



Safety / Data information

En

Etching powder for PCBs

Valid from:	2009-03-01	
Replaces version no:		
Printed:	2009-03-01	
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Substance: Etching powder for PCBs
Art. no. : 110170 - 110174 included in 110199
Producer: Scankemi elektronik
Hedåsvägen 1
S-187 36 Täby, Sweden

Telephone: +46-8-732 7900
Telefax: +46-8-732 5007

2. HAZARDS IDENTIFICATION

NFPA Ratings :

Health =3
Fire = 0
Reactivity = 1

EU Classification
C; R34

Major health hazards

Mucous membrane burns, respiratory irritation (possibly severe), skin irritation (possibly severe), eye irritation (possibly severe)

Physical hazards

Strong Oxidizer. Contact with combustible material may cause fire. May react with water.

Potential Health effects

Inhalation:

Short term exposure: irritation (possibly severe), difficulty breathing.

Long term exposure: same as effects reported in short term exposure.

Skin contact:

Short term exposure: irritation (possibly severe).

Long term exposure: same as effects reported in short term exposure.

Eye contact:

Short term exposure: irritation (possibly severe), blurred vision.

Long term exposure: same as effects reported in short term exposure.

Ingestion:

Short term exposure: burns, nausea, vomiting, diarrhea, stomach pain.

Long term exposure: same as effects reported in short term exposure.



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Carcinogen status:

OSHA: N

NTP: N

IARC: N

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical composition

Component:	Sodium persulfate
Chemical formula:	$\text{Na}_2\text{S}_2\text{O}_8$
Molecular weight:	238,1
CAS number	7775-27-1
Einecs-nr:	231-892-1
Rtecs-nr:	SE0525000
Percentage:	99%
Percentage in active solution:	15-20%
Symbol(s):	O, Xn

4. FIRST AID MEASURES

Inhalation:

When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately.

Skin contact:

Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). For burns, cover affected area securely with sterile, dry, loose-fitting dressing. Get medical attention immediately.

Eye contact

Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains. Continue irrigating with normal saline until ready to transport to hospital. Cover with sterile bandages. Get medical attention immediately

Ingestion:

Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. Give large amounts of water or milk. Allow vomiting to occur. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

Note to physician:

For inhalation, consider oxygen. Avoid gastric lavage or emesis.



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5. FIRE FIGHTING MEASURES

Fire and explosion hazards:

Negligible fire hazard. Oxidizer. Releases oxygen when heated and increases the burning rate of combustible materials. May ignite or explode on contact with combustible materials.

Extinguishing media:

Water. Do not use dry chemicals, carbon dioxide or halogenated extinguishing agents. Large fires: Flood with water. Apply water from a protected location or from a safe distance.

Fire fighting:

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Flood with water. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Evacuate if fire gets out of control or containers are directly exposed to fire. Evacuation radius: 2500 feet.

Fire fighting protective equipment:

Full fire fighting turn-out gear (bunker gear). Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

6. ACCIDENTAL RELEASE MEASURES

Occupational release:

Avoid contact with combustible materials. Do not touch spilled material. Small dry spills: Move containers away from spill to a safe area. Small liquid spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards. NFPA 43A Code for the Storage of Liquid and Solid Oxidizing Materials. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION



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EXPOSURE LIMITS:

No occupational exposure limits established by OSHA, ACGIH, or NIOSH.

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any dust and mist respirator with a full facepiece. Any air-purifying respirator with a full facepiece and a high-efficiency particulate filter. Any powered, air-purifying respirator with a full facepiece and a high-efficiency particulate filter. For Unknown Concentrations or Immediately Dangerous to Life or Health - Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: white

Physical form: crystalline powder

Molecular weight: 238.10

Molecular formula: Na₂S₂O₈

Melting point: No data available

Decomposition point: 180 °C (decamp.)

