Material Safety Data Sheet

Uniroyal Chemical
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MSDS No. A313002 Date Issued: 10/15/85 **Date Revised: 10/1/98; Supercedes: 3/6/97** R-6

NOTE TO END-USERS: This MSDS is being provided to all interested persons in accordance with federal and state right-to-know laws. Precautionary Statements, First Aid Statements and Directions for Use of this product by end-users are contained on the product label and must be followed at all times.

IDENTIFICATION

Trade Name: B-NINE® SP

CAS Number: 1596-84-5 (active)

Chemical Name:

Chemical Family: Hydrazide

Butanedioic acid mono (2,2-dimethylhydrazide) (9CI) 85%
Inerts: 15%
Common Name: Daminozide

SPECIAL REGULATORY HAZARDS

Ingredient	CAS No.	Exposure Limit	OSHA (1910.1200)	EEC*
Product	Mixture	ND	Corrosive	Risk of serious damage to eyes

Hazard assessment based on available data.
Transportation: NA

PHYSICAL DATA

Appearance and Odor: White powder; slight amine-like odor

Solubility: 11.5% in water @ 20°C

Specific Gravity (H2O=1): 1.37 g/cm^3

Vapor Pressure @ 20°C: ND

Melting Point: NA

Vapor Density (Air = 1): ND

Boiling Point: NA

Volatility @ 70°F: Nil

Other Data: Bulk Density: 0.52 - 0.58; Evaporation rate (Butyl acetate = 1): Nil

FIRE AND EXPLOSION HAZARD DATA

Flash Point: >100°C (212°F) Setaflash clos. cup

Autoignition Temperature: 262°C (504°F)

Extinguishing Media: Water spray, dry chemical.

Flammable Limits: LEL: 0.032 oz./ft.^{3}

Special Fire Fighting Procedures: Protect against inhalation of combustion products.

Unusual Hazards: May form explosive dust-air mixtures.

REACTIVITY DATA

Stability: Light stable. May darken when heated.

Incompatibility: Strong acids or alkalis.

Decomposition Products: Oxides of nitrogen and dimethyl hydrazine (an animal carcinogen) under burning conditions.

NA = Not Applicable ND = Not Determined * European Economic Community

SPECIAL PROTECTION INFORMATION

Engineering Controls: Sufficient ventilation to minimize dust exposure. Protect closed dust handling systems against possible dust explosions. Avoid dust accumulations on building or equipment surfaces.

Personal Protection Equipment: Avoid all personal contact. Observe good personal hygiene. Chemical resistant gloves, protective clothing and eye protection should be worn when handling. Launder clothing before reuse. In the absence of adequate ventilation, use NIOSH-certified **respiratory protection.**

NOTE TO END-USERS: The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.

STORAGE, SPILLS AND DISPOSAL INFORMATION

Storage: Do not contaminate water, food or feed by storage or disposal. Store in the original container only. After partial use, close the container tightly. Store in a secure place that is temperate and dry. High humidity and moisture will cause this product to harden. Use spray and stock solutions within 24 hours. Do not store solutions. Immediate use is appropriate if another component is added to spray mixture.

Spills: Vacuum up to avoid creating dust. Transfer into secure containers for proper disposal. Use personal protective equipment as outlined above.

Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Environmental Information: Do not discharge into lakes, streams, ponds or public waters unless in accordance with NPDES permit. For guidance, contact your Regional Office of the EPA. Do not contaminate water when disposing of equipment washwaters.

Bluegill Sunfish: 96 hr LC50 - 650 ppm
Rainbow Trout: 96hr LC50 - 360 ppm
Bobwhite Quail LC50 - > 5620 ppm

These data indicate that B-NINE SP is not toxic to these species.

HEALTH RELATED DATA

SPECIFIC HAZARDS: Contact with eyes may cause irreversible eye damage. Contact with skin may cause irritation.

Primary Route(s) of Entry: Ingestion, skin absorption, eye contact, inhalation.

First Aid Procedures:

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF SWALLOWED: Drink promptly a large quantity of milk, egg white or gelatin solution; if not available drink large amounts of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

TOXICOLOGY INFORMATION:

Oral toxicity: LD50 (rats) - > 5000 mg/kg
Dermal toxicity: LD50 (rabbits) - 5000 mg/kg
Inhalation toxicity: LC50 (rats) - > 2.0 mg/l (4hr)
Irritation: eye (rabbits): corrosive
skin (rabbits): minimal

Chronic: In a chronic rat feeding study, at doses up to 10,000 ppm (500 mg/kg/day) there was an increased incidence of ovarian atrophy and bile duct hyperplasis in females. Daminozide was not carcinogenic. The NOEL for chronic toxicity was 5 mg/kg/day. There was no evidence of carcinogenic effects in a mouse oncogenicity study at doses up to 10,000 ppm (1430 mg/kg/day). In a dog feeding study, at doses up to 7500 ppm (188 mg/kg/day), there were no effects on any toxicological parameter.

In a rat reproduction study, at doses up to 10,000 ppm (500 mg/kg/day), there were no effects in offspring growth, however, there was a slight delay in mating. The NOEL for reproductive toxicity was 100 ppm (5 mg/kg/day). In a rat teratology study, at doses up to 1800 mg/kg/day, there was an increase in developmental variations (incomplete ossification of sternebra) at 1800 mg/kg/day. The NOEL for developmental toxicity was 390 mg/kg/day. In a rabbit teratology study, at doses up to 300 mg/kg/day, there were no teratogenic or developmental effects at the highest dose tested. The NOEL for developmental toxicity was 300 mg/kg/day.

Daminozide was negative in the Ames, mouse dominant lethal, mouse lymphoma, E. coli, DNA damage and CHO chromosome aberration assays.