



Ensinger, Inc.
 365 Meadowlands Blvd.
 Washington, PA 15301
 Ph: 724-746-6050
 Fx: 724-746-9209

Ensinger-Hyde
 1 Main Street
 Grenloch, NJ 08032
 Ph: 856-227-0500
 Fx: 856-232-1754

MATERIAL SAFETY DATA SHEET

TECAFORM™ SAN Antimicrobial Copolymer Acetal

EMERGENCY TELEPHONE: 724-746-6050 or 856-227-0500
Issue Date: October 4, 2004
Revised Date: October 4, 2004
TRADE NAME: Polyoxymethylene Co-Polymer, POM
CHEMICAL NAME: Polyacetal Resin
PRODUCT NAME: Acetal Co-Polymer

1. Hazardous Ingredients & Composition Information

Composition: Polyoxymethylene Co-Polymer. The principle monomer is 1,3,5-trioxan (CAS# 110-88-3). The co-monomer is 1,3-dioxacy-cloheptane (CAS# 505-65-7)

<u>Ingredient / C.A.S.#</u>	<u>Wt.%</u>	<u>Hazard Data</u>
Antibacterial Additive / 265647-11-8	< 5%	ACGIH TLV = 5 mg/m ³ TWA OSHA PEL = 5 mg/m ³ TWA

This compound may contain varying amounts of polymers, stabilizers, and processing aids. Except as indicated above, any hazardous chemical that may be included in these mixtures are present in concentrations of less than 1.0 percent.

2. Health Hazard Summary

Signs and Symptoms of Exposure: Acetal itself is harmless, molten material can cause thermal burns. If Acetal is subjected to excessive heat the primary decomposition product is formaldehyde, which has a penetrating odor that can irritate the eyes and throat even at low concentrations.

Toxicological Properties: No adverse health effects have been observed in the handling of Acetal provided that the workplace is adequately ventilated and normal safety practices are followed. If formaldehyde is released due to excessive heating, steps must be taken to ensure that the TLV (ACCGIH 1985-86 TLV-TWA: 1ppm) is not exceeded. Formaldehyde is classified as an animal carcinogen by the National Toxicology Program (NTP 3rd Annual Report on Carcinogens).

3. Emergency & First Aid Procedures

Eye Contact: If contact with decomposition products occurs, flush eyes with water for 15 minutes. Obtain medical attention if irritation persists.

Skin Contact: If contact with decomposition produces occurs, flush contaminated skin with soap and water. Obtain medical attention if irritation persists. Thermal burns from contact with molten material should be treated by a physician.

Inhalation: If contact with decomposition products occurs, remove to fresh air. Other measures are usually unnecessary. Obtain medical attention if irritation persists.

Ingestion: Seek medical attention.

4. Physical & Chemical Characteristics

Melting Point: N.A
 Specific Gravity: 1.35 - 1.60 @20°C
 Vapor Pressure: N.A.
 Vapor Density: N.A.

Melting Range: 163 - 168°C
Molecular Weight: Polymer
Water Solubility: Insoluble
Appearance / Odor: Opaque / Odorless

5. Emergency and First Aid Procedures

Flash Point: Ignition Temp 320 - 340oC (ASTM D1929)

Extinguishing Media: Water mist; CO₂; Dry Chemical; Foam. Use water spray to cool containers.

Unusual Fire and Explosion Hazards: Formaldehyde may be released if product is exposed to excessive heat or fire. Firefighters should wear air-supplied or self-contained breathing apparatus. Airborne dust may be explosive. Explosibility of dusts increases with decreasing particle size, so the production of fines should be minimized.

Conditions to Avoid: Avoid extreme heat. Decomposition occurs at temperatures above 240°C

Materials To Avoid: Avoid contact with polyvinylchloride (PVC) materials when processing Acetal; acids; strong oxidizers.

Hazardous Decomposition Products: Formaldehyde and carbon monoxide when product is exposed to excessive heat.

6. Occupational Control Procedures

Eye Protection: Safety glasses with side-shields should be worn during industrial operations. A face shield should be worn when handling molten material.

Skin Protection: Protective clothing should be worn when handling molten material.

Respiratory Protection: NIOSH approved organic vapor cartridge respirator if needed when handling molten materials. Supplied-air or self-contained breathing apparatus in emergency or non-routine situations.

Ventilation: Local exhaust ventilation a source may be needed when processing molten material. General ventilation should be adequate for routine handling.

7. Spill, Leak, or Disposal Information

Steps to be taken in case material is released or spilled: Reclaim for processing if possible.

Waste Disposal Method: Permitted landfill or incineration. Comply with local, state, and federal regulations.

Special Storage / Handling Requirements: Avoid extreme heat, protect from moisture during transportation and storage. Pellet-handling equipment should be grounded to prevent buildup of electrostatic charge. Pellets on floor may be slippery and cause falls. Avoid dust accumulation.

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe this information to be correct but cannot guarantee its accuracy or completeness. Health and safety precaution in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulation. No statement made in the data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.