chemical, foam, carbon dioxide or halon.         SPECIAL FIRE-FIGHTING PROCEDURES:       None         UNUSUAL FIRE & EXPLOSION HAZARDS: May form flammable dust-air mixtures.         STABILITY CONSIDERATIONS:       Stable	
SI	ECTION I - PRODUCT IDENTIFICATION	INCOMPATIBILITY WITH: Avoid contact with hot or concentrated nitric and perchloric acids, fuming sulfuric acid or 98% sulfuric acid at 60 degrees C (140 degree F) or above.	
MANUFACTURER: DISTRIBUTOR: INFORMATION:	Munro Products 9150 Clarence Center Road Clarence Center, NY 14032 716/741-9450	HAZARDOUS DECOMPOSITION PRODUCTS: None HAZARDOUS PRODUCTS OF COMBUSTION: Combustion products depend on temperature, other materials present and air supply. They can be carbon monoxide, carbon dioxide, acrolein, formaldehyde other aldehydes, ketones, fatty acids, methane, ethane and unsaturated hydrocarbons. Carbo methane, ethane and unsaturated hydrocarbons. Carbo	
EMERGENCY:	CHEMTREC <sup>®</sup> 1-800-424-9300	HAZARDOUS POLYMERIZATION: Will not occur.	
PRODUCT NAME: TRADE NAME:	SLIP GUARD ADDITIVE BathWorks Fine Grit		
CODE:	Slip Guard Additive	SECTION V - HEALTH HAZARD DATA	
		SIGNS AND SYMPTOMS OF OVEREXPOSURE IN THE WORKPLACE: None known	
S	ECTION II - HAZARDOUS INGREDIENTS		
		MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE: Not Known	
		PRIMARY ROUTE OF ENTRY: Inhalation	
POLYPROPYLENE PIGMENT Polypropylene Texturing Pigr	1-PROPENE HOMOPOLYMER POLYOLEFINS CAS #900 <u>HMIS+</u> RATING nent Health hazard: 0 Minimal	3-07-0 Not evaluated for carcinogenicity by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program) or the OSHA (Occupational Safety & Health Administration). There is no evidence of carcinogenicity in any animal species.	
and Flattening Agents	Flammability hazard: 1 Slight	REPORTED HUMAN EFFECTS: None known	
	Reactivity hazard. 0 Minimai	REPORTED ANIMAL EFFECTS: None known	
APPEARANCE AND ODOR:	White particulate; odorless		
Hazardous Ingredients Polyproylene	Recommended Atmosphere Leve 10mg/m total 5mg/m respirable	SECTION VI - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS SPECIAL NOTATION:	
Our supplier interprets the I Hazard Communication Star NOT be considered a health	U.S. Occupational Safety and Health Act and Regulations, included and 29 CFR 1910.1200 dated November 25, 1983, this product hazard material.	Munro Products, BathWorks, LubWorks & Lub Refinishing, Inc. are not responsible for accidents related to the application of the slip guard products on bathtubs, shower bases or other areas needing the slip guard application. The customer should test, maintain and care for all slip guard areas through the life time of the slip guard application. Special attention, caution and maintenance is recommended.	
**Air level recommended by o	our supplier.	NON WARRANTY The information presented herein, while not guaranteed, is to the best of our knowledge true and	
SECTION III - PHYSICAL DATA		product, since the manner of use is beyond our control. No suggestion for product use, nor anything	
BOILING POINT: NA	VAPOR PRESSURE @ 20 degree C: NA	contained herein, shall be construed as a recommendation for its use in infringement of any existing	
VAPOR DENSITY: Negligible	at 20 degree C % VOLATILE (vol.): N / A		
FREEZING POINT: NA	SOLUBILITY IN WATER: Negligible	TUB REFINISHING, INC. DBA MUNRO PRODUCTS	
SPECIFIC GRAVITY: 0.9	pH: NA		
EVAPORATION: NA			
SECTIO	ON IV - FIRE AND EXPLOSION HAZARD DATA	——	
CAUTIO FLASH POINT: 276 degree	N! MAY FORM FLAMMABLE DUST-AIR MIXTURES. C (530 degree F) COC, ASTM D57-92		