

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Tygon® R-3603

PRODUCT USE: Plastic Tubing used in Injection Kit

===== SECTION I - COMPANY IDENTIFICATION =====

DISTRIBUTED BY: The Rot Doctor
PO BOX 30612
Seattle, WA, 98113
(206)364-2155

FOR CHEMICAL EMERGENCY
Spill, Leak, Fire, Exposure or Accident
CALL INFOTRAC - Day or Night
1-800-535-5053
Outside the United States call Collect
1-352-323-3500

MSDS REVISED: 02/22/10

- 1.1 COMMON NAME (Used on label):** Tygon® R-3603
- 1.2 CHEMICAL NAME:** N/A
- 1.3 CHEMICAL FAMILY:** Polyvinyl Chloride/Compounded organic polymer
- 1.4 FORMULA:** The specific chemical identity of the ingredients is considered a trade secret.

In reference to 40CFR, Section 313, part 372, community right to know, we classify Tygon® Tubing as an "Article" and therefore not subject to notification requirements.

===== SECTION II - HAZARDOUS INGREDIENTS =====

- 2.1 Principal Hazardous Component(s) (Chemical & Common Names) Threshold Limit Value**
 - a. Di-2-Ethylhexyl Phthalate (DOP or DEHP) 5mg/m³
- 2.2 Principal Non-Hazardous Component(s) (Chemical & Common Names) Threshold Limit Value**

All additives are physically bound in the manufacturing process and are not expected to create any hazard when the product is used in accordance with normal manufacturing and industrial hygiene practice and by following the guidelines on this sheet.

===== SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS =====
(FIRE & EXPLOSION DATA)

- 3.1 **BOILING POINT:** N/A
- 3.2 **SPECIFIC GRAVITY (H₂O=1):** 1.18
- 3.3 **VAPOR PRESSURE:** 7 X 10⁻⁸ mm Hg, 20°C
- 3.4 **PERCENT VOLATILE BY VOLUME:** N/A
- 3.5 **VAPOR DENSITY (AIR=1):** N/A
- 3.6 **EVAPORATION RATE:** N/A
- 3.7 **SOLUBILITY IN WATER:** Negligible
- 3.8 **MELTING POINT:** N/A
- 3.9 **APPEARANCE AND ODOR:** Clear tubing; Slight odor.
- 3.10 **FLASH POINT:** 500°F (260°C)
- 3.11 **FLAMMABLE LIMITS IN AIR BY VOLUME:** LOWER: N/A UPPER: N/A
- 3.12 **AUTO-IGNITION TEMPERATURE:** N/A
- 3.13 **EXTINGUISHER MEDIA:** WATER
- 3.14 **SPECIAL FIRE FIGHTING PROCEDURES:** Fire fighters should wear full protective clothing including a self-contained breathing apparatus.
- 3.15 **UNUSUAL FIRE & EXPLOSION HAZARDS:** None Known

===== SECTION IV - PHYSICAL HAZARDS =====

- 4.1 **STABILITY:** STABLE: X UNSTABLE:
CONDITIONS TO AVOID: Temperatures above 300°F will slowly decompose the tubing material resulting in the liberation of HCl gas.
- 4.2 **INCOMPATIBILITY:** None known
- 4.3 **HAZARDOUS DECOMPOSITION PRODUCTS:** When forced to burn, PVC compounds will mainly contribute CO, CO₂, and HCl as gases.
- 4.4 **HAZARDOUS POLYMERIZATION:** MAY OCCUR: WILL NOT OCCUR: X
CONDITIONS TO AVOID: None known

===== SECTION V - HEALTH HAZARDS =====

- 5.1 **THRESHOLD LIMIT VALUE:** N/E
- 5.2 **SIGN & SYMPTOMS OF EXPOSURE:**
 - 1. **ACUTE OVEREXPOSURE:** Toxicological testing has not been conducted with this material
 - Route of entry:** **Eye contact:** See inhalation
 - Skin contact:** See inhalation
 - Inhalation:** At temperatures above 300°F, fumes may be emitted that are irritating to respiratory tract, eyes, or skin of sensitive people.
 - Ingestion:** N/A
 - 2. **CHRONIC OVEREXPOSURE:** None Known
- 5.3 **MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** There are no data available which address medical conditions which are generally recognized as being aggravated by exposure to this product.
- 5.4 **CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:**

NATIONAL TOXICOLOGY PROGRAM:	YES:	NO:
I.A.R.C. MONOGRAPHS:	YES:	NO:
OSHA:	YES: Suspected	NO:
CALIF. PROP 65:	YES: DEHP	NO:
- 5.5 **OSHA PERMISSIBLE EXPOSURE LIMIT:** 5 mg/m³ TWA
- 5.6 **ACGIH THRESHOLD LIMIT VALUE:** 5 mg/m³ TWA, 10 mg/m³ STEL
- 5.7 **OTHER EXPOSURE LIMIT USED:** Unknown
- 5.8 **EMERGENCY & FIRST-AID PROCEDURES:**
 - Inhalation:** If irritation occurs, remove affected individual from area, refer to physician.
 - Eyes:** N/A
 - Skin:** N/A
 - Ingestion:** N/A

===== SECTION VI - SPECIAL PROTECTION INFORMATION =====

- 6.1 **RESPIRATORY PROTECTION:** N/R
- 6.2 **VENTILATION:** LOCAL EXHAUST: N/R
 MECHANICAL-GENERAL: N/R
 MECHANICAL-SPECIAL: N/R
 MECHANICAL-OTHER: N/R
- 6.3 **PROTECTIVE GLOVES:** N/R
- 6.4 **EYE PROTECTIVE:** N/R
- 6.5 **OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Not Necessary

===== SECTION VII - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES =====

- 7.1 **PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE:** Store cool and dry.
- 7.2 **OTHER PRECAUTIONS:** N/A
- 7.3 **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**N/A
- 7.4 **WASTE DISPOSAL METHODS:** According to Local, State and Federal Regulations.

===== SECTION VIII - OTHER INFORMATION =====

8.1 TRANSPORTATION INFORMATION:

DOT SHIPPING NAME: N/A
DOT HAZARD CLASS: N/A
DOT LABEL(s): N/A
UN/NA NUMBER: N/A
PLACARDS: None
IATA: N/A
IMO IMDG-CODE: N/A
EUROPEAN CLASS: RID (OCTI): N/A
 ADR (ECE): N/A
 RAR (IATA): N/A

8.2 The information and recommendation set forth herein are taken from sources believed to be accurate as of the date hereof, however, the manufacture makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.

Form #N0123.1

LEGEND: N/E - Not Established, N/A - Not Applicable, N/R - Not Required, N/D - Not Determined