Material Safety Data Sheet –

MTHPA-C

7-33 Amsterdam Street Newark, NJ 07105

MTHPA-C

****

MATERIAL	**DATE ISSUED**	**DOT HAZARD CLASSIFICATION**
MTHPA-C	10/01/11-Rev3	Non-hazardous **DOT SHIPPING NAME**
CAS NO. 11070-44-3	**SUPERSEDES**	Not regulated**DOT LABEL** None
FORMULA $C_9H_{10}O_3$	10/03/03	

CHEMICAL NAME Methyltetrahydrophthalic anhydride

********** **I - INGREDIENTS** **********

APPROXIMATE WEIGHT % TWA/TLV

Methyltetrahydrophthalic anhydride 90-95 None est. (CAS No. 11070-44-3) Other Anhydride(s) (New Jersey Trade 1-10 None est. Secret No. 28067400000-5060)

********** **II - PHYSICAL AND CHEMICAL PROPERTIES** **********

APPEARANCE Clear to yellow liquid **pH** Acidic **VISCOSITY** 50-80 Cp @ 25°C **ODOR** Faint **BOILING POINT** Not known **MELTING OR FREEZING POINT** Not known **VAPOR DENSITY (Air=1)** 5.5 **VAPOR PRESSURE (mm Hg)**<0.01 mm@20°C **PERCENT VOLATILE (by weight)** Nil **SPECIFIC GRAVITY (WATER=1)**~1.2 @ 25°C**EVAPORATION RATE (Butyl Acetate=1)** **SOLUBILITY IN WATER** <0.1% (hydrolyzes)

********** **III - FIRE AND EXPLOSION INFORMATION** **********

FLASH POINT >200°F **AUTO IGNITION TEMPERATURE** Not known **LOWER EXPLOSION LIMIT(%)**1.7(MTHPA) **UPPER EXPLOSION LIMIT(%)**10.5(MTHPA)**EXTINGUISHING MEDIA FOAM** X **ALCOHOL FOAM** **CO_2** X **DRY CHEMICAL** X **WATER** X **OTHER**

SPECIAL FIRE FIGHTING PROCEDURES:

Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Products of combustion are toxic. Treat as hot oil or fat. If water must be used, use a fog nozzle to avoid spattering of hot material and spread of burning liquid.

********** **IV - HEALTH EFFECTS INFORMATION** **********

PRIMARY ROUTES OF ENTRY - **SKIN CONTACT** X **EYE CONTACT** X **INHALATION** X **INGESTION**

********** IV - HEALTH EFFECTS INFORMATION (continued) *********
MTHPA-C

EFFECTS OF OVEREXPOSURE

Based upon available toxicity and epidemiology information for this material and other related materials, it is anticipated that this material will produce moderate eye and skin irritation. Prolonged exposure will result in chemical burns and possible irreversible damage. Mists or vapors will most likely be irritating to the respiratory tract. Repeated or prolonged contact have been found epidemiologically to induce skin and respiratory sensitization.

OVEREXPOSURE MAY AGGRAVATE EXISTING CONDITIONS:

Bronchial asthma, eczema or other allergic conditions.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes:
Flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician not available, flush for additional 15 minutes and then transport victim to medical care.

Skin:
Wash affected areas with plenty of water, and soap if available, for several minutes. Remove and clean contaminated clothing and shoes. Seek medical attention if irritation develops.

Ingestion:
If swallowed, immediately give 3-4 glasses of water. DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

Inhalation:
Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention.

CHEMICALS LISTED AS CARCINOGEN BY:

NATIONAL TOXICOLOGY PROGRAM -No
I.A.R.C. MONOGRAPHS -No **OSHA** -No ********** **V - REACTIVITY INFORMATION** **********

STABILITY: **STABLE** X **CONDITIONS TO AVOID UNSTABLE**
Moisture, heat

********** V-Reactivity Information (cont.) **********

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may produce toxic organic vapors/fumes and oxides of carbon.

HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID

MAY WILL NOT X None known
OCCUR OCCUR

INCOMPATIBILITY (MATERIALS TO AVOID) **WATER** X **OTHER** X Bases, oxidizing agents. (This material hydrolyzes in water.

********** **VI - SPILL AND DISPOSAL INFORMATION** **********

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Caution! Floors may become slippery. Wear appropriate protective gear and NIOSH/MSHA approved respirator where mists or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.). Transfer the liquid and solid separately to containers for recovery or disposal. Wet residue with water and absorb with inert material (sand, earth...) and transfer into appropriate containers for disposal. Keep spill out of sewers and open bodies of water.

WASTE DISPOSAL METHODS

Dispose of in compliance with all Federal, state and local laws and regulations. Incineration is the preferred method.

********** **VII - PERSONAL PROTECTION INFORMATION** **********

VENTILATION TYPE

In processes where mists or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices.

RESPIRATORY PROTECTION

In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls.

PROTECTIVE GLOVES

Rubber or plastic, when needed, to prevent skin contact.

EYE PROTECTION

Wear chemical goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions.

********** VII - PERSONAL PROTECTION INFORMATION**********

OTHER PROTECTIVE EQUIPMENT

Eye wash; safety shower; protective clothing (long sleeves, coveralls or other, as appropriate), when needed, to prevent skin contact.

********** VIII - STORAGE AND HANDLING **********

PRECAUTIONS FOR STORAGE AND HANDLING:

Keep containers tightly closed until used.

********** IX - TOXICOLOGY INFORMATION**********

TOXICITY

The toxicity information provided below is for the closely related materials, Methyltetrahydrophthalic anhydride (mixed isomers) and Tetrahydrophthalic anhydride.

ACUTE

For Methyltetrahydrophthalic anhydride (mixed isomers):
- oral LD_{50} (rat): 2140 mg/kg; 4430 mg/kg
  dermal LD_{50} (rat): >2000 mg/kg
  dermal LD_{10} (rabbit): 1410 mg/kg
-skin irritation (rabbit): Mild irritant.
-sensitization (human – epidemiological): Sensitizing. Causing bronchial hyperreactivity, IgE-mediated allergic response.

For Tetrahydrophthalic anhydride:
-inhalation LC (rat & mouse): >294 mg/m_3
-interperitoneal LD_{10} (mouse): 500 mg/kg
-eye irritation (rabbit): Moderate irritant.
-sensitization (guinea pig – maximization test): Sensitizing.

GENOTOXICITY/MUTAGENICITY

For Tetrahydrophthalic anhydride: -mutagenicity (Ames assay – Salmonella sp.): Not a mutagen with or without metabolic activation. -

ECOTOXICITY

AQUATIC TOXICITY

For Tetrahydrophthalic anhydride:
-LC_{50} (Leuciscus idus – 48-hour – static): 610 mg/l
  EC_{50} (Daphnia magna – 24-hour): 117 mg/l
  EC_{50} (algae – Scenedesmus sp.-72-hour): 65.7 mg/l
-EC_{10} (bacteria – Pseudomonas sp.– 16-hrs): 89 mg/l

MTHPA-C

**********X - MISCELLANEOUS AND REGULATORY INFORMATION**********

CANADIAN WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) CLASSIFICATION
This product is not regulated by WHMIS

DOMESTIC SUBSTANCE LIST (DSL) STATUS
The components of this material are currently listed on the Canadian DSL.

TRANSPORT OF DANGEROUS GOODS (TDG)
Not regulated by Transport of Dangerous Goods

FEDERAL LEVEL REGULATIONS:

TOXIC SUBSTANCES CONTROL ACT (TSCA INVENTORY) STATUS:
This product is currently listed on U.S. EPA TSCA 8(b) inventory list.

TSCA Section 12(b) Export Notification:Components present in this product which, if exported, could require eitherannual or one-time reporting under this regulation are as follows:

Chemical Name	CAS Number	Typical Maximum Concentration
None known		

OSHA Hazard Communication Standard for Trade Secrets:

Note: In case of emergency, information on the proprietary component(s) of this material will be released to authorized medical personnel.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of1980 requires notification of the National Response Center (Telephone 800-4248802) in the event of a release of quantities of the following hazardousmaterials contained in this product, if the release is equal to or greater thanthe Reportable Quantities (RQs) listed in 40 CFR 302.4:

Chemical Name	CAS Number	Typical Maximum Concentration
None known		

SARA Title III, Sections 302/304 (Superfund Amendments and Reauthorization actof 1986) - This act requires emergency planning, including agency notification,for possible release of the following components of this material, based uponthe Threshold Planning Quantities (TPQs) and release Reportable Quantities(RQs)listed for the Components in 40 CFR 355:

Chemical Name	CAS Number	Typical Maximum Concentration
None known		

SARA Title III Sections 311/312 - This act requires reporting under theCommunity Right-to-Know provisions due to the inclusion of the followingcomponents of this material in one or more of the five hazard categories listedin 40 CFR 370:

Chemical Name	CAS Number	Hazard Categories*)
Methyltetrahydrophthalic anhydride Other Anhydrides NJTSR 2806740000-5060P)	11070-44-3 Proprietary	A A

Material Safety Data Sheet
MTHPA-C

MTHPA-C
**********X - MISCELLANEOUS AND REGULATORY INFORMATION**********

***) The five hazard categories are as follows: F=FIRE HAZARD; S= SUDDEN RELEASEOF PRESSURE; R=REACTIVE; A=IMMEDIATE (ACUTE) HEALTH HAZARD; C=DELAYED (CHRONIC)HEALTH HAZARD**

SARA Title III Section 313 - This act requires submission of annual reports offthe releases of the following components of this material if the thresholdreporting quantities as listed in 40 CFR 372, are met or exceeded:

Typical MaximumChemical Name	CAS Number	Concentration
None known		

STATE RIGHT-TO-KNOW REGULATIONS:

CALIFORNIA PROPOSITION 65 - Components present in this material which the Stateof California has found to cause cancer, birth defects or other reproductiveharm are as follows:

Typical MaximumChemical Name	CAS Number	Concentration
None known		

MASSACHUSETTS Right-to-Know - The following components of this material areincluded in the Massachusetts Substance List and are present at or abovereportable levels:

Typical MaximumChemical Name	CAS Number	Concentration
None known		

MICHIGAN Critical Materials - The following components of this material areincluded in the Michigan Critical Materials List:

Chemical Name	CAS Number
None known	

NEW JERSEY Right-to-Know - The following components of this materialare included in the New Jersey Hazardous Substance List and are presentat or above reportable levels:

Chemical Name	CAS Number	Typical MaximumConcentration
Other anhydride(s) (NJTSR 28067400000-5060P)	Proprietary	1-10%

PENNSYLVANIA Right-to-Know - The following components of this materialare included in the Pennsylvania Hazardous Substance List and arepresent at or above reportable levels:

Typical MaximumChemical Name	CAS Number	Concentration
None known		