

# Material Safety Data Sheet

## n-Ethylmaleimide, 99+%

ACC# 01068

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** n-Ethylmaleimide, 99+%

**Catalog Numbers:** AC156100050, AC156100100, AC156100250, AC156100500, NC9133919, NC9289156, NC9481561, XXAC15610-100G

**Synonyms:** 1-Ethyl-1H-Pyrrole-2,5-Dione; NEM; Cryptopyrrole; Maleic acid n-ethylimide.

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
128-53-0	n-Ethylmaleimide	>99	204-892-4

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white to light yellow crystalline powder. Flash Point: 73 deg C.

**Danger!** Toxic if swallowed, inhaled or absorbed through the skin. May be fatal if swallowed. Causes eye and skin burns. Causes digestive and respiratory tract irritation with possible burns. May cause allergic skin reaction. The toxicological properties of this material have not been fully investigated.

**Target Organs:** Respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** Causes eye burns. Lachrymator (substance which increases the flow of tears). May cause corneal edema and inflammation.

**Skin:** Causes skin burns. Toxic in contact with skin. Skin contact may cause an allergic skin reaction (sensitization) in a small proportion of individuals.

**Ingestion:** May be fatal if swallowed. May cause burns to the digestive tract. May cause nausea and vomiting.

**Inhalation:** Irritation may lead to chemical pneumonitis and pulmonary edema. Toxic if inhaled. Causes respiratory tract irritation with possible burns.

**Chronic:** Laboratory experiments have resulted in mutagenic effects.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

**Skin:** Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.

**Ingestion:** POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** 73 deg C ( 163.40 deg F)

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Keep refrigerated. (Store below 4°C/39°F.) Store in a tightly closed container. Store in a dry area. Store protected from light. Store under nitrogen. Refrigeration has been recommended to prolong integrity of the product.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
n-Ethylmaleimide	none listed	none listed	none listed

**OSHA Vacated PELs:** n-Ethylmaleimide: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystalline powder

**Appearance:** white to light yellow

**Odor:** pungent odor - strong odor

**pH:** 5.1 (1g/l aq. sol.)

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not available.

**Boiling Point:** 210 deg C

**Freezing/Melting Point:** 41-45 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Soluble in water.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C<sub>6</sub>H<sub>7</sub>NO<sub>2</sub>

**Molecular Weight:** 125.0545

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. May discolor on exposure to light.

**Conditions to Avoid:** High temperatures, light, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong acids, strong bases.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 128-53-0: UX9625000

### LD50/LC50:

**CAS#** 128-53-0:

Dermal, guinea pig: LD50 = 500 mg/kg;

Oral, mouse: LD50 = 25 mg/kg;

Oral, rat: LD50 = 25 mg/kg;

### Carcinogenicity:

**CAS#** 128-53-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** DNA Inhibition: hamster lung 750nmol/L; human cell types 6umol/L; mouse cell types 300umol/L; rat liver 2umol.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.

**Environmental:** No information reported.

**Physical:** No information available.

**Other:** None.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (n-Ethylmaleimide)	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (n-Ethylmaleimide)
<b>Hazard Class:</b>	6.1	6.1
<b>UN Number:</b>	UN2928	UN2928
<b>Packing Group:</b>	II	II

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 128-53-0 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 128-53-0: immediate, fire.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 128-53-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

#### Hazard Symbols:

T+

#### Risk Phrases:

R 28 Very toxic if swallowed.

R 34 Causes burns.

R 43 May cause sensitization by skin contact.

**Safety Phrases:**

- S 1 Keep locked up.
- S 24 Avoid contact with skin.
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 28 After contact with skin, wash immediately with...
- S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WGK (Water Danger/Protection)**

CAS# 128-53-0: 3

**Canada - DSL/NDSL**

CAS# 128-53-0 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of E, D1A, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 128-53-0 is listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 9/23/1998

**Revision #3 Date:** 4/21/2004

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