FLINT HILLS resources

MATERIAL SAFETY DATA SHEET

1. Identification

Material name	TMA (NORTH AMERICA - ENGLISH)
MSDS number	9434
Version #	11
Revision date	10-28-2011
CAS #	552-30-7

Recommended use and Limitations on use

Recommended use	Industrial manufacture of polymers and esters.
Limitations on use	Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.
Synonym(s)	TRIMELLITIC ANHYDRIDE
Manufacturer	Flint Hills Resources Chemical Intermediates, LLC 23425 Amoco Road Channahon, IL 60410 United States
Supplier	Flint Hills Resources, LP P. O. Box 2917 Wichita, KS 67201-2917 United States

Telephone numbers - 24 hour emergency assistance

Chemtrec (US)	800-424-9300
Carechem24 (Europe)	44 (0) 1235 239 670 (UK)
Carechem24 (US/Canada)	866-928-0789
Carechem24 (Mexico)	52 555 004 8763
Carechem24 (Brazil)	55 113 711 9144

Telephone numbers - general assistance

24 HR (7 DAYS) (Wichita Customer Service)	866-400-4343
24 HR (7 DAYS) (Joliet)	815-467-3209
8-5 (M-F, CST) MSDS Assistance	316-828-7988
Email: msdsrequest@fhr.com	

2. Hazards identification

Emergency overview

WARNING!

WHITE MUSTY SMELLING SOLID

HEALTH HAZARDS
DO NOT BREATHE DUST
IRRITATING TO THE RESPIRATORY TRACT
MAY CAUSE ALLERGIC SKIN OR RESPIRATORY TRACT REACTION
MAY CAUSE SEVERE EYE IRRITATION
FUMES FROM HEATED MATERIAL MAY BE IRRITATING AND HAZARDOUS
MAY CAUSE LUNG DAMAGE
SEE "TOXICOLOGICAL INFORMATION" (SECTION 11) FOR MORE INFORMATION

FLAMMABILITY HAZARDS
DUST MAY FORM EXPLOSIVE MIXTURE IN AIR WHEN DISPERSED IN A CONFINED SPACE
THE IGNITION OF A SUFFICIENT CONCENTRATION OF A COMBUSTIBLE DUST IN AIR IN AN UNCONFINED SPACE MAY RESULT IN A FIREBALL AND EXPLOSION
THIS MATERIAL, AS PRODUCED AND NOT IN ITS FINELY DIVIDED FORM AS DUST, IS NOT AN EXPLOSIVE AS DEFINED BY ESTABLISHED REGULATORY CRITERIA

REACTIVITY HAZARDS
STABLE

MEDICAL SURVEILLANCE: It is FHR's opinion that an effective medical surveillance program for TMA is essential to the prevention of illness as a result of over-exposure to TMA in the workplace. A medical surveillance program may include a thorough medical history and periodic physical exams with emphasis on pulmonary function and allergies. Sensitization to TMA is an immune-mediated effect. A blood test is available to detect and measure antibodies to TMA which can be helpful in predicting and confirming TMA-related illness. Additional information is described in FHR's TMA Bulletin TM-135.

NOTE: Combustible dust properties are dependent on the moisture content and particle size distribution of the tested material as received. Customers are encouraged to perform testing for explosibility potential for dust accumulated at their site. This data is provided as an indicator of potential explosivity hazard.

For additional safety information, consult the current editions of the National Fire Protection Association (NFPA) 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, NFPA 499, Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas, NFPA 77, Recommended Practice on Static Electricity, NFPA 68, Standard on Explosion Protection by Deflagration Venting or similar guidance for your country or region.

Potential health effects

Routes of exposure

Inhalation, ingestion, skin and eye contact.

Eyes

Causes severe eye irritation with tearing, redness or a stinging burning feeling. May cause corneal damage. Can injure eye tissue. Effects may become more serious with prolonged exposure.

Skin

Contact may cause reddening, itching and inflammation. Skin contact may cause harmful effects in other parts of the body.

See "Toxicological Information" (Section 11) for more information.

Inhalation

Trimellitic anhydride (TMA) is a respiratory sensitizer. In susceptible individuals, i.e., those that have developed antibodies to TMA, repeated inhalation of dust or vapor may result in an immediate onset of asthma-like symptoms (coughing, sneezing, tightness in the chest, and wheezing) or delayed respiratory effects.

Overexposure to this material may cause systemic damage including target organ effects listed under "Toxicological Information" (Section 11).

Ingestion

Swallowing this material may be harmful. May cause irritation of the mouth, throat and gastrointestinal tract. Symptoms may include salivation, pain, nausea, vomiting and diarrhea.

3. Composition/information on ingredients

Components	CAS #	Concentration*
TRIMELLITIC ANHYDRIDE	552-30-7	100 %

*Values do not reflect absolute minimums and maximums; these values are typical which may vary from time to time.

Composition comments

This Material Safety Data Sheet is intended to communicate potential health hazards and potential physical hazards associated with the product(s) covered by this sheet, and is not intended to communicate product specification information. For product specification information, contact your Flint Hills Resources, LP representative.

4. First aid measures

First aid procedures

Eye contact

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. GET IMMEDIATE MEDICAL ATTENTION.

Skin contact

Immediately wash skin with plenty of soap and water after removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Contaminated clothing should be vacuumed with a HEPA-type filter or sprayed with water to prevent the spread of dust. Launder clothing before re-use.

Inhalation

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR).

Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Ingestion

Rinse mouth. Do not use mouth-to-mouth method if victim ingested the substance. If ingestion of a large amount does occur, call a poison control center immediately. Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Notes to physician

Keep victim under observation. Symptoms may be delayed. INHALATION: Acute asthmatic reactions to TMA should be treated like acute asthma from any cause. If the patient is cyanotic or acutely dyspneic, consider supplemental oxygen and systemic corticosteroids. The primary treatment for the late onset respiratory systemic syndrome (TMA flu) is systemic corticosteroids plus antipyretics and bronchodilators as needed.

5. Fire-fighting measures

Flammable properties

Material will burn in a fire.

This material, as produced and not in its finely divided form as dust, is not explosive as defined by established regulatory criteria.

This material, in its finely divided form, presents an explosion hazard when dispersed in a confined or unconfined area in a sufficient concentration and ignited in air. Ignition of a dust cloud in an unconfined area may result in a fireball. Ignition of a dust cloud in a confined space may result in a pressure buildup in equipment.

This material may accumulate static charge which can cause an electrical spark (ignition source) in some cases.

See Combustible Dust Property data in Section 9.

For additional safety information, consult the current editions of the National Fire Protection Association (NFPA) 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, NFPA 499, Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas, NFPA 77, Recommended Practice on Static Electricity, NFPA 68, Standard on Explosion Protection by Deflagration Venting or similar guidance for your country or region.

Extinguishing media

Suitable extinguishing media

Use water spray, dry chemical, carbon dioxide or fire-fighting foam for Class B fires to extinguish fire.

Unsuitable extinguishing media	Do not use water jet.
Protection of firefighters	
Specific hazards arising from the chemical	Combustion may produce COx and other decomposition products in the case of incomplete combustion.
Fire fighting equipment/instructions	Evacuate area and fight fire from a safe distance. Use water spray to cool adjacent structures and to protect personnel. Firefighters must wear NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

6. Accidental release measures

Environmental precautions	If material is released to the environment, take immediate steps to stop and contain release. Prevent or minimize formation of a dust cloud or layer. Eliminate all sources of ignition. Isolate hazard area and deny entry. Caution should be exercised regarding personnel safety and exposure to the released material. Notify local, provincial and/or federal authorities, if required.
Other information	FOR NON-EMERGENCY PERSONNEL: INHALATION SENSITIZATION HAZARD. Avoid inhalation of dust. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. FOR EMERGENCY RESPONDERS: INHALATION SENSITIZATION HAZARD. Eliminate and/or shut off ignition sources and keep ignition sources out of the area. Keep unnecessary people away; isolate hazard area and deny entry. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stay upwind. Isolate for 800 meters (1/2 mile) in all directions if tank, rail car or tank truck is involved in fire. Evacuate area endangered by release as required. This material, in its finely divided form, presents an explosion hazard when dispersed in a confined or unconfined area in a sufficient concentration and ignited in air. Ignition of a dust cloud in an unconfined area may result in a fireball. Ignition of a dust cloud in a confined space may result in a pressure buildup in equipment. For small spill, sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Use approved industrial vacuum cleaner for removal or use non-sparking tools to collect spillage. Grounding, bonding, and intrinsic safety of equipment used should be considered. Avoid cleanup procedures that may result in water pollution. For large spills and releases follow recommendations as provided by guidance for your country or region. For personal protection in case of a large spill, use chemical/dust goggles, face shield, boots, and gloves. If concentration is unknown, a Self-Contained Breathing Apparatus (SCBA) should be used to avoid inhalation of the material. A respirator that will protect against organic vapor and dust/mist may be used where concentrations are known and the respirator's assigned protection factor is adequate. See Exposure Controls/Personal Protection, Section 8, Disposal Considerations, Section 13.

