Tuffak XL Material Safety Data Sheet

Product Name	TUFFAK (R) XL Polycarbonate Sheet
Product Synonym(s)	
Chemical Family	Polycarbonate
Chemical Formula	N/A
Chemical Name	See Ingredients
EPA Reg Num	
Product Use	

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol]	25971-63-5	0-99	N
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol], 4-(1,1-dimethylethyl)phenyl ester	103598-77-2	0-99	N
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol], 4-(1-methyl-1-phenylethyl)phenyl ester	111211-39-3	0-99	N
Methylene chloride	75-09-2	< 3 ppm	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Communication Standard (29 CFR 1910.1200)

While this material is not classified as hazardous under Federal OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of this product. This MSDS should be retained and available for employees and other users of this product.

The components of this product are all on the TSCA inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

Polycarbonate sheet material
CAUTION!
MAY CAUSE EYE AND SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Potential Health Effects

Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol]

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. As a finished product, it is a synthetic, high molecular weight polymer. Due to its chemical and physical properties, this material does not require special handling other than the good industrial hygiene and safety practices employed with any industrial material of this type. Under normal processing conditions, this material will release fume or vapor. Components of these releases may vary with processing time and temperatures. These process releases may produce eye, skin and/or respiratory tract irritation and, with repeated or prolonged exposures, nausea, drowsiness, headache and weakness.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IN CASE OF CONTACT, flush the area with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops and persists.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	>400 C/752 F	
Flash Point	NA	Flash Point Method
Flammable Limits- Upper	NA	
Lower	NA	

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

Heated material can form flammable vapors with air.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Contain spill. Sweep or scoop up and remove to suitable container. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Avoid temperature extremes during storage; ambient temperature preferred.

Storage

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Eye / Face Protection

Use good industrial practice to avoid eye contact.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing dust. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
Methylene chloride		
ACGIH TWA	-	50 ppm 174 mg/m3
OSHA Skin designator	-	Y
OSHA STEL PEL	-	125 ppm
OSHA TWA PEL	-	25 ppm
Other Exposure Limits	-	737

-Only those components with exposure limits are printed in this section.
-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Polycarbonate sheet material
pH	NA
Specific Gravity	1.15 to 1.19
Vapor Pressure	NA
Vapor Density	NA
Melting Point	132 C/270 F
Freezing Point	NA
Boiling Point	NA
Solubility In Water	Insoluble
Percent Volatile	0

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Hazardous Polymerization

Does not occur.

Incompatibility

Prolonged contact with acids, alkalies and strong oxidizing agents may attack or dissolve the polymer.

Hazardous Decomposition Products

Thermal decomposition may yeild acrylic monomers.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

No data are available.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

No data are available.

Chemical Fate Information

No data are available.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations.

14 TRANSPORT INFORMATION

DOT Name	NOT REGULATED
DOT Technical Name	
DOT Hazard Class	
UN Number	
DOT Packing Group	PG
RQ	

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title IIII Rules (40 CFR Part 370)

Immediate (Acute) Health	N	Fire	N
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Methylene chloride	1000 LBS	
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol], 4-(1,1-dimethylethyl)phenyl ester	NE	
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol]	NE	
Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol], 4-(1-methyl-1-phenylethyl)phenyl ester	NE	NE

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Ammendments and Reauthorization Act of 986 and 40 CFR Part 372. See Section 2

Methylene chloride

California Prop 65 - Carcinogen

This product does contain the following chemical(s), as indicated below, currently on the California list of Known Carcinogens.

Methylene chloride

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Methylene chloride

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Methylene chloride

Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Methylene chloride

Pennsylvania Right to Know

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Methylene chloride

Pennsylvania Special Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Special Hazard List.

Methylene chloride

16 OTHER INFORMATION

Revision Information

Revision Date	29 JUN 2000	Revision Number 3
Supercedes Revision Dated	17-JUN-2000	

Revision Summary

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark