

**BEST Inc.**

**MSDS 00000120122**

**MATERIAL SAFETY DATA SHEET EZReball™**

**SECTION I - NAME & PRODUCT**

ADDRESS: BEST Inc CONTACT: info@solder.net

3603 Edison Place

Rolling Meadows IL 60008

TRADE NAME, COMMON NAME OR SPECIFICATION: EZReball™ soldering preforms (can be loaded with a variety of solder ball alloys). The weight percent of the metals depends on the number of solder balls in the preform and type of solder ball alloy used.

EMERGENCY TELEPHONE: 847-797-9250

APPROVED BY: Bob Wettermann August 6, 2013

**SECTION II - COMPOSITION**

Inert Polyimide Film

As nuisance dust-polyimide polymers

As residuals in film-dimethyl acetamide 127-19-5 < 1

<b>Hazardous Ingredients</b>	Wt %	CAS Registry #	OSHA PEL mg/m3	TLV-TWA mg.m3	TLV-Steel mg/m3	Risk Phrsaes
Lead	0-90	7439-92-1	0.05	0.05	.15	R20/21/33
Tin	10-96.5	7440-31-5	2	2	2	
Silver	0-4	7440-22-4	0.01	.01	NE	R33
Copper	0-1	7440-22-4	.1 (fume)	.1 (fume)	NE	
<b>Non-hazardous ingredients</b>						
Inert Polyimide film	Balance	N/A	N/A	N/A	N/A	

Fibrous Glass Cloth

Continuous 65997-17-3 10

Acrylic Adhesive

108-88-3 <1 100 150 50 150

\*as nuisance Dust 15

\*\*Reportable under EPCRA 313 SARA Title III of USEPA If 1% or more

### SECTION III - PHYSICAL AND CHEMICAL DATA

#### Inert Polyimide Film

Melting Point: None

Form: Transparent film

% Volatiles: 1% max

Color: Dark Amber to black

Solubility in Water: Insoluble

Specific Gravity: >1.4

#### BGA Solder Balls

Boiling point Deg F. (760mm Hg) NA

Solubility in Water Insoluble

Vapor Pressure NA

Evaporation rate NA

Appearance and Odor Silver Gray metal, Odorless, Various shapes and size

% Volatile by weight NA

#### Fibrous Glass Cloth

Melting Point None

Solubility in Water Unknown

% Volatile Unknown

Appearance Off-weight colored tolls of tape

### STABILITY AND REACTIVITY

#### Inert Polyimide Film

Chemical Stability: Stable at normal temperatures and storage conditions.

Incompatibility with other materials: Non foreseeable

Decomposition: At temperatures above 400 deg C, the major off gases are carbon monoxide and carbon dioxide

#### BGA Solder Balls

Stability Stable

Incompatibility (Materials to avoid) Oxidizing materials, acids, hydrogen peroxide

Hazardous Decomposition Products Lead oxide fume and/or lead particular may be evolved

Hazardous Polymerization Will not occur  
Polymerization: Will not occur.

Decomposition: Carbon monoxide, carbon dioxide, nitrogen oxides

#### Fibrous Glass Cloth

Stability Expected to be stable at normal temperatures  
and storage conditions

Incompatibilities Strong acids or bases.

In the event of fire, oxides of carbon and nitrogen

Hazardous Polymerization Not expected

### **SECTION IV - FIRE & EXPLOSION HAZARD DATA**

FLASH POINT: N/A    METHOD USED:    FLAMMABLE LIMITS: N/A

EXTINGUISHING MEDIA: Not flammable, use a dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use sufficient local exhaust to reduce the dust. Use self-contained breathing apparatus, NIOSH approved, to avoid dust or fumes generated during fire fighting efforts.

AUTO-IGNITION TEMPERATURE: Not known

### **SECTION V - HEALTH HAZARD DATA**

#### **FIRST AID MEASURES**

##### Inert Polyimide Film

Inhalation: Not a probable route of exposure from the film.

For the film we recommend treating as a nuisance particulate

Before Using polyimide films, read the bulletin on safe handling and use.

Inhalation: Not a probably route of exposure for film

Exposure to alumina or carbon black encapsulated in the polymer is not likely.  
a nuisance particulate

Skin Contact: No irritation is expected from handling film. Less than 1ppm dimethyl acetamide was extracted from film by distilled water at 40 deg C for 4 hours.

