Material Safety Data Sheet
CLARK FOAM
25887 Crown Valley Parkway
Laguna Niguel, CA 92677

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Transport Emergency: CALL CHEMTREC Telephone # : 800-424-9300 Clark Foam Emergency #: 949-582-2000

I. IDENTIFICATION

PRODUCT NAME; Clark Foam (surfboard cores, sailboard cores and slab stock)
CHEMICAL FAMILY: Closed cell, rigid Polyurethane Foam
STRUCTURE: Carbon dioxide blown, Toluene di isocynate/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 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 MATERIALS: 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.

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 EXPOSURE Repeated/prolonged contact may cause a dehydrating effect.[2]

VI. EMERGENCY AND FIRST AID PROCEDURES

SOLID FOAMS No adverse health effects have been observed.
FOAM DUST IN EYES Wash with water and if irritation persists seek medical advise.
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 RECOMMENDATONS – SOLID FOAM

EYE PROTECTION: None required
SKIN PROTECTION: None required
RESPIRATORY PROTECTION: None required
VENTILATION: None required

VIII. EMPLOYEE PROTECTION RECOMMENDATIONS – FOAM DUST

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, light, etc. to a minimum to keep fire hazard at a minimum and to keep dust out of eyes and lungs

IX. REACTIVITY DATA

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 retardant 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

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 highaccumulation 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 building, or simply allow no smoking .
HOT WIRE CUTTING Do not hot wire cut Clark Foam with 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".-