

MICRO-CHEM

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MATERIAL SAFETY DATA SHEET

PAGE 1
04 January 2002

SECTION 1. CHEMICAL IDENTIFICATION -----

CHEMICAL NAME: Organic Polymer Solution
TRADE NAME: NANO™ XP SU-8 Release Layer
PRODUCT #: XP-RND

SECTION 2. COMPOSITION-----

HAZARDOUS
INGREDIENTS: Cyclopentanone (CAS: 120-92-3); 70-90%.
Propylene glycol methyl ether (107-98-2); 10-20%
OTHER
INGREDIENTS: Proprietary polymer <1%
Proprietary Surfactant, <1%

SECTION 3. HAZARD DATA-----

INFLAMMABILITY: Flammable liquid.
SKIN CONTACT: May cause skin irritation.
EYE CONTACT: May cause serious damage to the eyes.
INGESTION: May be harmful if swallowed.
INHALATION: Irritating to mucous membranes and upper respiratory tract.
MUTAGENICITY: Data not available.
CARCINOGENICITY: Data not available.
TARGET ORGANS: Eyes, Respiratory, Behavioral, Liver.

SECTION 4. FIRST AID MEASURES-----

INHALATION: If inhaled, remove to fresh air. If patient has stopped breathing, give artificial respiration. If breathing is difficult give oxygen. Contact physician immediately.
INGESTION: Induce vomiting. Wash out mouth with water if conscious. Get medical attention immediately.
SKIN CONTACT: Rinse with water for 15 minutes while removing contaminated clothing and shoes. Wash affected area with soap and water. Wash contaminated clothing.
EYE CONTACT: Rinse immediately with water, flush for 15 min. lifting eyelids frequently. Get emergency medical assistance.

MATERIAL SAFETY DATA SHEET

PAGE 2
04 January 2002

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SECTION 5. FIRE FIGHTING MEASURES-----

EXTINGUISHING

MEDIA: Dry chemical, carbon dioxide, and foam.

SPECIAL FIRE FIGHTING PRECAUTIONS:

Wear self-contained breathing apparatus (SCBA) and personal protective equipment to prevent contact with skin and eyes.

UNUSUAL FIRE OR EXPLOSION HAZARDS:

Vapor may travel considerable distance to source of ignition and flash back. Heat will build pressure and may rupture closed containers. Forms explosive mixtures in air. Keep containers cool with water spray.

SECTION 6. ACCIDENTAL RELEASE PROCEDURES -----

Evacuate Area.

Eliminate all ignition sources.

Wear self-contained breathing apparatus (SCBA), rubber boots, and heavy rubber gloves. Avoid eye or skin contact. Cover with dry absorbent material and collect in closed container for disposal using non-sparking tools. Ventilate area and wash spill site after material pickup is complete, rinse with water. All clean up should be carried out in accordance with federal, state, and local regulations. If required proper authorities should be notified.

SECTION 7. STORAGE AND HANDLING PRECAUTIONS-----

STORAGE: Store in tightly closed container in a cool environment away from direct sunlight.

HANDLING: Keep away from heat, sparks, and flames.
Do not breathe vapors.
Use only with mechanical exhaust.
Do not contact with skin, eyes, and clothing.
Severe eye irritant.
Avoid prolonged or repeated exposure.
Wear heavy rubber gloves.
Wash with soap and water after handling.
Have safety shower and eye wash available.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION-----

RESPIRATORY PROTECTION:

In case of spills, use of self-contained breathing apparatus (SCBA) is recommended.

VENTILATION:

Local or general mechanical ventilation is required.

SKIN PROTECTION:

Heavy rubber gloves are highly recommended.

EYE PROTECTION:

Safety goggles are highly recommended.

TRADE NAME: NANO™ XP SU-8 Release Layer

ODOR: Slightly sweet
BOILING POINT: 118-131 °C (244-268 °F)
VAPOR PRESSURE: 9 mm @ 20 °C (68 °F)
VAPOR DENSITY: 2.3 (air=1)
% VOLATILES: See Table 1 below
FLASH POINT: 30 °C (87 °F) TCC
EXPLOSION LIMITS: 1.6 lower
unk. Upper

Table 1

Name

Specific Gravity Volatiles (%) VOC (g/L)

SECTION 10. REACTIVITY DATA

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur
HAZARDOUS COMBUSTION OR

SECTION 11. TOXICITY HAZARDS

ACUTE EFFECTS:

Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract.
Eye and skin contact can cause headache, nausea, vomiting, dizziness, weakness, drowsiness, narcosis, and loss of coordination in humans.
Causes moderate skin irritation in rabbits.

eyes.

100 mg / 7500 - severe as cyclopentadiene

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MATERIAL SAFETY DATA SHEET

PAGE 4
04 January 2002

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TLV: eyes: 230 mg – mild as Propylene glycol methyl ether
ACGIH (TWA) none established
PEL: OSHA (8hr TWA) none established

SECTION 12. ECOLOGICAL DATA

As cyclopentanone:
Data not available.

As Propylene glycol methyl ether:

It has a low potential to affect aquatic organisms, a high potential to biodegrade with unacclimated microorganisms from activated sludge, a low potential to affect secondary wasted treatment microbial respiration, a low potential to persist in the environment, and a low potential to bioconcentrate.

The direct instantaneous discharge to a receiving body of water of an amount of this chemical which will rapidly produce, by dilution, a final concentration of 250 mg/l or less is not expected to cause adverse environmental effects.

Oxygen Demand Data:

ThOD: 1.95 g oxygen/g

COD: 1.84 g oxygen/g
mg/L

BOD-20: 1.14 g oxygen/g

Acute Aquatic Effects Data:

48-h EC-50 (daphnia): 23,300 mg/L

96-h LC-50 (fathead minnow): 20,800

Biodegradation: A 28 day test for ready biodegradability using unacclimated microorganisms showed 73.4% degradation of the test article as measured by carbon dioxide evolution and a loss of dissolved organic carbon.

Secondary Waste Treatment Effects: A 3 hour activated sludge respiration inhibition test showed an EC-50 of >1000 mg/L.

SECTION 13. DISPOSAL CONSIDERATIONS

Burn in an EPA-licensed chemical incinerator equipped with an afterburner and scrubber at an approved waste disposal facility. Observe all federal, state, and local environmental regulations.

SECTION 14. TRANSPORTATION INFORMATION

HAZARD CLASSIFICATION: Flammable Liquid
SHIPPING NAME: Resin Solution
UN NUMBER: UN 1866
PACKING GROUP: III

SECTION 15. REGULATORY INFORMATION