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SAFETY DATA Information (203) 573-3303MSDS No. C224005Date Issued: 7/31/85Date Revised: 2/1/95; Supercedes: 5/3/94

R-4

## IDENTIFICATION

Trade Name: CELOGEN® TSH

CAS Number: 1576-35-8

Chemical Name: p-toluene sulfonyl hydrazide

Chemical Family: Hydrazide

## SPECIAL REGULATORY HAZARDS

<u>Ingredient</u>	<u>CAS No.</u>	<u>Exposure Limit</u>	<u>OSHA (1910.1200)</u>	<u>EEC*</u>
Product	1576-35-8	ND	Toxic Flammable Solid	Harmful Highly Flammable

Hazard assessment based on available data.

Transportation: DOT/ICAO/IATA/IMO Hazard Class: 4.1, Flammable Solid; ID No. UN3226

## PHYSICAL DATA

Appearance and Odor: Cream colored, crystalline powder, characteristic odor

Solubility: Insoluble in water  
Soluble in alcoholsSpecific Gravity (H<sub>2</sub>O = 1): 1.42

Melting Point: 212°F (100°C)

Vapor Pressure @ 20°C: NA

Boiling Point: NA

Vapor Density (Air = 1): NA

Other Data: ND

Volatility @ 70°F: Low

## FIRE AND EXPLOSION HAZARD DATA

Flash Point: [Decomposes at 230°F (110°C)]

Autoignition Temp: Bulk quantities may self-ignite if heated above 90°C

Extinguishing Media: Water spray, dry chemical

Flammable Limits: ND

Special Fire Fighting Procedures: Fires involving this material should be fought with fixed equipment.

Unusual Hazards: Fires involving large amounts of material should not be approached, individual containers may rupture abruptly causing "fireball" effect. In case of fire in nearby materials, soak containers with water. May form explosive dust-air mixtures. DO NOT ATTEMPT MANUAL FIRE FIGHTING.

## REACTIVITY DATA

Stability: Stable below decomposition temperature.

Incompatibility: Strong oxidizing agents.

Decomposition Products: N<sub>2</sub>, H<sub>2</sub>O, ammonium toluene sulfonamide and toluene sulfonamide.

NA = Not Applicable

ND = Not Determined

\*European Economic Community

Uniroyal makes no representation or warranty with respect to the information in this Material Safety Data Sheet. The information is however, as of this date provided, true and accurate to the best of Uniroyal's knowledge. This list of information is not intended to be all inclusive. Actual conditions of use and handling may require considerations of information other than, or in addition to, that which is provided herein.

## SPECIAL PROTECTION INFORMATION

**Engineering Controls:** Local exhaust ventilation strongly recommended. Protect closed handling systems against possible dust explosions. Avoid dust accumulation on building and equipment surfaces.

1. Limit quantity of product in processing or use are to no more than one container. Reclose container after any transfer operation.
2. Equipment should be designed and used to prevent sparks due to electrical discharges or metal on metal contact. All metal equipment should be effectively grounded.
3. Excessive heat and pressure build-up should be avoided during mixing or processing operations.

**Personal Protection Equipment:** Avoid all personal contact. Observe good personal hygiene. Impervious gloves, and goggles should be worn when handling. In the absence of adequate ventilation, NIOSH-certified respiratory protection for dust should be used.

## STORAGE, SPILLS AND DISPOSAL INFORMATION

**Storage:** Store in a cool, dry place in closed containers. Keep away from heat, sparks and open flame. Separate from combustible storage by 8 ft. aisles or isolate in detached building. Do not store over 4 ft. high unless sprinklers are hydraulically designed to produce a density of 0.5 gpm/sq. ft. over the entire area of the building.

**Spills:** Vacuum up an explosion proof or non-sparking vacuum cleaner to avoid creating dust. Transfer into secure containers for proper disposal. Use personal protective equipment as outlined above.

**Disposal:** In accordance with EPA-RCRA Regulations, 40CFR 261.21 (a) (2) - Ignitability, EPA Code-D001.  
Reportable Quantity: 100 lbs.

**Environmental Information:** Environmental effects have not been determined.

## HEALTH RELATED DATA

**Specific Hazard(s):** Toxic by oral exposure. Contact with eyes may cause irritation. No chronic health effects have been identified. There are no known medical conditions that are aggravated by exposure to this material.

**Primary Route(s) of Entry:** Inhalation, skin absorption.

**First Aid Procedures:**  
**Eye contact:** Flush with water for 15 minutes.  
**Skin contact:** Wash with soap and water.  
**Inhalation:** Remove to fresh air. Get medical attention.  
**Ingestion:** Induce vomiting. Get medical attention.

**Toxicology Information:**

**Oral toxicity:** LD50 (rats) - 360 mg/kg  
**Dermal toxicity:** LD50 (rabbits) - > 2 g/kg  
**Irritation:** eye (rabbits) - slight  
skin (rabbits) - negative  
**Genotoxicity:** Ames *Salmonella* - positive  
CHO HGPRT - negative  
Mouse micronucleus - negative  
Rat hepatocyte UDS - negative

MARKETED BY

**HARWICK STANDARD  
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