



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: "SUNFORT™"(Dry film photoresist)  
Product Description: Photopolymer resist for manufacturing printed wiring boards  
MSDS number: DF-0011  
MANUFACTURER:  
Company Name: ASAHI KASEI EMD CORPORATION  
Address: Electronics Interconnecting Materials Technology & Development  
Department  
2-1, Samejima, Fuji-city, Shizuoka-Pref.,416-8501 Japan  
Electronics Interconnecting Materials Marketing Department  
Nishi-Shinjyuku 1-23-7, Shinjyuku-ku, Tokyo 160-0023, Japan  
EMERGENCY TELEPHONE NUMBER:  
NONTRANSPORTATION  
<AGENT> Telephone  
ASAHI KASEI EMD CORPORATION  
Telephone: +81-545-62-2671  
8:30am-6pm Japan Time M-F

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

Component	Concentration(wt%)	CAS.NO
Polyester Film		25038-59-9
Polyethylene Film		9002-88-4
Photresist layer		
Acrylic/methacrylic monomers	30 - 50	Trade secret
Binder (Methyl methacrylate/ butyl acrylate/methacrylic acid copolymer)	40 - 60	Trade secret
Photoinitiators	1 - 10	Trade secret
Others		1 - 10 Trade secret

### 3. HAZARDS IDENTIFICATION

#### Emergency overview

Color: Light green  
Physical form: Thin film  
Odor: Weak odor  
Major health hazards: May cause respiratory and digestive tract irritation.  
May cause slight eye and skin irritation.  
Avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

#### Potential health effects

Inhalation: May cause respiratory tract irritation.  
Skin contact: May cause slight irritation.



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Eyes contact	May cause slight irritation.
Ingestion	May cause irritation of the digestive tract.

### 4. FIRST AID MEASURES

#### Special instructions

Upon absorption or influence/effect of larger quantities or in case of intoxication symptoms, a physician has to be consulted immediately.

#### First aid procedure

Inhalation	Remove to uncontaminated area. Give artificial respiration if not breathing. Call a physician.
Skin contact	Wash skin with soap and running water for at least 15 minutes while removing contaminated clothing and shoes.
Eyes contact	Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Ingestion	If conscious, drink water and vomit. Call a physician.

Information to a physician or other trained persons giving first aid

Call first aidants, bring unconscious person in stable side position and protect against cold, remove foreign matter from the mouth.

In case of respiratory arrest, give artificial respiration.

### 5. FIRE FIGHTING MEASURES

#### Flammable properties

Flash point	Over 190degC
Flammable limits in air	
LEL	Not applicable
UEL	Not applicable
Autoignition	Not applicable

#### Extinguishing media

Water spray jet, carbon dioxide, foam, dry chemical powder

#### Firefighting instructions

Keep personnel removed from and upwind of fire. Wear full fire-fighting turn-out gear and respiratory protection (self-contained breathing apparatus).

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precaution

Wear protective glasses and protective gloves.

#### Environmental Precaution

Incineration in accordance with U.S. national and local environmental control regulations.

#### Procedures for clean up

Clean up with solvents. (Water, alcohol, etc)



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### 7. HANDLING AND STORAGE

#### Handling

Use with adequate ventilation at lamination.

SUNFORT must be taken out from a black shield film under yellow safelights.

#### Storage

Store in sealed container and protect from direct sunlight.

(below 20°C, below 60% at humidity level)

Keep separated from incompatible substance.

### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering controls            Use sufficient exhaust on laminators.

#### Personal protective equipment

Eye protection                    Use safety glasses.

Skin protection                   Use protective gloves.

Respiratory protection        When decomposition gases are not adequately controlled, use an air-purifying respirator with an organic vapor cartridge or canister in case of use over 200°C.

Not required in normal use.

Self-contained breathing apparatus for fire fighting and mist or spray exposures, if necessary.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance                    Light green thin film photopolymerizable resist is sandwiched in between carrier film (polyester film) and cover film (polyethylene film).

Odour                              Weak odour

PH                                    Not applicable

Melting point                  Over 70degC (Softening point)

Specific gravity                1.15

Solubility in water              Negligible

Solubility in solvent           Soluble in ketone, alcohol

### 10. STABILITY AND REACTIVITY

Condition to avoid              Heat, strong light and radiation source.

Incompatibility with other materials    Peroxides, oxidizing agents, strong lyes and acids.

#### Hazardous decomposition products

Thermal decomposition products       Oxides of carbon, Various organic fragments.

Hazardous polymerization                Occurs by UV-light or heat.



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### 11. TOXICOLOGICAL INFORMATION

Acute inhalation effects	May cause irritation to respiratory membrane.
Eye effects	May cause slight irritation.
Skin effects	May cause slight irritation.
Acute oral effects	LD50>2000mg/kg (from the similar product, rat ,oral)
Subchronic effects	Not available
Chronic effects/carcinogenicity	Not available
Mutagenicity	Not available

### 12. ECOLOGICAL INFORMATION

Not available

### 13. DISPOSAL CONSIDERATIONS

Comply with U.S., national and local regulations.

Incineration in accordance with U.S., national and local environmental control regulations.

Do not dump this material into sewers, on the ground or into any body of water.

### 14. TRANSPORT INFORMATION

U.S. Department of Transportation : No classification assigned.

### 15. REGULATORY INFORMATION

U.S. Federal Regulations

This product complies with TSCA inventory reporting requirements.

### 16. OTHER INFORMATION

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