MATERIAL SAFETY DATA SHEET

MSDS Name: THURMALOX STAINLESS STEEL
MSDS Number: 282
Version Number
MSDS Date: MAY-14-2014

SECTION 1. IDENTIFICATION

Product Name:	**THURMALOX STAINLESS STEEL**
Hazard Rating:	**Health: 2 Fire: 3 Reactivity: 0 PPI:**
Company Identification:	**DAMPNEY CO INC. 85 PARIS ST EVERETT MA 02149-4411**
Contact:	**CONRAD FOO**
Telephone/Fax:	**(617) 389-2805 (617) 389-0484**
Emergency Phone (24 Hour):	**FOR INTERNATIONAL CHEMTREC 001 703 527 3887**
Chemtrec (24 Hour):	**800-424-9300 CCN6206**
Product Class	**SILICONE INDUSTRIAL COATING**
Trade Name	**THURMALOX STAINLESS STEEL**
Product Code	**282**
UN Number	**1263**
Shipping Name	**PAINT**

SECTION 2. HAZARD(S) IDENTIFICATION

Ingredient Name	CAS Number	Percent	TSCA
n-BUTANOL	71-36-3	17.80	Y
METHYL n-AMYL KETONE	110-43-0	7.99	Y
4-METHYL-2-PENTANONE,(HAPS) METHYL ISOBUTYL KETONE	108-10-1	7.58	Y
XYLENE (HAPS)	1330-20-7	4.96	Y
TOLUENE (HAPS)	108-88-3	3.37	Y
AROMATIC HYDROCARBON	64742-95-6	2.85	Y

ETHYL BENZENE (HAPS)	100-41-4	1.50	Y
1,2,4-TRIMETHYLBENZENE	95-63-6	1.40	Y
CHROMIUM	7440-47-3	0.87	Y
NICKEL	7440-02-0	0.61	Y
CRYSTALLINE SILICA	14808-60-7	0.21	Y
MOLYBDENUM	7439-98-7	0.13	Y

*** ALL Ingredients in this product are listed in the T.S.C.A. Inventory

** SPECIAL REMARKS ON ABOVE LISTED INGREDIENTS **
Technical grade xylene contains 18-20% ethyl benzene CAS # is 100-41-4 and is subject to reporting requirements of SECTION 313 of SARA TITLE III.
ACGIH - short term exposure limit (STEL) for MIBK is 75 ppm.
NIOSH recommends a limit of 50 ppm, 8-hour TWA.
ACGIH recommends a TWA of 50 ppm for toluene (skin).

SPECIAL REMARKS SPECIFIC TO THIS RAW MATERIAL
NTP and IARC concludes that crystalline silica, (respirable) may reasonably be anticipated to be a carcinogen. National Institute for Occupational Safety and Health (NIOSH) recommends maximum permissible concentration 0.025 mg/m3 as determined by a full shift sample up to 10 hour working day, 40 hour work week.
NTP concludes that silica, crystalline (respirable) may be anticipated to be a carcinogen, IARC CLASS 2A.
Chromium and forms of chromium compounds are listed as carcinogens by NTP, IARC and ACGIH.
IARC considers nickel compounds to be carcinogenic to humans.

SECTION 3. PHYSICAL DATA

Form:	LIQUID
Appearance/Color:	METALLIC GRAY
Odor:	AROMATIC
pH Value:	Not Applicable
Boiling Range:	228.°F - 344.°F
Melting Point:	Not Applicable
Evaporation Rate:	0.028 times Faster than n-Butyl Acetate

Vapor Density:	Heavier than air
Partition Coefficient	Not Available
% Volatile Weight	58.26%
% Volatile Volume	74.43%
Specific Gravity:	1.07443
Weight/Gallon:	8.9 LB/GAL
VOC	5.22 LB/GAL
Heavy Elements (ppm)	0.

SECTION 4. FIRE AND EXPLOSION HAZARD DATA

Flammability Class	1B
Flash Range:	45.°F - 108.°F
Explosive Range:	1.%
	12.6%

EXTINGUISHING MEDIA:

Use CLASS B extinguisher, inert granular material like dry sand, CLASS D extinguisher with low velocity nozzle, CLASS D extinguishing agent, regular protein foam or AFFF. Do not use a water hose stream. Do not use halogenated extinguishing agents.

SPECIAL FIREFIGHTING PROCEDURES:

When closed containers are exposed to excessive heat, there is a possibility of pressure build-up inside the container. This could result in the rupture of the container. Use water fog to keep fire-exposed containers cool. Minimize breathing gases, vapors, fumes or decomposition products during a fire. Trained fire fighters should use supplied-air breathing apparatus for enclosed or confined spaces. After the organic material has burned, aluminum particles suspended in the air may form an explosive mixture; avoid any disturbance which could cause a dust cloud, such as gas propelled fire extinguishers, in the burning material. Direct the CLASS B extinguishing agent, such as dry chemicals, above the fire, to rain down on the burning material. Care should be taken when applying a CLASS B extinguishing agent because some agents can accelerate a fire. When most of the organics have been consumed, the metal will glow bright if burning, if this happens isolate the fire with dry inert granular material, or CLASS D extinguishing agent, then leave it alone.

