

# SAFETY DATA SHEET

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## SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

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**CAS Number:** 85-44-9  
**Product Name:** Phthalic anhydride  
**Revision Date:** Dec 20, 2017 **Date Printed:** Dec 21, 2017  
**Version:** 2.0 **Supersedes Date:** Jul 05, 2017  
**Manufacturer's Name:** Thames River Chemical Corp.  
**Address:** 5230 Harvester Road Burlington, ON, CA, L7L 4X4  
**Emergency Phone:** CHEMTREC (800) 424-9300  
**Information Phone Number:** 905-681-5353  
**Fax:** 905-681-5377  
**Product/Recommended Uses:** For laboratory or industrial use only.

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## SECTION 2) HAZARDS IDENTIFICATION

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### Classification

Acute toxicity Oral - Category 4  
Respiratory Sensitizer (Solid/Liquid) - Category 1  
Serious Eye Damage - Category 1  
Skin Irritation - Category 2  
Skin Sensitizer - Category 1  
Specific Target Organ Toxicity -Single Exposure (Respiratory Tract Irritation) - Category 3

### Pictograms



### Signal Word

Danger

### Hazard Statements - Health

Harmful if swallowed  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
Causes serious eye damage  
Causes skin irritation  
May cause an allergic skin reaction  
May cause respiratory irritation

### Precautionary Statements - General

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.

### Precautionary Statements - Prevention

Wash thoroughly/Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.

Avoid breathing dust/fume/gas/mist/vapors/spray.  
In case of inadequate ventilation, wear respiratory protection.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Contaminated work clothing should not be allowed out of the workplace.  
Use only outdoors or in a well-ventilated area.  
Keep container tightly closed.

#### Precautionary Statements - Response

IF SWALLOWED: Call a POISON CENTER or doctor, if you feel unwell.  
Rinse mouth.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor.  
IF ON SKIN: Wash with plenty of water and soap.  
Specific treatment (see first-aid on the SDS).  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing. And wash it before reuse.  
If skin irritation or a rash occurs: Get medical advice/attention.  
Call a POISON CENTER or doctor, if you feel unwell.

#### Precautionary Statements - Storage

Store in a well-ventilated place. Store locked up.

#### Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

#### Physical Hazards Not Otherwise Classified

No Data Available

#### Health Hazards Not Otherwise Classified

No Data Available

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### SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

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CAS	Chemical Name	% By Weight
000085-44-9	PHTHALIC ANHYDRIDE	99.8% - 100.0%
0000108-31-6	MALEIC ANHYDRIDE	0 - 0.05 %

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

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### SECTION 4) FIRST-AID MEASURES

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#### Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

#### Eye Contact

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes or until medical aid is available. If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open.

#### Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.  
Wash contaminated clothing before re-use or discard.

## **Ingestion**

If vomiting occurs naturally, lie on your side, in the recovery position. If you feel unwell/If concerned: Get medical advice/attention.

## **Most Important Symptoms and Effects, Both Acute and Delayed**

No Data Available

## **Indication of Any Immediate Medical Attention and Special Treatment Needed**

No Data Available

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## **SECTION 5) FIRE-FIGHTING MEASURES**

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### **Suitable Extinguishing Media**

Small Fire : Dry chemical, foam, carbon dioxide, water-spray or alcohol-resistant foam. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Large Fire: Water spray, fog or alcohol-resistant foam.

### **Unsuitable Extinguishing Media**

Do not use straight stream of water.

### **Specific Hazards in Case of Fire**

Fire will produce irritating gases.

### **Fire-fighting Procedures**

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely.

### **Special Protective Actions**

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

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## **SECTION 6) ACCIDENTAL RELEASE MEASURES**

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### **Emergency Procedure**

Isolate hazard area and keep unauthorized personnel away. Stay uphill and/or upstream. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ventilate closed spaces before entering.

### **Recommended Equipment**

Wear chemical protective clothing.

### **Personal Precautions**

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

### **Environmental Precautions**

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Dike far ahead of liquid spill for later disposal.

### **Methods and Materials for Containment and Cleaning up**

Absorb Liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal.

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## **SECTION 7) HANDLING AND STORAGE**

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### **General**

Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored All containers must be properly labelled.

### **Ventilation Requirements**

Use only with adequate ventilation to control air contaminants to their exposure limits.

## Storage Room Requirements

Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Empty container retain residue and may be dangerous.

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## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Eye protection

Wear indirect-vent, impact and splash resistant goggles when working with liquids

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	CANsmg	CANppm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)
MALEIC ANHYDRIDE	3	0.75	1	0.25			1	0.25		1		
PHTHALIC ANHYDRIDE	24	4	6	1			12	2		1		0.005(IFV)

Chemical Name	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis	ACGIH Carcinogen	ACGIH Notations
MALEIC ANHYDRIDE		0.01 (IFV)		Resp sens	A4	DSEN; RSEN; A4
PHTHALIC ANHYDRIDE		0.002(IFV)		Res sens; asthma	A4	Skin;DSEN;RSEN;A4

A4 - Not Classifiable as a Human Carcinogen, sens - sensitization

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## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

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### Physical and Chemical Properties

Density	12.77 lb/gal
Specific Gravity	1.53
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Appearance	white flakes
Odor Description	acrid odour
Odor Threshold	0.053 mg/l
pH	not known – forms weak acidic solution in water solution
Melting Point	131 °C
Low Boiling Point	284 °C
High Boiling Point	N/A
Flash Point	152 °C
Vapor Pressure	0.00052 at 25°C mmHg
Vapor Density	5.1 (air = 1)

Evaporation Rate	not known – not considered volatile
Upper Explosion Level	N/A
Lower Explosion Level	N/A
Water Solubility	6.3 g / L
Coefficient Water/Oil	not known
Viscosity	N/A

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## SECTION 10) STABILITY AND REACTIVITY

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### Reactivity

No Data Available

### Stability

Stable under normal storage and handling conditions.

### Conditions to Avoid

Avoid heat, sparks, flame, high temperature, freezing and contact with incompatible materials.

### Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

### Incompatible Materials

Strong bases, acids, oxidizing and reducing agents.

### Hazardous Decomposition Products

No Data Available

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## SECTION 11) TOXICOLOGICAL INFORMATION

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### Likely Route of Exposure

Inhalation, ingestion, skin absorption

### Acute Toxicity

Harmful if swallowed

### Aspiration Hazard

No Data Available

### Carcinogenicity

No Data Available

### Germ Cell Mutagenicity

No Data Available

### Reproductive Toxicity

No Data Available

### Respiratory/Skin Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

### Serious Eye Damage/Irritation

Causes serious eye damage

### Skin Corrosion/Irritation

Causes skin irritation

### Specific Target Organ Toxicity - Repeated Exposure

No Data Available

### Specific Target Organ Toxicity - Single Exposure

May cause respiratory irritation

0000085-44-9 PHTHALIC ANHYDRIDE

LC50 (rat): greater than 52.5 mg/m<sup>3</sup> (4-hour exposure); cited as greater than 210 mg/m<sup>3</sup> (1-hour exposure) (dust) (10)

LD50 (oral, rat): approximately 2000 mg/kg (1); 4020 mg/kg (8)

LD50 (oral, mouse): 1500 mg/kg (11)

LD50 (dermal, rabbit): greater than 10000 mg/kg (10)

0000108-31-6 MALEIC ANHYDRIDE

LD50 (oral, rat): 400 mg/kg (17, unconfirmed); 625 mg/kg (18); 850 mg/kg (19); 900 mg/kg (in water) (20); 1050 mg/kg (in corn oil) (20)

LD50 (oral, mouse): 465 mg/kg (19)

LD50 (oral, guinea pig): 390 mg/kg (18)

LD50 (oral, rabbit): 875 mg/kg (18)

LD50 (d

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## SECTION 12) ECOLOGICAL INFORMATION

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### Toxicity

No Data Available

### Mobility in Soil

No Data Available

### Bio-accumulative Potential

No Data Available

### Persistence and Degradability

No Data Available

### Other Adverse Effects

No Data Available

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## SECTION 13) DISPOSAL CONSIDERATIONS

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### Waste Disposal

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

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## SECTION 14) TRANSPORT INFORMATION

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### U.S. DOT Information

UN number: Not Regulated

Proper shipping name: N/A

Hazard class: N/A

Packaging group: N/A

Hazardous substance (RQ): No Data Available

Toxic-Inhalation Hazard: No Data Available

Marine Pollutant: No Data Available

Note / Special Provision: No Data Available

### Transport Canada Information

UN number: Not Regulated

Proper shipping name: N/A

Hazard class: N/A

Packaging group: N/A

Marine Pollutant: No Data Available

Transport in bulk (according to Annex II of MARPOL 73/78): No Data Available

Note / Special Provision: No Data Available

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## SECTION 15) REGULATORY INFORMATION

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CAS	Chemical Name	% By Weight	Regulation List
0000085-44-9	PHTHALIC ANHYDRIDE	99.8% - 100.0%	DSL, TSCA
0000108-31-6	MALEIC ANHYDRIDE	0 - 0.05 %	DSL, TSCA

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## SECTION 16) OTHER INFORMATION

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### Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANtmg or CANtppm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

### Version 2.0:

Revision Date: Dec 20, 2017

Hazards and Physical properties updated with supplier SDS Data

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