SAFETY DATA SHEET

Creation Date 20-September-2009 **Revision Date** 19-March-2018 **Revision Number** 1

1. Identification

Product Name **N-Ethylmaleimide**

Cat No. : **40526**

CAS-No 128-53-0
Synonyms NEM

Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (800) 579-7421.

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 3
Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1

Label Elements

Signal Word
Danger

Hazard Statements
Fatal if swallowed
Toxic in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction

Precautionary Statements
Prevention
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection
Response
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER/doctor
Rinse mouth
Do NOT induce vomiting
Wash contaminated clothing before reuse
Storage
Store locked up
Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Light sensitive

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Maleic acid N-ethylimide	128-53-0	>95

4. First-aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation Move to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects Breathing difficulties. Causes burns by all exposure routes. May cause allergic skin reaction. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling,

trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire

Flash Point 73 °C / 163.4 °F

Method - No information available

Autoignition Temperature Not applicable

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes. Containers may explode when heated. Combustible material.

Hazardous Combustion Products

Thermal decomposition can lead to release of irritating gases and vapors

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
3	1	0 1	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.

Refer to protective measures listed in Sections 7 and 8

Environmental Precautions Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Remove all sources of ignition.

7. Handling and storage

Handling Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Wear personal protective equipment. Do not ingest. Do not breathe vapors/dust. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep away from heat and sources of ignition. Keep locked-up. Keep away from direct sunlight. Keep refrigerated. Store under an inert atmosphere.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection	Goggles
Hand Protection	Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber Neoprene Natural rubber PVC	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified 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.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
Recommended Filter type: Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls
No information available.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Powder Solid
Appearance	Off-white
Odor	pungent
Odor Threshold	No information available
pH	5.1 @ 20°C 1 g/l aq.sol
Melting Point/Range	41 - 45 °C / 105.8 - 113 °F
Boiling Point/Range	210 °C / 410 °F @ 760 mmHg
Flash Point	73 °C / 163.4 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	Not applicable

Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	C6 H7 N O2
Molecular Weight	125.13

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions. Sensitivity to light.

Conditions to Avoid Excess heat. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition. Exposure to light.

Incompatible Materials Strong oxidizing agents, Strong acids, Strong bases

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapors

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50 ATE = 5 - 50 mg/kg. Category 2.

Dermal LD50 ATE = 200 - 1000 mg/kg. Category 3.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Maleic acid N-ethylimide	25 mg/kg (Rat)	500 mg/kg (Guinea pig)	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Causes burns by all exposure routes

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Maleic acid N-ethylimide	128-53-0	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble

breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Harmful to aquatic organisms.

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No	UN2928
Proper Shipping Name	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class	6.1
Subsidiary Hazard Class	8
Packing Group	II

TDG

UN-No	UN2928
Proper Shipping Name	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class	6.1
Subsidiary Hazard Class	8
Packing Group	II

IATA

UN-No	UN2928
Proper Shipping Name	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class	6.1
Subsidiary Hazard Class	8
Packing Group	II

IMDG/IMO

UN-No	UN2928
Proper Shipping Name	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class	6.1
Subsidiary Hazard Class	8
Packing Group	II

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

Component	DSL	NDSL	TSCA	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Maleic acid N-ethylimide	X	-	X	204-892-4	-		-	-	X	X	-

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

16. Other information

Prepared By	Product Safety Department Email: tech@alfa.com www.alfa.com
Creation Date	20-September-2009
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Print Date	19-March-2018
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Disclaimer

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End of SDS