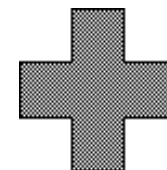




Material Safety Data Sheet

Clark Foam
25887 Crown Valley Parkway
Laguna Niguel, California 92677



Date Issued: 10/8/98

Supersedes: 11/14/95

TRANSPORTATION EMERGENCY: CALL CHEMTREC Telephone #: 800-424-9300

Clark Foam Emergency #: (949) 582-2000

I. IDENTIFICATION

PRODUCT NAME: Clark Foam (surfboard cores, sailboard cores).

CHEMICAL FAMILY: Closed cell, rigid Polyurethane Foam.

STRUCTURE: Carbon dioxide blown, Toluene di isocyanate/Polyester Rigid Polyurethane Foam.

II. HAZARDOUS INGREDIENTS

Not applicable - Rigid Polyurethane Foam is a fully reacted polymer.

III. PHYSICAL DATA

APPEARANCE: Solid.

COLOR: White or brown on surface after prolonged exposure to sunlight.

ODOR: None.

SPECIFIC GRAVITY: Will vary with density or "weight" of foam.

SOLUBILITY IN WATER: Insoluble.

PERCENT VOLATILES BY VOLUME: None.

IV. FIRE AND EXPLOSIVE DATA

FLASH POINT OF SOLID MATERIAL: Not applicable - solid material.

FLASH POINT OF FINE FOAM DUST: Any finely divided combustible solid is capable of producing a dust explosion. Experimentally produced dust explosions using 200 mesh polyurethane dust indicate that minimum airborne concentrations of 25-30 grams dust per cubic meter of air are required before an explosion can occur. Other experiments suggest 100 - 200 grams per cubic meter as the lowest critical concentration. Dust monitoring of air at polyurethane fabricating equipment has shown that dust concentrations during normal operations are considerably below the lowest critical level for an explosion to occur, and the probability of an explosion is negligible. Apparently, the polyurethane dust formed is too coarse to remain airborne for long and settles rapidly.¹

EXTINGUISHING MEDIA Use water spray, carbon dioxide, dry chemical, alcohol-type, or universal-type foams applied by manufacturer's recommended technique.

SPECIAL FIRE FIGHTING PROCEDURES Full emergency equipment with a self-contained breathing apparatus and full protective clothing should be worn by firefighters.

UNUSUAL FIRE AND EXPLOSION HAZARDS During a fire, irritating vapors and toxic gases can be generated (see IX). Settled combustible dust presents a risk in that disturbance could generate a dust cloud of sufficient concentration to be explosive. A report issued by the National Fire Protection Association points out that many of the most disastrous dust explosions (none involving polyurethane dust) are caused by so-called secondary explosions, generated when a combustible dust which has settled is lifted by a low-order primary explosion to form a highly explosive dust cloud.¹

V. HEALTH HAZARD DATA

TLV AND SOURCE: None established. Considered an inert or nuisance dust.

ACUTE EFFECTS OF OVEREXPOSURE

ANIMAL TOXICITY - ORAL (LD50) Ingestion of Polyurethane Foam by rats in amounts equivalent to 7.5 grams/kilogram eaten over a five day period caused no outward evidence of toxicity.²

ANIMAL TOXICITY - INHALATION Emphysema of the type typically resulting from exposure to fine dusts was observed in rats after gross exposure to polyurethane dust.¹

SWALLOWING None currently known.

SKIN ABSORPTION None currently known.

SKIN CONTACT No adverse health effects have been observed other than mild abrasions if rubbed hard.

INHALATION Any type of dust particles that enter the lungs can cause some risk.

EYE CONTACT Similar to any comparable nuisance dust.

CHRONIC EFFECTS OF EXPO- Repeated/prolonged contact may cause a dehydrating effect.²

VI. EMERGENCY AND FIRST AID PROCEDURES

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| SOLID FOAM | No adverse health effects have been observed. |
| FOAM DUST IN EYES | Wash with water and if irritation persists seek medical advice. |
| FOAM DUST ON SKIN | Wash affected areas with soap and water. Should irritation develop or persist call a physician. |
| INHALATION OF DUST | Seek medical advice if symptoms of a respiratory problem persist after a reasonable amount of time. |
| NOTES TO PHYSICIAN | There is no specific antidote or treatment. Treatment should be the same as treatment for any inert plastic or solid material dust or solid. It is believed that the foam dust is slightly abrasive. Treatment of overexposure should be directed at the control of symptoms and the clinical condition. |

VII. EMPLOYEE PROTECTION RECOMMENDATIONS - SOLID FOAM

| | | | |
|-------------------------|----------------|------------------|----------------|
| EYE PROTECTION: | None required. | SKIN PROTECTION: | None required. |
| RESPIRATORY PROTECTION: | None required. | VENTILATION: | None required. |

VIII. EMPLOYEE PROTECTION RECOMMENDATIONS - FOAM DUST

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|------------------------|--|
| EYE PROTECTION | Use well fitted, side shield goggles. |
| SKIN PROTECTION | None required. |
| RESPIRATORY PROTECTION | Use dust masks which mechanically filter and prevent inhalation of the dust at all times. Change or clean filters per manufacturer's recommendations. |
| VENTILATION | Recommended if unusually high concentrations of dust are present. |
| OTHER | Keep accumulations of dust on floors, walls, ceilings, tools, lights, etc. to a minimum to keep fire hazard at a minimum and to keep dust out of eyes and lungs. |

IX. REACTIVITY DATA

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|-------------------------|--|---|
| STABILITY: Stable | POLYMERIZATION: Will not occur. | INCOMPATIBILITY (MATERIALS TO AVOID): None. |
| HAZARDOUS DECOMPOSITION | Burning Polyurethane Foam produces toxic decomposition products which are not significantly different from those of other nitrogen-containing substances such as wool, leather, nylon and ABS. The major toxicants are carbon monoxide, oxides of nitrogen, hydrogen cyanide and irritants. ² Clark Foam does not contain fire retardants or phosphorous compounds. | |

X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Collect as normal waste.

WASTE DISPOSAL METHOD: Common Landfill. All material should be packaged, labeled, transported and disposed in conformance with all applicable local, state and federal regulations.

XI. SPECIAL PRECAUTIONS AND STORAGE DATA

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| SPECIAL SENSITIVITY | Store away from sparks, flames or other ignition sources. |
| HOUSEKEEPING | Use administrative controls to keep entire storage and fabrication areas free of foam dust, scraps and chips as they present a source of kindling for combustion. In areas where a very high accumulation of dust has built up, only clean by vacuum as sweeping or blowing by air could result in an explosive concentration of dust. Keep floors, walls, ceilings, tools, lights, etc. free of dust. |
| SMOKING | Appropriate Fire Officials should be consulted to determine No Smoking areas in buildings, or simply allow no smoking. |
| HOT WIRE CUTTING | Do not hot wire cut Clark Foam without OSHA approved ventilation or other engineering controls. |
| OTHER | For additional information consult NIOSH publication 76-154, "Urethane Foams - Good Practices for Employees' Health and Safety." |

¹The Upjohn Company (now Dow Chemical) publication titled "Risks of Finished Polyurethane and Polyisocyanurate Products."

²Bayer Chemical Material Safety Data Sheet for Polyurethane Foam approved by J.H. Chapman on 1/6/95