7. Handling and storage

Handling

INHALATION SENSITIZATION HAZARD. Do not breathe dust. Prevent contact with eyes, skin and clothing. Wash thoroughly after handling.

This material, as produced and not in its finely divided form as dust, is not explosive as defined by established regulatory criteria.

This material, in its finely divided form, presents an explosion hazard when dispersed in a confined or unconfined area in a sufficient concentration and ignited in air. Ignition of a dust cloud in an unconfined area may result in a fireball. Ignition of a dust cloud in a confined space may result in a pressure buildup in equipment.

This material may accumulate electrostatic charge which may cause an electrical spark (ignition source) in some cases.

Ground and bond lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. When airborne dust or a dust cloud is present, do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards.

Facilities using this material should assess their potential for combustible dust and static spark hazards and follow applicable federal, state and local laws and regulations and accepted codes and standards.

Avoid accumulation of dust on surfaces and hidden areas where dust may collect in the interior of buildings to minimize secondary dust explosion potential. Clean up dust using approved methods that do not generate dust clouds if ignition sources are present.

Do not eat, drink or smoke in areas of use or storage.

For additional safety information, consult the current editions of the National Fire Protection Association (NFPA) 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, NFPA 499, Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas, NFPA 77, Recommended Practice on Static Electricity, NFPA 68, Standard on Explosion Protection by Deflagration Venting or similar guidance for your country or region.

Storage

Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid contact with water, strong oxidizers and bases.

Empty containers may contain product residue. Do not reuse without adequate precautions.

Do not eat, drink or smoke in areas of use or storage.

8. Exposure controls / personal protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
TRIMELLITIC ANHYDRIDE (552-30-7)	STEL	0.002 mg/m3	Inhalable fraction and vapor; Skin; Sensitizer
	TWA	0.0005 mg/m3	Inhalable fraction and vapor; Skin; Sensitizer

U.S. - Minnesota (MNOSHA)

Components	Type	Value
TRIMELLITIC ANHYDRIDE (552-30-7)	TWA	0.005 ppm 0.04 mg/m3

Exposure guidelines NOTE: Only ingredients with validated exposure limits are shown in section 8.

US ACGIH Threshold Limit Values: Skin designation

TRIMELLITIC ANHYDRIDE (CAS 552-30-7) Can be absorbed through the skin.

Engineering controls	INHALATION SENSITIZATION HAZARD. Do not breathe dust. Use explosion-proof equipment if high dust/air concentrations are possible. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.
Personal protective equipment	
Eye / face protection	Keep away from eyes. Prevent eye contact by using chemical/dust goggles and face shield. Have eye washing facilities readily available where eye contact can occur.
Skin protection	Use protective gloves complying with OSHA standard 1910.138. Nitrile Rubber Permeation rate: > 480 minutes (8 hour) Thickness: > 0.5 mil Use of protective coveralls and long sleeves is recommended.
Respiratory protection	INHALATION SENSITIZATION HAZARD. Do not breathe dust. Use only with adequate ventilation. Working without a respirator is only acceptable where the concentration does not exceed recommended exposure levels and ventilation is adequate. A respirator that will protect against organic vapor and dust/mist may be used where concentrations are known and the respirator's assigned protection factor is adequate. If concentration is unknown, a Self-Contained Breathing Apparatus (SCBA) should be used to avoid inhalation of the material.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, on clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Color	White to yellow
Odor	Not available
Odor threshold	Not available
Physical state	Solid
Form	Flakes or tablets
pH	Not available
Melting point	187.2°C at 1013 hPa
Freezing point	Not available
Boiling point	390°C at 1013 hPa
Flash point	227°C at 1013 hPa
Evaporation rate	Not available
Flammability	Non flammable
Flammability limits in air, upper, % by volume	7 %
Flammability limits in air, lower, % by volume	1 %
Vapor pressure	0.0000152 Pa at 25 °C
Vapor density	Not available
Relative density	1.4867 at 20 °C
Solubility (water)	24400 mg/l at 20 °C

