# MALEIC ACID CAS # 110167

A Special Carcinogen E Dermal Hazard I Neurotoxin

B Human Terato\Repro Haz F Corrosive J Suspect Carcinogen

C Highly Toxic G Eye Damage K Suspect Terato\Repro Haz

D Inhalation Hazard H STEL L Sensitizers

HAZARD INDEX . . . . . . . . . J K .

NFPA HAZARD CODES (H,F,R,O) 2 1 0

ACUTE TOXICTY RISK INDEX 4 - LD50 708.0 mg/Kg

INHALATION HAZARD

INHALATION RISK INDEX 2.4 - LC50 720.0

ROUTE OF EXPOSURE

skin Contact: Causes skin irritation.

skin Absorption: Harmful if absorbed through skin.

Eye Contact: Causes severe eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating t mucous

membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Gastrointestinal disturbances.

PHYSICAL CHARACTERISTICS

PHYSICAL STATE: Solid

Ccombustible

VAPOR PRESSURE 4.0 mm Hg @ 20 °C

FLASH POINT 212 °F

SEGREGATION: SHELF # 1

STORAGE GROUP(S):

d - Organic Acid/Flammable/Toxic

l - Flammable/Combustible Solvent

WASTE CHARACTERISTIC HAZARD: TOXIC

INCOMPATIBILITIES:Oxidizing agents.

FIRE EXTINGUISHER: Carbon dioxide, dry chemical powder, or appropriate foam.

REACTIVE PROPERTIES

HANDLING: Do not breathe dust. Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated exposure. STORAGE: Keep tightly closed.

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: Xn

Indication of Danger: Harmful.

R: 22 36/37/38

Risk Statements: Harmful if swallowed. Irritating to eyes,

respiratory system and skin.

S: 26 28 37

Safety Statements: In case of contact with eyes, rinse

immediately with plenty of water and seek medical advice. After

contact with skin, wash immediately with plenty of soap-suds.

Wear suitable gloves.

US DEPARTMENT OF ENERGY TEEL'S

DOE Occupational Exposure Limit 10 mg/m3

DOE Short Term Exposure Limit 10 mg/m3

DOE Ceiling Limit 60 mg/m3

Immediately Dangerous to Life and Health 300 mg/m3

The information presented in the OPMSDS is intended as a synopsis of relative hazard characteristics for this chemical, for application within the UMass-Boston Chem/XL Laboratory Program. This information is derived from a wide range of sources documented in that program. While these sources are considered credible, the user is cautioned that the university cannot guarantee the accuracy nor accept responsibility for damages which may arise from errors, omissions, or the use of this information in any context other than intended. The user is strongly encouraged to seek additional information whenever feasible.