Allow material to become cool before disposal.

UNUSUAL FIRE & EXPLOSION HAZARDS:

During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SECTION 5. HEALTH HAZARD DATA

Route	Species	Exposure and Dose
n-BUTANOL		
Inhalation	Rat	LD50 4 HOURS 8000. PPM
Oral	Rat	LD50 2500. mg/kg
Oral	Rabbit	LD50 3400. mg/kg
Skin	Rabbit	LD50 5300. mg/kg
METHYL n-AMYL KETONE		
Inhalation	Rat	LC50 4000. PPM
Oral	Rat	LD50 1600. mg/kg
Skin	Rabbit	LD50 10206. mg/kg
4-METHYL-2-PENTANONE,(HAPS) METHYL ISOBUTYL KETONE		
Inhalation	Rat	LC50 2830. PPM
Oral	Rat	LD50 3340. mg/kg
Skin	Rabbit	LD50 5990. mg/kg
XYLENE (HAPS)		
Inhalation	Rat	LC50 4 HOURS 5000. PPM
Oral	Rat	LD50 4300. mg/kg
Skin	Rabbit	LD50 1700. mg/kg
TOLUENE (HAPS)		
Inhalation	Rat	LC50 4 HOURS 28800. mg/M3
Oral	Rat	LD50 5580. mg/kg
Skin	Rabbit	LD50 12196. mg/kg
ETHYL BENZENE (HAPS)		
Skin	Rabbit	LD50 15433. mg/kg
MOLYBDENUM		
Inhalation	Rat	LC50 5840. mg/M3

Oral	Rat	LD50 5000. mg/kg
Skin	Rat	LD50 2000. mg/kg

PERMISSIBLE EXPOSURE LEVEL:
SEE SECTION VIII

EFFECTS OF OVEREXPOSURE:
High vapor concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic, and have other central nervous system effects.

PRIMARY ROUTE(S) OF ENTRY:
(X) Dermal (X) Inhalation ( ) Ingestion

Pulmonary functions may be reduced by inhalation of respirable crystalline silica. Lung scarring produced by such inhalation may lead to progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases and which increased susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure.

Damage to humans: chronic overexposure of Butanol may aggravate pre-existing disorders, affect the hearing, anemia. Overexposure to Butanol has been found to cause the following effects in laboratory animals: anemia, liver abnormalities, kidney damage, eye and lung damage.

Butanol has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. the relevance of the findings to humans is uncertain.

Histologic fibrosis of lungs from chromium pigments exposure, dermal and mucous membrane irritation and damage can result from prolonged exposure.

MIBK shortens the time of onset or worsens liver and kidney damage induced by other chemicals. MIBK shortens the time of onset or worsens the neurotoxic effects induced by other chemicals.

EMERGENCY AND FIRST AID PROCEDURES:
Eyes - flush thoroughly with running water for 15 minutes, including under the eyelids. Get medical attention.
Skin - promptly remove contaminated clothing and wash affected areas thoroughly with soap and water. If irritation occurs get medical attention. Wash contaminated clothing thoroughly before re-use.

Inhalation - if overcome by vapor, remove to an area free from risk of further exposure and call a physician immediately. Administer oxygen or artificial respiration as needed. Inhalation of excessive concentrations of vapors or mists may cause irritation of the nose and throat. Signs of nervous system depression (drowsiness, dizziness, loss of coordination, and fatigue). Prolonged or repeated exposure to vapors or mist may cause liver and kidney damage.

Ingestion - if swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:

Preexisting eye, skin, liver and/or kidney disorders may be aggravated by exposure to this product.

Acute and chronic prolonged exposure to respirable crystalline quartz may cause delayed lung injury, (silicosis). Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death.

Toluene may be harmful to the fetus based on laboratory animal studies. Repeated exposure to toluene has been associated with high frequency hearing loss based on evidence in laboratory animals. The human health consequences of this finding is uncertain.

Chronic overexposure to xylene has been suggested to cause cardiac abnormality in humans.

SECTION 6. STABILITY AND REACTIVITY MEASURES

Stability:	This product is stable
Hazardous Polymerization:	Hazardous polymerization will not occur

INCOMPATIBILITY:

Avoid contact with strong oxidizing agents, acids or bases.

Avoid contact with water which can generate hydrogen gas that can build-up pressure in sealed drums. Aluminum flakes can react violently with halogenated hydrocarbons.

CONDITIONS TO AVOID:

Avoid heat, open flames.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide and aluminum oxide.

SECTION 7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Before attempting cleanup, refer to hazard caution information in other sections of this sheet.

LARGE SPILLS - notify safety personnel. Eliminate potential sources of ignition. Wear appropriate respirator and protective clothing. Soak up with absorbent such as sand, clay, or other suitable material. Place in non-leaking containers and seal tightly for proper disposal. Ventilate confined spaces. Minimize breathing vapors. Open all windows and doors. Minimize skin contact. Keep product out of sewers and water courses by diking and impounding. Observe precautions for volatile, combustible vapors from absorbed material.

SMALL SPILLS - take up with absorbent material and place in non-leaking container for proper disposal.

Use dustless methods (vacuum), or flush with water. Do not dry sweep.

This product must meet the criteria of EP toxicity and should be managed as a hazardous waste.(40 CFR 261.20-24)

WASTE DISPOSAL METHOD:

Assure conformity with applicable federal, state and local regulations.

Dispose in accordance with Federal, State and Local Regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
n-BUTANOL	50.00 PPM	N/est	N/est	N/est	50.00 PPM
METHYL n-AMYL KETONE	50.00 PPM	N/est	N/est	N/est	100.00 PPM
4-METHYL-2-PENTANONE,(HAPS) METHYL ISOBUTYL KETONE					

	50.00 PPM	N/est	75.00 PPM	205.00 PPM	50.00 PPM
XYLENE (HAPS)					
	100.00 PPM	N/est	150.00 PPM	150.00 PPM	100.00 PPM
TOLUENE (HAPS)					
	N/est	N/est	100.00 PPM	300.00 PPM	200.00 PPM
AROMATIC HYDROCARBON					
	N/est	N/est	N/est	N/est	N/est
ETHYL BENZENE (HAPS)					
	100.00 PPM	N/est	125.00 PPM	125.00 PPM	100.00 PPM
1,2,4-TRIMETHYLBENZENE					
	N/est	N/est	N/est	N/est	N/est
CHROMIUM					
	N/est	N/est	N/est	N/est	1.00 mg/M3
NICKEL					
	N/est	N/est	N/est	N/est	1.50 mg/M3
CRYSTALLINE SILICA					
	0.10 mg/M3	N/est	0.05 mg/M3	0.05 mg/M3	0.10 mg/M3
MOLYBDENUM					
	N/est	N/est	N/est	N/est	10.00 mg/M3

RESPIRATORY PROTECTION:
Use NIOSH approved respirator as required to prevent overexposure.
UNCONFINED SPACES - use a vapor/particulate respirator such as NIOSH approved No. TC-23C.
CONFINED SPACES - use a constant flow air-line respirator such as NIOSH approved No. TC-19C.

VENTILATION:
Provide sufficient ventilation to keep air contaminant concentration below current applicable OSHA Permissible Exposure Limit or ACGIH's TLV Limit. No smoking or open lights.
Traces of Benzene and Formaldehyde may form when this product is heated above 300 degrees F. Evolution rate is highest during the first few hours, then subsequently approaches zero. Personnel

should wear organic vapor respirators until workplace exposure levels have been determined. Review the OSHA Benzene regulations for detailed information on safe handling requirements.
OSHA PEL for Formaldehyde is 0.75 ppm.
OSHA PEL for Benzene is 10 ppm.

PROTECTIVE GLOVES:
Use chemical-resistant gloves to prevent skin contact.

EYE PROTECTION:
Use splash goggles or face shield to prevent eye contact.
Wear protective safety glasses when exposed to dust particles.

OTHER PROTECTIVE EQUIPMENT:
Use chemical-resistant or other protective outerwear to protect against clothing contamination and skin contact.

SECTION 9. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING, TRANSPORTATION, AND STORING:
CAUTION! FLAMMABLE. Handling and storage conditions must be suitable for OSHA CLASS 2 flammable liquid. Store in cool, well ventilated, fire resistant storage area. Protect containers against physical damage. Keep away from heat, flame, and strong oxidizing agents. Do not store above 100 degrees F. Use only with adequate ventilation. Keep containers closed when not in use. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Do not take internally. Bond and ground containers of this material when pouring to avoid static sparks which create a fire hazard.

OTHER PRECAUTIONS:
Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

SECTION 10. REGULATORY INFORMATION

SARA TITLE III SECTION 313:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

Ingredient Name	CAS Number	Percent

n-BUTANOL	71-36-3	17.80
4-METHYL-2-PENTANONE,(HAPS) METHYL ISOBUTYL KETONE	108-10-1	7.58
XYLENE (HAPS)	1330-20-7	4.96
TOLUENE (HAPS)	108-88-3	3.37
ETHYL BENZENE (HAPS)	100-41-4	1.50
CHROMIUM	7440-47-3	0.87
NICKEL	7440-02-0	0.61

-PROP 65 (CARCINOGEN)
WARNING: this product contains a chemical known to the state of California to cause cancer.

Ingredient Name	CAS Number	Percent
ETHYL BENZENE (HAPS)	100-41-4	1.50
NICKEL	7440-02-0	0.61
CRYSTALLINE SILICA	14808-60-7	0.21

-PROP 65 (BOTH CARCINOGEN AND TERATOGEN)
WARNING: This product may contain a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Ingredient Name	CAS Number	Percent
TOLUENE (HAPS)	108-88-3	3.37

The information and recommendations contained herein are based on data believed to be correct. However, Dampney makes no warranty expressed or implied regarding the accuracy of these data or results to be obtained from the use thereof. Dampney assumes no responsibility for personal injury or property damage caused by use of the material described herein. It is the responsibility of the purchaser or user to ensure that this material is properly and safely used.