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Registration No. 0105538113808

25/01/2019

QC-002/62

To whom it may concern

Subject : GC-M PTA General PTA specification

ANALYSIS ITEM	UNIT	SPECIFICATION	TEST METHOD
APPEARANCE	-	WHITE POWDER	VISUAL INSPECTION
IRON	ppm	2.00 MAX	INDUCTIVELY COUPLED PLASMA - OPTICAL EMISSION SPECTROSCOPY
4-CARBOXYLBENZALDEHYDE	ppm	25 MAX	LIQUID CHROMATOGRAPHY
WATER CONTENT	%wt	0.20 MAX	ASTM E 203-16

**GUARANTEE VALUES**

ACID VALUE	mgKOH/g	675±2	TITRATION
DMF COLOR 5% SOLUTION (APHA)	-	10 MAX	VISUAL COMPARISON
ASH CONTENT	ppm	6 MAX	RESIDUE ON IGNITION

Best regards,

(Sermsri Srichainan)

Quality Assurance and Quality Management Manager



# SAFETY DATA SHEET

Date January 22, 2019

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Purified Terephthalic Acid (PTA)

### COMPANY IDENTIFICATION

GC-M PTA CO., LTD.  
8 Prakornsongkroraj Rd., Soi G-2,  
Muang Rayong , Thailand 21150  
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**Remark: Please contact to Quality Assurance Section  
(ext. 2882 and 2884) for more information and/or suggestion  
and complaint issue**

## 2. HAZARDS IDENTIFICATION

### GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE: PHYSICAL HAZARDS

Explosives	: Not applicable.
Flammable gases	: Not applicable.
Flammable aerosols	: Not applicable.
Oxidizing gases	: Not applicable.
Gases under pressure	: Not applicable.
Flammable liquids	: Not applicable.
Flammable solids	: Classification not possible.
Self-reactive substances and mixtures	: Not applicable.
Pyrophoric liquids	: Not applicable.
Pyrophoric solids	: Not classified.
Self-heating substances and mixtures	: Classification not possible.
Substances and mixtures, which in contact with water, emit flammable gases	: Not applicable.
Oxidizing liquids	: Not applicable.
Oxidizing solids	: Not applicable.
Organic peroxides	: Not applicable.
Corrosive to metals	: Classification not possible.

### HEALTH HAZARDS

Acute toxicity: oral	: Category 4
Acute toxicity: skin	: Classification not possible.
Acute toxicity: inhalation (gas)	: Not applicable.

Acute toxicity: inhalation (vapor): Classification not possible.  
 Acute toxicity: inhalation (dust) : Classification not possible.  
 Acute toxicity: inhalation (mist) : Classification not possible.  
 Skin corrosion/irritation : Category 3  
 Serious eye damage/eye irritation : Category 2B  
 Respiratory sensitization : Classification not possible.  
 Skin sensitization : Not classified.  
 Germ cell mutagenicity : Not classified.  
 Carcinogenicity : Classification not possible.  
 Toxic to reproduction : Category 2  
 Specific target organ toxicity (single exposure) : Category 3 (respiratory irritation)  
 Specific target organ toxicity (repeated exposure) : Category 1 (respiratory system)  
 Category 2 (bladder)  
 Aspiration hazard : Classification not possible.

ENVIRONMENTAL HAZARDS

Hazardous to the aquatic environment (acute): Not classified  
 Hazardous to the aquatic environment (chronic): Not classified

GHS LABEL ELEMENTS :  
 PICTOGRAMS :



SIGNAL WORD: DANGER

HAZARD STATEMENTS :  
 Harmful if swallowed.  
 Causes mild skin irritation.  
 Causes eye irritation.

Suspected of damaging fertility or the unborn child. May cause respiratory irritation. Causes damage to respiratory system through prolonged or repeated exposure. May cause damage to bladder through prolonged or repeated exposure.

PRECAUTIONARY

STATEMENTS: Prevention:

Use only outdoors or in a well-ventilated area and DO NOT breathe dust/fume. Use personal protective equipment; protective helmet/eye protection/face protection/respirator/protective gloves/protective clothing/protective boots as required. Wash hands, face, and other necessary parts thoroughly, and gargle after handling.

Response:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.  
IF ON SKIN: Wash skin with soap and water/shower. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get immediate medical advice/attention.  
IF exposed or concerned, or if you feel unwell: Get medical advice/attention.

