SAFETY DATA SHEET

Date Prepared	:	01/29/2008
Date Issued	:	03/09/2023

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name	:	$\mathrm{DP3342MS}$ (Anisotropic conductive film)		
Manufacturer	:	Dexerials Corporation		
Address	:	1724 Shimotsuboyama, Shimotsuke-shi,		
		Tochigi 323-0194, Japan		
		Phone: +81-285-39-7950 Fax: +81-285-47-3242		

SECTION 2. HAZARDS SUMMARIZE

Classification of hazardous

Not applicable to GHS classification due to Article

Emergency overview

In case heat adhesion of this product is carried out, there is a possibility that the remains solvent contained in a product may serve as fumes and gasses.

Don't inhale the fume and gases by using suitable ventilation system.

Direct contact may cause irritation to eyes and skin, and skin sensitization because the product contains denatured epoxy resin.

Nickel powder contained in a product is possibly carcinogenic to humans.

- Potential health effects
 - Skin/Eyes contact

Direct contact to adhesive layer may cause irritation and skin sensitization. Ingestion/Inhalation

Fumes and gasses with a possibility of generating at the time of heat adhesion stimulate the skin, an eye, and a throat.

Chronic effects/Carcinogenicity

None has known as product.

It is known denatured epoxy resin is positive at the Mutagenicity test. Nickel particles, which are fixed in adhesive layer, do not make any harm to human body. (IARC has reported that nickel powder is possibly carcinogenic to humans.)

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components (% Chemical component by WT.)

Substance	CAS#	Concentration
Denatured (Meth) acrylate	Trade Secret	$20{\sim}30\%$
Denatured epoxy resin	Trade Secret	$40{\sim}50\%$
Phenoxy resin	Trade Secret	$1 \sim 10\%$
Elastomer	Trade Secret	$10\sim 20\%$
Hardener	Trade Secret	$1 \sim 10\%$
Au/Ni plated plastic particles	Trade Secret	$1 \sim 10\%$
Others	Trade Secret	$1 \sim 10\%$

SECTION 4. FIRST AID MEASURES

Inhalation

When fumes and gasses are inhaled, it moves to the place of fresh air and strives for quiet. You should consult a doctor depending on your condition.

Eye contact

In case of contact with eyes, rinse immediately with plenty of water.

If irritation persists, seek medical attention.

Skin contact

Flush with large amounts of water. Use soap if available.

If irritation persists, seek medical attention.

Ingestion

As supplied, product is a solid material and would not in practice be ingested.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguish media

Water spray, Carbon dioxide, Dry chemical powder or Foam <u>Prohibited Extinguishing media</u>

No information

Firefighting instruction

Wear positive pressure, self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Evacuate area and fight fire from a safe distance.

SECTION 6. ACCIDENTAL RELEASE MEASURES

As supplied, product is a solid material and would not in practice be released

SECTION 7. HANDLING AND STORAGE

Handling

Don't contact directly to the adhesive face without wearing protective gloves.

When product is heated, handle it in a well-ventilated area not to inhale the vapor. <u>Storage</u>

Store in a cool (below 5 $^{\circ}$ C), dry location away from strong acids and strong oxidizing agents.

SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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Engineering controls
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Suitable ventilating equipment should be installed at working area where product is heated and pressed.

Personal protection

Protective gloves: Wear appropriate gloves to prevent direct contact, because of irritation.

Protective glasses: Suitable safety glasses is recommended not to injure eyes by edges of the sheet.

Exposure guideline

No dat	a as produc	t			
As Ni	ACGIH	TLV-TWA	1.5 mg/m 3	(Inhalable	Fraction)
	WEL Long	-term value	0.5 mg/m 3		

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Solid (Adhesive tape)
Color	:	Gray
Odor	:	Characteristic
Flash point	:	No data
Auto ignition temperature	:	No data
Boiling point	:	Not applicable
Vapor pressure	:	Not applicable
Melting point	:	Not determined
Solubility in water	:	Insoluble in water
Specific gravity	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

<u>Stability</u> Stable under normal handling conditions <u>Incompatibility</u> Strong acids and strong oxidizing agents <u>Hazardous decomposition products</u> Carbon monoxide, Carbon dioxide, Nitrogen oxides <u>Hazardous polymerization</u> It will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

As pro	duct			
A	Acute effects			
	No informatio	on as product		
<u>(</u>	Chronic effects	<u> </u>		
	No informatio	on as product		
T	<u>'oxicity data</u>			
	No data as pr	oduct		
As epo:	xy resins			
A	<u>Acute effects</u>			
	Irritant, Ski	n sensitization	ı	
<u>(</u>	<u>Chronic effects</u>	<u>i</u>		
	Unknown			
<u>T</u>	<u>'arget organ</u>			
	Unknown			
<u>Toxicity data</u>				
ORL -RAT $LD_{50} > 2000 mg/Kg$				
SKN-RBT LD ₅₀ > 2000 mg/Kg				
As Nickel				
Carcinogenicity information				
	IARC	Japan	ACGHI	
	$2\mathrm{B}$	$2\mathrm{B}$	A5	
A	<u>Acute effects</u>			
	Unknown			
<u>Chronic effects</u>				
Unknown				
<u>Toxicity data</u>				
No data				

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological information Unknown Other harmful information Unknown

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

SECTION 14. TRANSPORT INFORMATION

UN NO.	:	Not listed
International classification	:	Not relevant

SECTION 15. REGULATORY INFORMATION

Export control law in Japan: Under control item of Catch-all regulation.

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

SECTION 16. OTHER INFORMATION

Reference

SDS of each component issued by material makers

The information herein is the best of our knowledge and is only related to this specific product. No warranty, either expressed or implied, is made with respect to such information. The recommended handling procedures are believed to be generally applicable. However, it is user's responsibility to review these recommendations in the specific content of the intended use. We reserve the right to revise this SDS as new information become available. It is recommended to ask for the latest version to our sales division.

End of SDS