



# Material Safety Data Sheet

## UltraCruz™ Nitrocellulose Pure Transfer Membrane, 0.45µm, 30cm x 3m roll: *sc-3724*

### CHEMICAL IDENTIFICATION

Synonyms: Celex, Celloidin, Cellulose Tetranitrate, Kodak LR 115, Paralodion, Pyralin, Proxilin and Xyloidin.

Description: Nitrocellulose membranes can be used for immunoblotting (Western Blotting) of proteins. Protein binding to nitrocellulose is believed to occur through hydrophobic interactions. The 0.45 µm pore size is common for proteins greater than 10 kDa. The 0.22 µm pore size is recommended for proteins less than 10 kDa.

#### References:

1. Lin, J.C. and Kasamatsu, H. 1983. On the electrotransfer of polypeptides from gels to nitrocellulose membranes. *Anal. Biochem.* 128: 302-311.
2. Van Oss, C.J., et al. 1987. Mechanism of DNA (Southern) and protein (Western) blotting on cellulose nitrate and other membranes. *J. Chromatogr.* 391: 53-65.
3. Gershoni, J.M. and Palade, G.E. 1982. Electrophoretic transfer of proteins from sodium dodecyl sulfate-polyacrylamide gels to a positively charged membrane filter. *Anal. Biochem.* 124: 396-405.

### COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 9004-70-0

Storage: Store product at room temperature in a sealed container.

### HAZARDS IDENTIFICATION

Label precautionary statements: Flammable (USA), Highly Flammable (EU). Keep away from sources of ignition—no smoking. Take precautionary measures against static discharges. Wear suitable gloves and eye/face protection.

### FIRST-AID MEASURES

In case of contact, immediately flush eyes with water for at least 15 minutes.

### FIRE EXTINGUISHING MEASURES

Extinguishing media: Water spray, carbon dioxide, dry chemical powder or appropriate foam.

Firefighting procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Flammable solid.

Unusual fire and explosions hazards: Emits toxic fumes under fire conditions.

### ACCIDENTAL RELEASE MEASURES

Wear protective gloves, sweep up, place in bag and hold for waste disposal.

### HANDLING AND STORAGE

Refer to section titled EXPOSURE CONTROLS/PERSONAL PROTECTION.

### EXPOSURE CONTROLS/PERSONAL PROTECTION

Avoid breathing dust. Wash thoroughly after handling. Keep tightly closed. Keep away from heat and open flame. Store in a cool dry place.

### PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Flat sheet.

Solubility: Water-insoluble.

### STABILITY AND REACTIVITY

Stability: Stable.

Conditions to avoid: Direct sunlight.

Incompatibilities: Strong acids, strong bases, cellulose and its derivatives may react vigorously with calcium oxide, bleaching powder, perchlorates, perchloric acid, sodium chlorate, flourine, nitric acid and sodium nitrate.

Toxic fumes of: carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous polymerization may occur.

### TOXICOLOGICAL INFORMATION

Acute effects: No known adverse health effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS#: QW0970000, Nitrocellulose.

#### Toxicity Data

ORL-RAT LD50: >5 GM/KG TXAPA9 33, 159, 1975

ORL-MUS LD50: >5 GM/KG TXAPA9 33, 159, 1975

Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

### ECOLOGICAL INFORMATION

Data not yet available.

### DISPOSAL CONSIDERATIONS

Burn in a chemical incinerator equipped with an afterburner and scrubber but expert extra care in igniting as this material is highly flammable. Observe all federal, state and local environmental regulations.



## TRANSPORT INFORMATION

DOT regulations

- Hazard class: 4.1
- Identification number: UN3270
- Packing group: II
- Proper shipping name (technical name): NITROCELLULOSE MEMBRANE FILTER (less than 12.6% nitrogen by dry mass)
- Label: 4.1

- Land transport ADR/RID (cross-border)
- ADR/RID class: 4.1 Flammable solids
- Danger code (Kemler): 46
- UN-Number: 3270
- Packing group: I
- Label: 4.1+6.1
- Description of goods: 3270 NITROCELLULOSE MEMBRANE FILTER

- Maritime transport IMDG:
- IMDG Class: 4.1
- UN Number: 3270
- Label: 4.1
- Packing group: II
- EMS Number: F-A,S-I
- Marine pollutant: No
- Proper shipping name: NITROCELLULOSE MEMBRANE FILTER

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: 4.1
- UN/ID Number: 3270
- Label: 4.1
- Packing group: II
- Proper shipping name: NITROCELLULOSE MEMBRANE FILTER (less than 12.6% nitrogen by dry mass)

## REGULATORY INFORMATION

European information: Caution: Substance not yet fully tested. Highly flammable. R 11 highly flammable. S 16 keep away from sources of ignition—no smoking. S 33 take precautionary measures against static discharges. S37/39 wear suitable gloves and eye/face protection. Reviews, standards, and regulations OEL=MAK.

NOHS 1974: HZD TO186; NIS 18; TNF 1058; NOS 15; TNE 3797.

NOHS 1974: HZD 81779; NIS 317; TNF 74092; NOS 155; TNE 668421.

NOHS 1983: HZD 81779; NIS 259; TNF 50531; NOS 156; TNE 712600; TFE 115799.

EPA TSCA section 8(B) chemical inventory.

EPA TSCA section 8(D) unpublished health/safety studies.

EPA TSCA test submission (TSCATS) database, January 2001 section 16.

## OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Santa Cruz Biotechnology shall not be held liable for any damage resulting from handling or from contact with the product.