

# **Material Safety Data Sheet**

Transportation Emergency: 1-800-451-8346

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## SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CATALOG #: 1700-3-04

NAME: 4-FLUOROTOLUENE

## SECTION 2. ---- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS NUMBER: 352-32-9

MOLECULAR FORMULA: C<sub>7</sub>H<sub>7</sub>F MOLECULAR WEIGHT: 110.13

### SECTION 3. ----- HAZARDS IDENTIFICATION -----

## LABEL PRECAUTIONARY STATEMENTS

FLAMMABLE.

IRRITANT.

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND

TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

## SECTION 4. ----- FIRST-AID MEASURES-----

#### ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

## INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE

ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

#### DERMAL EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.

## EYE EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

## SECTION 5. ----- FIRE FIGHTING MEASURES -----

FLASH POINT

40 °C

#### **EXTINGUISHING MEDIA**

SUITABLE: FOR SMALL (INCIPIENT) FIRES, USE MEDIA SUCH AS "ALCOHOL" FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. FOR LARGE FIRES, APPLY WATER FROM AS FAR AS POSSIBLE. USE VERY LARGE QUANTITIES (FLOODING) OF WATER APPLIED AS A MIST OR SPRAY; SOLID STREAMS OF WATER MAY BE INEFFECTIVE. COOL ALL AFFECTED CONTAINERS WITH FLOODING OUANTITIES OF WATER.

#### **FIREFIGHTING**

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. SPECIFIC HAZARD(S): FLAMMABLE LIQUID. VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK. EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

EXPOSURE HAZARD(S)

MATERIAL: IRRITANT.

#### SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE AREA. SHUT OFF ALL SOURCES OF IGNITION.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

METHODS FOR CLEANING UP

COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

## SECTION 7. ----- HANDLING AND STORAGE-----

#### **HANDLING**

USER EXPOSURE: DO NOT BREATHE VAPOR. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. STORAGE

SUITABLE: KEEP TIGHTLY CLOSED. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. STORE IN A COOL DRY PLACE.

#### SECTION 8. - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - -

## **ENGINEERING CONTROLS**

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED. USE NONSPARKING TOOLS.

PERSONAL PROTECTIVE EQUIPMENT

OTHER: WEAR APPROPRIATE GOVERNMENT APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING. WASH CONTAMINATED CLOTHING BEFORE REUSE.

#### SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE AND ODOR

COLORLESS LIQUID

PHYSICAL PROPERTIES

MELTING POINT: -56 °C BOILING POINT: 116 °C

DENSITY: 0.992 g/mL @ 25 °C REFRACTIVE INDEX: 1.4692 @ 20 °C

#### SECTION 10. -----STABILITY AND REACTIVITY -----

### **STABILITY**

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, HYDROGEN FLUORIDE.

#### SECTION 11.-----TOXICOLOGICAL INFORMATION -----

#### ROUTE OF EXPOSURE

SKIN CONTACT: CAUSES SKIN IRRITATION.

MULTIPLE ROUTES: VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES, AND UPPER RESPIRATORY TRACT. MAY BE HARMFUL BY

INHALATION, INGESTION, OR SKIN ABSORPTION.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

## SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

### SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

#### SECTION 14. ----- TRANSPORT INFORMATION -----

## DOT

PROPER SHIPPING NAME: FLUOROTOLUENES

UN#: 2388 CLASS: 3

PACKING GROUP: II

## SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER: F-Xi
INDICATION OF DANGER: FLAMMABLE. IRRITANT.
R: 10-36/37/38
S: 16-23-24/25-26-36/37/39-45
UNITED STATES REGULATORY INFORMATION
TSCA: LISTED ON TSCA INVENTORY; FOR R&D USE ONLY

## 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. SYNQUEST LABS, INC. SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.