Eye contact: Not a probable route of exposure for film

#### **Carcinogenicity Information**

The following components are listed by IARC, NTP, OSHA, or ACGIH as carcinogens:

Material IARC NTP OSHA ACGIH

Carbon Black 2B

Dimethyl Acetamide (Residual in film)

All reportable ingredients are listed in the TSCA Chemical Substance Inventory

For the polymer from which the film is made, DuPont recommends treating polymer dust as

Ingestion: Not a probable route of exposure for film

#### BGA Solder Balls

Inhalation: Not a probable route of exposure for films

Skin Contact: Wash with soap and water after handling. If skin irritation develops, consult a physician.

Eye contact: Flush Eyes with water. Consult a physician if irritation persists

Ingestion: Not a probably route of exposure for films or compressed air cleaning systems. Scrap or waste solder should be recycled or stored in sealed dry containers for later disposal. Must be in accordance with federal, state and local regulations.

To maintain exposure below TLV's. bismuth, antimony and indium do not product significant quantities of fume below 900F

#### Fibrous Glass Cloth

Spill / leak procedure: Due to the physical nature of this material, not expected.

Should material be released, pick up to prevent slipping hazard.

Protective Equipment : Wear respiratory protection in the event of fire.

Waste Disposal: Dispose in accordance with local, state and federal regulations

Ventilation: Local ventilation if necessary to maintain airborne levels below established limits

Eye Protection: May be necessary if conditions cause dust

Skin protection: Clothing that covers arms (Long sleeves), Legs (Long pants), and gloves may be necessary

Respiratory Protection: Not normally necessary unless nuisance airborne glass exceeds PAL, then provide in accordance with OSHA 1919.134

Avoid inhalation of solder fume or dust, Vacuuming is recommended. Do not use dry sweeping

### **SECTION VI - SPILL, LEAK & DISPOSAL**

Pick up in order to prevent slippage

### **SECTION VII - SPECIAL PROTECTION INFORMATION**

Respiratory Protection: Nor normally needed. Seek professional advice prior to respirator selection and use.

Engineering Control: Local exhaust ventilation is recommended to control any air contaminants. Control concentration of all components so that TLVs are not exceeded.

Protect clothing/Equipment: Use eyewear to prevent contact as appropriate to the given operation. If there is danger of molten material contacting the skin or eyes, use eye/protection and heat-resistant gloves.

Hygienic Work Practices: Do not eat, drink or smoke in the immediate work area. Wash hands before eating, drinking or smoking.

### **SECTION VIII - SPECIAL PRECAUTIONS & COMMENTS**

## **FIRE FIGHTING INFORMATION**

### Inert Polyimide Film

#### Flammable Properties

Not a fire or explosion hazard.

The flammability characteristic of Polyimide Film is reported as "self-extinguishing"

The film, chars but does not burn in air. It will burn in atmosphere of 100% oxygen.

The processing of polyimide films can cause the generation of static charge.

Precautions for static charges should also be taken when removing plastic films used as protective packaging".

#### Extinguishable Media

#### Fire Fighting Instructions

None required

### BGA Solder Balls

Estimated Flammable Limits (% by volume in air)

LEL NA

UEL NA

Flash point (Deg F) NA

Extinguishing Media NA

Special Fire-fighting procedures:

Use NIOSH approved self-contained breathing apparatus and full protective clothing if involved in a fire.

Unusual Fire and explosion Hazard: Moderate in the form of dust when exposed to heat or flame. When heated to high temperatures, lead emits highly toxic fumes.

### Fibrous Glass Cloth

Estimated Flammable Limits (% by volume in air)

LEL NA

UEL NA

Flash point (Deg F) NA

Extinguishing Media NA

Special Fire-fighting procedures:

Use NIOSH approved self-contained breathing apparatus and full protective clothing if involved in a fire.

Unusual Fire and explosion Hazard: Moderate in the form of dust when exposed to heat or flame. When heated to high temperatures, lead emits highly toxic fumes.

## **TRANSPORTATION INFORMATION**

Dept of Transportation: Hazardous Waste Solid # NA3077, Class 9, Misc Hazardous Waste

## **USA REGULATORY INFORMATION**

SARA Status: This chemical is subject to the reporting requirements of Sxn 313,-40CFR 372.65