



Material Safety Data Sheet


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Section 1 - Product and Company Identification

Product name : SF-D20	
Other names : PR STRIPPER	
Product use : dissolve photo resist	
Supplier's name : San Fu Chemical Co., Ltd., Shan Hua Plant	
Supplier's address : 340 Hsiao Hsin Li, Shan Hua Town, Tainan Hsien, Taiwan, R.O.C.	
Supplier's phone : 06-5837608	Emergency phone : 06-5837608
FAX. : 06-5839498	

Section 2 - Hazards Identification

Classification :
<ol style="list-style-type: none">1. Metal Corrosion Category 12. Skin Corrosion/Irritation Category 13. Respiratory Sensitization Category 14. Aspiration Hazard Category 1
The Most Important Hazards and effect
Label element :
<ul style="list-style-type: none">■ Hazard symbol : Health Hazard, Corrosion, Exclamation Mark 
<ul style="list-style-type: none">■ Signal word : Danger
Hazard statement :
<ol style="list-style-type: none">1. May corrode metal2. May cause serious irritation to skin and eyes3. Toxic by inhalation, may cause the allergy, asthma, or difficulty in breathing4. Fatal if swallowed or enter the respiratory tract
Precautionary statement :
<ol style="list-style-type: none">1. Place in cool, well-ventilated area.2. Seal the containers.3. Wear appropriate protective gears (clothes, goggles/mask)4. If spill, cover with sand or soil, or take up with liquid-absorbent material (e.g. Chemizorb)
Others Hazard :

Section 3 - Composition/Information On Ingredients

Mixture :

Component or impurities contributing to the hazard	Concentration or concentration range (%)	CAS No.
NMP (1-Methyl-2-Pyrrolidinone)	50%~70%	872-50-4
MEA (Ethanol Amine)	10%~20%	141-43-5



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DMSO(Dimethyl Sulfoxide)	10%~40%	67-68-5
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Section 4 - First Aid Measures

<p>The First-aid Information :</p> <ul style="list-style-type: none">■ Inhalation :<ol style="list-style-type: none">1. Move exposed person to fresh air. Keep person warm and at rest.2. If not breathing, provide artificial respiration or oxygen by trained personnel.3. If heart has stopped beating, start cardiopulmonary resuscitation (CPR).4. If not necessary, do not move the patient.5. Call physician immediately.■ Skin Contact :<ol style="list-style-type: none">1. Avoid contact with the substance; if necessary, wear chemical impervious gloves.2. Flush skin with plenty of water for at least 20 minutes.3. Remove all the contaminated clothing, shoes, and leather products.4. Thoroughly clean contaminated clothes before reuse. Do not reuse contained shoes and leather products.5. Get medical attention immediately.■ Eye Contact :<ol style="list-style-type: none">1. Immediately flush eyes with plenty of water for at least 30 minutes, lifting lower and upper eyelids occasionally.2. Try to not contaminate unaffected area. Get medical attention immediately.■ Ingestion :<ol style="list-style-type: none">1. Wash mouth but do not induce vomiting.2. Give large quantities of water.3. Never give anything by mouth to an unconscious person.4. Call a physician immediately.
The Most Important Symptoms and Hazardous Effects : irritation to respiratory tract, skin, and eyes
Protection of First-aiders : wear adequate personal protective equipment, such as Chemical protective clothing (LEVEL C)
Notes to a Physician : --

Section 5 - Fire Fighting Measures

Extinguishing Media : water, foam, CO ₂ , dry powder
Specific Hazards when Fire-fight : Carbon monoxide, Nitrogen oxide: Flash point: 93°C (closed cup); Extinguishing Media: water, foam, CO ₂ , dry powder; Autoignition temp.: 346°C
Specific Fire-fighting Procedure : <ol style="list-style-type: none">1. Cool tanks or containers with flooding quantities of water.2. If safe to do so, turn off the source of fire.
Specific Protection of Firefighters : Wear full set protective gears; wear full-piece oxygen breathing mask.



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Section 6 - Accidental Release Measures

Personal Precautions :

1. Restrict access to area until completion of clean up.
2. Ensure clean up is conducted by trained personnel only.
3. Keep well ventilation.
4. Extinguish or turn off the source of fire
5. Notify the government environmental health and safety units.

Environmental Precautions : Keep well ventilation.

Methods for Cleaning up :

1. Avoid contact with spills.
2. Prevent from entering sewers or confined space.
3. If safe to do so, stop or reduce spills.
4. Absorb or dike spill with sand or other inert, stable, and non-flammable materials.
5. Use pump or vacuum equipment to absorb the substance, and place in closed container. Contaminated absorbents may pose the same hazards as the spilled product.
6. Small spills: absorb spill with inert materials. Seal in suitable containers for disposal. Small amounts of residue may be flushed with plenty of water.
7. Large spills: contact the fire department, emergency management agency, or the suppliers immediately.

Section 7 - Handling and Storage

Handling :

1. Use of anti-corrosion mechanical ventilation system. (include general and local exhaust ventilation)
2. Separate from other ventilation systems.
3. Air exhaust vents should be place outdoor.
4. Supply fresh air to maintain a safe work environment.

Storage :

1. Keep away from heat or any source of ignition.
2. Avoid producing vapor and mist.
3. Handling amount of usage should be kept to a minimum.
4. Consider install equipment to prevent fire and spilling.
5. Label the container, and keep the container closed while not use.
6. Store in a cool, well-ventilated area.
7. Stay away from acid or any incompatible material (oxidants)
8. Stay away from spark, sunshine, heat, or any sources of ignition.
9. Protect containers against physical damage, check regularly for spill and leak.
10. Use anti-corrosive building materials in the storage area, such as ventilation and lighting equipment.
11. Empty containers may remain hazardous residues.

Section 8 - Exposure Controls & Personal Protection

Engineering measures :

1. Use of anti-corrosion mechanical ventilation system. (include general and local exhaust ventilation)



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2. Separate from other ventilation systems.			
3. Air exhaust vents should be place outdoor.			
4. Supply fresh air to maintain a safe work environment.			
Control parameters			
TWA	STEL	Ceiling	Biological standards
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Personal protective equipment :			
Hygiene measures :			
1. Remove contaminated clothes, clean thoroughly before reuse or disposal. Must advise the danger to the laundry worker.			
2. Smoking, eating and drinking are prohibited in work area.			
3. Wash hands thoroughly after handling this substance.			
4. Maintain a clean work environment.			

Section 9 - Physical & Chemical Properties

Appearance : liquid	Odor : ammonia odor
Color : Transparent or light yellow	Melting Point: --
pH value : >13	Boiling point/boiling range : 202°C
Flammability: --	Flash point : >93°C
Decomposition temp : --	Test method : closed
Auto ignition temp : > 346°C	Explosion properties : /
Vapor pressure : --	Vapor density : >1
Density : 1.04	Solubility : dissolve in the water
log Kow : --	Evaporation Rate : --

Section 10 - Stability & Reactivity Data

Stability : stable
Possible hazardous reactions under specific conditions : /
Conditions to avoid : stable in normal condition, but will absorb moisture in the air
Materials to avoid :
1. Strong acid, hydrochloric acid, acid anhydride: violent reaction or explosive reaction
2. Strong Oxidizers: violent reaction
3. Monomers (epoxide, vinyl chloride, vinyl acetate): violent reaction
4. Strong deoxidizer (Hydrazine) : violent reaction
5. Nitrocellulose: may cause spontaneous combustion
Hazardous decomposition products : --

Section 11 - Toxicological Information

Route of exposure : inhalation, skin, ingestion, eye
Symptoms : mucous stimulation, headaches, dizziness, mental confusion, nausea, irritation to skin or eyes, tear production



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Immediate Toxicity :

1. Skin : If contact, may cause minor irritation; will be absorbed by skin.
2. Inhalation : Expose to high concentration may cause mucous stimulation, headaches, dizziness, mental confusion, nausea
3. Eye : Vapor may cause irritation. If contact with this liquid, it may cause burn, irritation, tear production, inflammation of the conjunctiva, and transient corneal opacity.
4. Ingestion :
 - LD₅₀: 3914 mg/kg (Rat, Oral)
 - LD₅₀: 8 gm/kg (Rabbit, Skin)
 - LC₅₀:

Specific effects :

1. Overtime expose to very high concentration will induce headaches, dizziness, mental confusion, and nausea.
2. Animal test shows that expose to very high concentration will cause embryo toxicity on mice.

Section 12 - Ecological Information

Ecotoxicology :

- LC₅₀(fish) : --
- EC₅₀(Aquatic Invertebrates) : --
- Bioconcentration factor (BCF) : --

Persistence and degradability :

- Half-Life (Air) : --
- Half-Life (Water surface) : --
- Half-Life (Groundwater) : --
- Half-Life (Soil) : --

Bioaccumulative potential : --

Mobility in soil : --

Other adverse effects : --

Section 13 - Disposal Considerations

Methods of disposal : Dispose of as special waste in compliance with local and national environmental laws and regulations.

Section 14 - MSDS Transport Information

UN classification number : 1760

Proper D.O.T Shipping Name : --

Hazard Class :

DOT 49 CFR: 8

IMDG: 8

ICAO/IATA: 8

Packing Group : II

Marine pollution : n/a



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Specific precautionary transport measures and conditions : --

Section 15 - Regulatory Information

Regulations : Labor Safety and Health Facilities Regulations, Toxic Chemical Substances Labeling and Safety Data Regulations, Road Traffic Safety Regulations,
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Section 16 - Other Information

Literature references	1. MSDS Data Bank from Industrial Technology Research Institute of Taiwan, R. O. C.		
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Remarks	Symbols Explanations: "--" No information is available at this time. "/" Not applicable to this substance.		
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