Vapor pressure: not applicable

Vapor density: not applicable

Density: 2.59 g/cm³

Water solubility: 550 g/l (20 °C), 650 g/l (50 °C)

pH: 4.3 (at 250 g/l)

Volatility: not applicable

Odor threshold: No data available

Evaporation rate: not applicable

Active oxygen: 6.65 %

Temp. of ignition: not applicable

10. STABILITY AND REACTIVITY

REACTIVITY: May react with water. Releases toxic, corrosive, flammable or explosive gases.



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CONDITIONS TO AVOID: Avoid contact with combustible materials. May ignite or explode on contact with combustible materials. Keep out of water supplies and sewers.

INCOMPATIBILITIES: combustible materials, reducing agents, salts of metals.
Sodium persulfate and 2,2'-azobis(2-amidinopropane) hydrochloride: Formation of shock sensitive compound.

COMBUSTIBLE MATERIALS: Violent reaction.
REDUCERS: Violent reaction.

HAZARDOUS DECOMPOSITION: Thermal decomposition products: oxides of sodium, oxides of sulfur (SO₂ and SO₃).

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

Toxicity data::

226 mg/kg intraperitoneal-mouse LD50; 178 mg/kg intravenous-rabbit LDLo.

Carcinogen status:: None.

Local effects:: Corrosive: inhalation, skin, eye, ingestion.

Acute toxicity level: Insufficient Data.

Target organs: No data available

HEALTH EFFECTS:

INHALATION:

Acute exposure: Inhalation may cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and labored breathing.

Chronic exposure: No data available.

SKIN CONTACT:

Acute exposure: Contact with the skin may cause severe irritation with redness, pain and burns.

Chronic exposure: Depending on concentration and duration of exposure, symptoms may be as those of acute exposure.

EYE CONTACT:

Acute exposure: Contact with the eyes may cause severe irritation with redness, pain and blurred vision.

Chronic exposure: Depending on concentration and duration of exposure, symptoms may be as those of acute exposure.

INGESTION:

Acute exposure: Ingestion may cause abdominal pain, nausea, vomiting, and diarrhea. The estimated human fatal dose is 10 grams.

Chronic exposure: No data available.



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12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Fish toxicity: 631000 ug/L 48 hour(s) LC50 (Mortality) Guppy (*Poecilia reticulata*).

Invertebrate toxicity: 649000 ug/L 48 hour(s) LC50 (Mortality) Cyclopoid copepod (*Cyclops strenuus*).

13. DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

Proper Shipping name: Sodium persulfate

LAND:

UN nr: 1505

Hazard class or division: 5.1

Sign: 50/1505

SEA:

UN nr: 1505

Hazard class or division: 5.1

PACKING GROUP: III

MFAG: 700

EmS: 5.1-06

Air/IATA/ICAO/DGR:

UN nr: 1505

Hazard class or division: 5.1

PACKING GROUP: III

Additional information: keep dry and cool. Keep apart from hot surface.

15. REGULATORY INFORMATION

Classification: O: oxidizing; Xn hazardous.

Contents: Sodiumperoxidisulfate.

International regulations: : EU number, (EINECS): 231-892-1



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EU RISK PHRASES: R: 8-22-42/43

May cause fire when in contact with combustible material.
Dangerous when swallowed.
May cause allergic reaction when inhaled or when in contact with skin.

EU SAFETY PHRASES: S: 2-17-20-22-24-25-26-27-39-42/43-46

Keep out of reach of children.
Keep away from combustible material.
When using do not eat or drink.
Avoid breathing of dust.
Avoid contact with skin.
Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Take off immediately all contaminated clothing.
Wear eye/face protection.
Wear rubber gloves or protective gloves.
If swallowed, seek medical advice immediately and show this container or label.

National restrictions: be aware of local restrictions.

16. OTHER INFORMATION

This information is valid for the above said product, and may not be valid when the product is used together with one or more of other products or materials in an other process or procedure. The information is to the best of our knowledge correct and is given in good faith, but with guarantee. It is to the user to convince himself the information is valid when he is using the product.

New issue 2006-06-15; Replacement for issue 1998-11-23. The product is classified as **not** harmful to the environment.