Storage:

Keep container tightly closed. Store cool/well ventilated area. Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations. Do not reuse the container for any other purpose. Dispose of in accordance with applicable laws and regulations.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	%	CAS No.
Terephthalic acid	>99	100-21-0

SYNONYMS : 1,4-Benzenedicarboxylic acid  
p-Benzenedicarboxylic acid

**4. FIRST AID MEASURES****INHALATION :**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep the affected person warm and at rest. Get medical attention immediately.

**EYE CONTACT :**

Immediately flush eyes with plenty of water for several minutes and get medical attention. Part eyelids with fingers to assure complete flushing.

Check for and remove contact lenses if easily possible.

**SKIN CONTACT :**

Immediately remove contaminated clothing and shoes. Flush skin with large amounts of water, clean off with soap and water. Get medical attention if symptoms develop.

**INGESTION :**

Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Keep the affected person warm and at rest. Get medical attention immediately.

**MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED :** Dust may cause irritation to eye and respiratory tract.

**SPECIAL PROTECTIVE ACTIONS FOR FIRST-AIDERS :**

Wear appropriate personal protective equipment such as respirator, goggles, protective gloves, etc.

**NOTE TO PHYSICIAN :**

Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA :** water jet, water fog, dry chemical, CO<sub>2</sub>, alcohol foam

UNSUITABLE EXTINGUISHING MEDIA: Not specified

FIRE FIGHTING INSTRUCTIONS

Keep unnecessary and unprotected personnel away. Shut off supply if possible. Remove containers to safe place if possible. Keep surrounding areas cool by spraying water. Fight fire from an upwind position.

FIRE FIGHTING EQUIPMENT:

Respiratory and eye protection required for fire-fighting personnel. Full protective equipment and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires.

HAZARDOUS COMBUSTION PRODUCTS: Carbon oxides.

**6. ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in Section 8. Keep upwind, evacuate downwind.

ENVIRONMENTAL PRECAUTIONS:

Do not let this chemical enter the environment. Do not flush into sewer, river or any body of water.

CONTAINMENT/CLEAN-UP METHODS:

Vacuum or sweep up material and place in a disposal container. Use non-sparking tools and equipment.

**7. HANDLING AND STORAGE**

HANDLING

Technical Measures:

Use only in well-ventilated area. Keep away from heat, sparks, and flame. Use explosion-proof electrical equipment. Take precautions against build-up of electrostatic charges.

Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wear appropriate personal protective equipment. Provide hand and eye wash station near work area. Wash thoroughly after handling.

Ventilation:

Use only under local exhaust or general ventilation.

Safe Handling Advice:

To prevent dust explosion, ground and bond containers and equipment; keep the oxygen concentration below 12 % in silos and pneumatic transportation pipes. Take precautions against build-up of electrostatic charges. Avoid dust formation. Do not breathe dust.

STORAGE

Storage Conditions:

Keep the oxygen concentration below 12 vol% if stored in silos. Wear airline mask when entering a silo. Protect from direct sunlight. Store in dark and well-ventilated area. Keep away from heat, flame, and all sources of ignition. Ground and bond containers and equipment to prevent build-up of electrostatic charges. Keep container tightly closed. Keep away from strong oxidizers. Store in a segregated and approved area.

Packaging Material:

Use UN approved containers or containers approved by local and national authorities. Paper, flexible freight container

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

EXPOSURE LIMITS : ACGIH-

TLV: 10 mg/m<sup>3</sup>(TWA) OSHA-

PEL :Not established.

ENGINEERING CONTROLS :

Provide general ventilation. Use closed system or local exhaust ventilation. Provide safety shower and eye wash station near work area.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection : dust respirator, breathing apparatus.

Hand protection : Protective gloves.

Eye protection : Safety glasses, goggles.

Skin and body protection : Safety helmet, antistatic protective clothing, safety shoes.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE : Solid.  
APPEARANCE : White crystal or powder.  
ODOR : Not available.  
pH : Not applicable.  
BOILING POINT : Not available.  
SUBLIMATION POINT : 402 °C <sup>2)</sup>  
FLASH POINT : 260 °C <sup>2)</sup>  
AUTOIGNITION TEMPERATURE :  
496 °C <sup>1)</sup>  
FLAMMABLE LIMITS : Not available.  
VAPOR PRESSURE : <1 Pa (at 20 °C) <sup>2)</sup>  
VAPOR DENSITY : Not available.  
SPECIFIC GRAVITY : 1.51 <sup>2)</sup>  
SOLUBILITY : 0.28 g/100 mL (H<sub>2</sub>O at 20 °C)  
Log Pow : 1.96 <sup>2)</sup>

**10. STABILITY AND REACTIVITY**

STABILITY : Stable for normal storage and handling.  
Powdered material may present a dust explosion hazard.<sup>2)</sup>  
HAZARDOUS REACTIONS : Reacts violently with strong oxidizers.<sup>2)</sup>  
MATERIALS TO AVOID : Strong oxidizers  
CONDITIONS TO AVOID : Heat, air, sunlight, moisture.  
HAZARDOUS DECOMPOSITION PRODUCTS : Carbon oxides.

**11. TOXICOLOGICAL INFORMATION**

ACUTE TOXICITY :  
Oral rat LD<sub>50</sub> 1960 mg/kg [Category 4]<sup>1)</sup>  
Skin Not available. [Classification not possible]<sup>1)</sup>  
Inhalation Not available. [Classification not possible]<sup>1)</sup>  
SKIN CORROSION/IRRITATION:  
Human, rabbit mild. [Category 3]<sup>1)</sup>  
SERIOUS EYE DAMAGE/EYE IRRITATION:  
Rabbit mild. [Category 2B] <sup>1)</sup>  
RESPIRATORY SENSITIZATION:  
Not available. [Classification not possible]<sup>1)</sup>  
SKIN SENSITIZATION:  
Guinea pig skin sensitization tests: Negative.



The effects on human health: "No sensitizing effects observed in humans." [Not classified]<sup>1)</sup>

**GERM CELL MUTAGENICITY:**

Somatic cell mutagenicity tests in vivo:  
Negative. [Not classified]<sup>1)</sup>

**CARCINOGENICITY :**

Not available. [Classification not possible]<sup>1)</sup>

**REPRODUCTIVE TOXICITY :**

Based on the evidence of decreased weight gain and reduced viability in pups at dosing levels toxic to parental animals or in the absence of data on parental toxicity.  
[Category 2]<sup>1)</sup>

**SPECIFIC TARGET ORGAN**

**TOXICITY: Single Exposure :**

Based on the human evidence including "mild irritation of the respiratory organs."  
[Category 3] (Respiratory irritation.)<sup>1)</sup>

**Repeated Exposure:**

Based on the evidence from animal studies including "degeneration of the bronchial mucosal epithelium," "bladder calculus."  
[Category 1] (Respiratory system)  
[Category 2] (Bladder)<sup>1)</sup>

**ASPIRATION HAZARD:** Not available.  
[Classification not possible]

**12. ECOLOGICAL INFORMATION**

**HAZARDOUS TO THE AQUATIC ENVIRONMENT (ACUTE):**  
[Not classified]<sup>1)</sup>

**HAZARDOUS TO THE AQUATIC ENVIRONMENT (CHRONIC):**  
[Not classified]<sup>1)</sup>

**ECOTOXICITY :** Medaka LC<sub>50</sub> >100 mg/l/96 hr

**PERSISTENCE/DEGRADABILITY:** Biodegradable. (BOD = 74.7%).

**BIOACCUMULATION POTENTIAL:** Low (based on log kow = 2).

**13. DISPOSAL CONSIDERATIONS**

## WASTE FROM RESIDUES:

Whatever cannot be saved for recovery may be burned in an approved incinerator or disposed in approved waste facility. Ensure compliance with local, state, federal and national regulations.

## CONTAMINATED PACKAGING:

Empty the container completely before disposal.

**14. TRANSPORT INFORMATION**

UN class : Not regulated.

UN number : None.

**15. REGULATORY INFORMATION**

## INVENTORY STATUS

X : All components of this product comply with the inventory requirements administered by the governing country(s).

United States : TSCA Inventory [X]  
European Union : EINECS [X] ELINCS[] NLP[]  
Australia : AICS [X]  
Canada : DSL [X] NDSL []  
China : IECSC [X]  
Korea : KECI [X]  
New Zealand : NZIoC [X]  
Philippine : PICCS [X]

**16. OTHER INFORMATION**

## References:

- 1) GHS Classifications of Regulated Chemicals (National Institute of Technology and Evaluation, Japan, 2007)  
[http://www.safe.nite.go.jp/english/ghs\\_index.html](http://www.safe.nite.go.jp/english/ghs_index.html)
- 2) International Chemical Safety Cards (ICSC, 2007)