Solubility (organic solvent)	Not available
Partition coefficient (n-octanol/water)	Log Kow (Pow) =0.06 at 20 °C
Auto-ignition temperature	> 400°C at atmospheric pressure
Decomposition temperature	Not available
VOC	Not available
Pour point	Not available
Viscosity	Not available
Bulk density	Not available
Surface tension	Not applicable
Dissociation constant	2.91 pK1 at 20 °C 3.94 pK2 at 20 °C 5.3 pK3 at 20 °C
Percent volatile	Not available
Oxidising properties	None known
Stability	Not available
Explosivity	Non explosive
Hydrolysis	Not available
Granulometry	< 50 microns (<1% of sample) > 400 microns (95% of sample)
Molecular weight	192.13
Molecular formula	C9H4O5
Chemical family	Anhydride
Minimum Ignition Energy	10 - 25 mJ
Minimum Ignition Temp. - Dust Cloud	560 - 620 °C
Minimum Ignition Temp. - Dust Layer	> 210 °C
Minimum Explosible Concentration	70 - 80 g/m3
Maximum Explosion Pressure - Pmax	7.5 - 7.6 barg
Explosion Severity Index - Kst	199 - 217 bar-m/s
Limiting Oxygen Concentration	8.2 - 12.5 vol %

10. Stability and reactivity

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid exposure to moisture or moist air. Avoid dusting when handling and avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive with oxidizing agents, acids, alkalis and moisture. Contact with water will produce the corresponding acid. See precautions under Handling & Storage (Section 7).
Hazardous decomposition products	Not anticipated under normal conditions.
Possibility of hazardous reactions	Information on dust explosion hazard is given in Sections 5, 7, and 9. Reacts exothermically with water. This reaction is expected to be slow, but can become vigorous if local heating accelerates it. Reaction with water is accelerated by acids.

11. Toxicological information

Toxicological data

Product	Test Results
5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo- (552-30-7)	Acute Dermal LD50 Rabbit: > 2000 mg/kg 2.00 weeks bw Acute Inhalation LC50 Rat: 3750 mg/m3 4.00 hours air Acute Oral LD50 Rat: 2730 mg/kg 2.00 weeks bw

Pre-existing conditions aggravated by exposure	Pre-existing medical conditions which may be aggravated by exposure include disorders of the respiratory tract, asthma, and atopy (multiple allergies).
Toxicological data	TRIMELLITIC ANHYDRIDE (TMA) is a known human respiratory sensitizer. In susceptible individuals, i.e., those that have developed an immune response to TMA, the immediate onset of asthma-like symptoms (coughing, sneezing, tightness in the chest, and wheezing) may occur within minutes of exposure to TMA dust or vapor. Alternatively, some sensitized individuals develop late onset respiratory systemic syndrome (LRSS also known as "TMA flu"). Symptoms of LRSS generally develop four to eight hours after exposure has ended. Flu-like symptoms include coughing, wheezing, breathlessness, congestion, fever, chills, fatigue, and generalized aching. Recovery from episodes of LRSS generally occur within six to twelve hours. In rare instances, a sensitized individual may develop a more serious disorder known as pulmonary disease-anemia (PDA) characterized by hemoptysis and hemolytic anemia, requiring hospitalization. This disorder is associated with exposure to fumes resulting from high-temperature vaporization of TMA. Initially, asthma-like symptoms occur with the possible presence of bloodstained sputum. Studies in laboratory rats mimic the human effects of TMA and result in immunologically mediated lung changes. Sensitization to TMA has been demonstrated in laboratory animals as a result of dermal (only) exposure. The relevance to humans isn't certain, but it may be assumed that workers may develop sensitization to TMA as a result of repeated dermal contact. If any form of TMA respiratory sensitization develops, treatment is symptomatic. Symptoms may range from mild to severe. Recovery is generally rapid and complete following termination of exposure. Following recovery, the employee should not be assigned to duties where potential exposure to TMA may occur. Sensitization to TMA may result in an allergic reaction to other aromatic anhydrides. Likewise, sensitization to other anhydrides may result in allergic reaction to TMA. Exposure to this material may cause adverse effects or damage to the following organs or organ systems: skin, eyes, respiratory tract, mucous membranes, lungs, and blood.

12. Ecological information

Ecotoxicological data

Product	Test Results
5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo- (552-30-7)	EC50 Daphnia: > 792 mg/l 48.00 hours EC50 Freshwater algae: > 739 mg/l 72.00 hours LC50 Freshwater fish: > 957 mg/l 96.00 hours

Ecotoxicity	May be harmful to aquatic organisms.
Persistence and degradability	This material is readily biodegradable and not persistent.
Bioaccumulation / Accumulation	Not likely to bioaccumulate in aquatic organisms.
Mobility in environmental media	TMA or trimellitic acid released to the environment is expected to partition primarily to the water (99.2%) with small amounts in the soil (<1%) and the air and sediment (<0.1%).

13. Disposal considerations

Disposal instructions	Under RCRA, it is the responsibility of the user of the material to determine, at the time of disposal, whether the material meets RCRA criteria for hazardous waste. In Canada, wastes should be disposed of according to federal, state, provincial and local regulations. For additional handling information and protection of employees, see Section 7 (Handling and Storage) and Section 8 (Exposure Controls/Personal Protection).

14. Transport information

General	INTERNATIONAL TRANSPORTATION REQUIREMENTS: Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, and ICAO/IATA-DGR. BILL OF LADING - BULK (U. S. DOT): Non-regulated BILL OF LADING (CTDG): Not classified as dangerous for transport. The above description may not cover shipping in all cases, please consult 49 CFR 100-185 for specific shipping information.

15. Regulatory information

US federal regulations

All ingredients are on the TSCA inventory, or are not required to be listed on the TSCA inventory.

This material does not contain toxic chemicals (in excess of the applicable de minimis concentration) that are subject to the annual toxic chemical release reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313 (40 CFR 372).

Check local, regional or state/provincial regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Failure to report may result in substantial civil and criminal penalties.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

State regulations

Based on available information this product does not contain any components or chemicals currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65. Reformulation, use or processing of this material may affect its composition and require re-evaluation.

Canadian regulations

This material has been classified in accordance with the hazard criteria of the Hazardous Products Act and the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

All known major components of this material are listed on the Canadian Environmental Protection Act (CEPA) DSL or are exempt.

Controlled under WHMIS (Canada).

WHMIS classification

D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling

International regulatory information

There may be specific regulations at the local, regional or state/provincial level that pertain to this material.

INVENTORIES:
AUSTRALIA INVENTORY (AICS): 552-30-7
CANADA INVENTORY (DSL): 552-30-7
CHINA INVENTORY (IECS): 552-30-7
EU INVENTORY (EINECS/ELINCS): 209-008-0
JAPAN INVENTORY (ENCS): 3-1362
KOREA INVENTORY (ECL): KE-10640
PHILLIPINES INVENTORY (PICCS): 552-30-7
US INVENTORY (TSCA): 552-30-7

16. Other information

NFPA ratings

Health: 3
Flammability: 1
Instability: 1

HMIS® ratings

Health: 3*
Flammability: 1
Physical hazard: 1
* Indicates chronic health hazard

Disclaimer	NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. Adequate training and instruction should be given by you to your employees and affected personnel. Appropriate warnings and safe handling procedures should be provided by you to handlers and users. Additionally, the user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with the applicable federal, state, provincial or local hazard communication requirements. This MSDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, vendor neither assumes nor retains any responsibility for any damage or injury resulting from abnormal use, from any failure to adhere to appropriate practices, or from any hazards inherent in the nature of the material. Moreover, unless an employee or a customer accesses or receives a MSDS directly from the company, there is no assurance that a document obtained from alternate sources is the most currently available MSDS.
Further information	INHALATION SENSITIZATION HAZARD. Avoid breathing dust. Trimellitic anhydride (TMA) is an irritant and respiratory sensitizer. In susceptible individuals, i.e., those that have developed antibodies to TMA, repeated inhalation may result in an immediate onset of asthma-like symptoms (coughing, sneezing, tightness in the chest, and wheezing) within minutes of exposure.
Issue date	10-28-2011
This data sheet contains changes from the previous version in section(s):	This document has undergone significant changes and should be reviewed in its entirety.
Completed by	Flint Hills Resources, LP - Operations EH&S