Effective: may/15/2009

Revised: July/1/2012

Material Safety Data Sheet

Kopalon Tube "PTNA" PU403A" "PTU507A" type

This MSDS is written with meticulous care using our knowledge. However, the contents written inside is valid just in normal usage, and don't guarantee the safety under special condition, all contents from quoted literature and the safety of every living body.

When you use the above product, please follow the related law, refer to this MSDS sheet, examine the handling manual written by us and use in safety.

This MSDS is subject to revision when as new information becomes available.

1. Product and company identification

Manufacturer/supplier: Gunze Kobunshi Corporation

Address: 3-17-1 Sakuradai Isehara, Kanagawa 2591132

Section in charge: Quality Assurance Sect.

TEL: +81-463-94-3715

FAX: +81-463-94-4042

Date of issue: January/21/2010

Reference number: K-0011

Product name: Kopalon Tube "PTNA" "PTU403A" "PTU507A" type

2. Material specified

Classification of single or mixed product: Mixed product

(1)Chemical name: Polyethylene terephthalate

CAS#:25038-59-9

Content: 95~99wt%

Number of United Nations: It does not come under dangerous materials of UN.

(2)Chemical name: Colloidal silica CAS#:7631-86-9

Content: 1~5wt%

Number of United Nations: N.D.

3. Physical data

Appearance: Solid (Clear and no color film).

Specific gravity: 1.35 gms/. cub.cm.

Melting point: Chemical (1) 250 Degrees C.

Boiling point: Unclear.

Solubility in water: Insoluble.

Odor: None.

4. Fire and explosion hazard data

Flash point: Over 390 Degrees C.

Extinguishing media: Water, Foam, CO2 gas, Dry chemical.

Fire and explosion hazards:

Dense black smoke emitted when burned without sufficient oxygen.

Fire fighting equipment: Wear positive pressure self-contained breathing equipment apparatus

in any closed space.

5. Reactivity data

Stability: (Condition to avoid) Temperature over 300 degrees C release

combustible gases.

Incompatibility: (Specific materials to avoid) None.

Hazardous decomposition products:

Smoke and noxious gas (Carbon monoxide and hydrocarbons).

Hazardous polymerization:

Will not occur.

6. Environmental and disposal information

Chemical separation: Not applicable.

Action to take for spills/leaks:

Sweep up and discard.

Bury in landfill or burn in adequate incinerator according to all Disposal method:

applicable National and Local regulation.

7. Health hazard data

Eye: Solid or dusts may cause irritation or corneal injury due to mechanical

action.

Skin contact: Concerned about Mechanical injury.

Ingestion: May be an obstruction if swallowed. Single dose oral toxicity is

believed to be considered physiologically inert.

Inhalation: Vapors are unlikely due to physical properties. Dust may cause

irritation to upper respiratory tract.

8. First Aid

When it goes into your eyes:

Don't rub your eyes, and receive a medical treatment from oculist at

once after cleaning the eyes with pure water at least 15minutes.

When it sticks to your skin:

Wash it off with soap and water. If the melting one sticks to your skin, pour a lot of water on your skin and cool it down. Don't peel the welded polymer or welded cloth off forcefully. In this case, receive a

medical treatment as soon as possible.

When inhaling: If you inhale a lot of gas emitted from melting process at high

temperature,

move to the place surrounded by fresh air, keep quiet, and see your

doctor.

8. First Aid

When drinking: Wash in your mouth well, and throw it up as soon as possible.

In case of drinking a lot, see your doctor.

When injured: Receive a medical treatment as soon as possible.

9. Handling and storage precautions

General information of handling:

(1) Make the storage place in order and clean up the film on the floor.

(2) Don't use the fire recklessly but there are not danger of burning

and explosion.

(3) Avoid contact with melted material.

Exposure guidelines: None established.

Storage: Store in the dark and cool place avoid direct sunshine, fire, heat and

wet.

Ventilation: Good general ventilation sufficient for most conditions. **Respiratory protection:** In dusty atmospheres, use an approved dust respirator.

Skin protection: No precautions other than clean body-covering clothing should be

needed.

Eye protection: Use safety glasses.

10. Additional information

Special precautions to be taken in handling storage; reasonable care and caution in the handling of this product. Avoid breathing dust if

generated.