

SAFETY DATA SHEET

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name : FLEXFINER-30SA

Other means of identification

SDS Number : MS-7170401-US00

Synonyms : None

Recommended use of the chemical and restrictions on use

Recommended Use : Printed circuit board applications

Uses advised against : No information available

Supplier's details

Manufacturer Name : TAIYO INK MFG. CO., Ltd.

Manufacturer Address : 900 Hirasawa, Ranzan-machi, Hiki-gun, Saitama, 355-0215 Japan
TEL: 81-493-61-2733

Emergency telephone number : 81-493-61-2733

2. HAZARDS IDENTIFICATION


Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Serious eye damage / irritation	Category 2
Skin sensitization	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word	Warning
Hazard Statements	
· May cause an allergic skin reaction	
· Causes serious eye irritation	
	

Precautionary Statements**Prevention**

- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Wash hands/eyes thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice

- IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.

Fire

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Storage

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Disposal

- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Toxic to aquatic life with long lasting effects

73.1% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
ALUMINUM HYDROXIDE (AL(OH) ₃)	21645-51-2	5 - 10	*
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane	25068-38-6	3 - 5	*
Poly(oxy-1,2-ethanediyl), α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-	41637-38-1	3 - 5	*
2-Oxepanone, homopolymer, ester with 2,2'-oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-ropanediol], 2-propenoate	89800-10-2	3 - 5	*
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL-	128-37-0	0.1 - 1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice	: If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye Contact	: Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact	: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician if necessary.
Inhalation	: Move to fresh air. If symptoms persist, call a physician. If breathing is difficult, give oxygen.
Ingestion	: Rinse mouth. Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.
Protection of First-aiders	: Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects: : No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician: : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO₂). Dry powder. Dry chemical.

Unsuitable Extinguishing Media: No information available.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Explosion Data

Sensitivity to Mechanical Impact : None

Sensitivity to Static Discharge : None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions : Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove all sources of ignition.

Environmental Precautions

Environmental Precautions : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Avoid release to the environment. Collect spillage. Dispose of contents/container to an approved waste disposal plant. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

- Methods for Containment** : Prevent further leakage or spillage if safe to do so.
- Methods for Cleaning Up** : Dam up. Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

- Handling** : Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not take internally.

Conditions for safe storage, including any incompatibilities

- Storage** : Keep in properly labeled containers. Keep away from heat and sources of ignition. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place.
- Incompatible Products** : Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name (CAS No.)	ACGIH TLV	OSHA PEL	NIOSH IDLH
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL- 128-37-0	TWA(8h): 2 mg/m ³	TWA(8h): 10 mg/m ³	
ALUMINUM HYDROXIDE (AL(OH)3) 21645-51-2	TWA(8h): 1 mg/m ³ (as Al)		

Immediately Dangerous to Life or Health. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: <http://www.cdc.gov/niosh/npg/npgdcas.html>

Appropriate engineering controls

- Engineering Measures** : Showers, Eyewash stations, Ventilation systems.

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** : Safety glasses with side-shields.
- Skin and Body Protection** : Lightweight protective clothing. Protective gloves.
- Respiratory Protection** : If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.
- Hygiene Measures** : When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Film	Appearance	Amber
Odor	Mild	Odor Threshold	No information available

Property	Values	Remarks/ - Method
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	No data available	None known
Flash Point	No data available	Gelation
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Auto ignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
Flammable Properties	Not Flammable	
Explosive Properties	No data available	
Oxidizing Properties	No data available	

Other information

VOC Content : 0 %

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Incompatible products. Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous decomposition productsCarbon monoxide (CO). Carbon dioxide (CO₂). Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	: There is no data available for this product.
Eye Contact	: There is no data available for this product.
Skin Contact	: May cause allergic skin reaction
Ingestion	: There is no data available for this product.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	: No information available.
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Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization	: May cause an allergic skin reaction
Mutagenic Effects	: No information available.
Carcinogenicity	: No information available.

Reproductive Toxicity	: No information available.
STOT - single exposure	: No information available.
STOT - repeated exposure	: No information available.
Aspiration Hazard	: No information available.

Numerical measures of toxicity - Product

Acute Toxicity	: 73.1% of the mixture consists of ingredient(s) of unknown toxicity. <i>The following values are calculated based on chapter 3.1 of the GHS document:</i>
LD50 Oral	: 3,171 mg/kg; Acute toxicity estimate
LD50 Dermal	: 27,000 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Eco toxicity

No data available.

Persistence and Degradability	: No information available.
Bioaccumulation	: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	: Dispose of in accordance with federal, state, and local regulations
Contaminated Packaging	: Do not re-use empty containers
US EPA Waste Number	: No information available.

14. TRANSPORT INFORMATION

Note	: No information available.
DOT	: Not regulated
IATA	: Not regulated
IMDG/IMO	: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA : Does not comply
 DSL/NDSL : Does not comply

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

No information available.

Clean Water Act

No information available.

CERCLA

No information available.

U.S. State Regulations

California Proposition 65: This product does not contain Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product contains the substances under the U.S. State Right-to-Know Regulations
 "X" designates that the ingredients are listed on the state right to know list.

Chemical Name (CAS No.)	New Jersey	Massachusetts	Pennsylvania	New York
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL- :128-37-0	x	x	x	x

U.S. EPA Label Information

EPA Pesticide Registration Number: Not applicable

16. OTHER INFORMATION

NFPA	Health Hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazard -
HMIS	Health Hazard 1*	Flammability 0	Physical Hazard 0	Personal Protection X

Prepared By : TAIYO INK MFG. CO., LTD
 900 Hirasawa, Ranzan-machi, Hiki-gun
 Saitama, 355-0215 JAPAN
 +81-493-61-2731

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General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet