

# MATERIAL SAFETY DATA SHEET

## PRODUCT AND COMPANY IDENTIFICATION

Company name : COOLMIN Co., LTD.  
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number

Established/revised on Apr 30<sup>th</sup>, 2014

PRODUCT NAME (Chemical name, product name) : COOLMIN E-10

## IDENTIFICATION OF THE SUBSTANCE

Single product / Mixture	:	Mixture	
Chemical name	:	Phosphoric acid	N,N'-Diethylthiourea
Component and contents	:	45.0%	0.5%
Chemical formula/Structural formula	:	H3PO4	C5H12N2S
METI number	:	(1)-422	(2)-1758
CAS registry number	:	7664-38-2	105-55-5
Category UN /UN number	:	1805	Not available
PRTR	:	Not available	Not available

## HAZARDS IDENTIFICATION

Category name	:	Corrosive substance
Risk	:	Nonflammable but reacts with various metals to form flammable gases (hydrogen).
Potential health effects	:	Eye and skin contact: Irritates eyes and skin.
Potential environmental effects	:	Drainage treatment is needed.

## FIRST AID MEASURES

Eye contact	:	Immediately flush eyes with plenty of running water for over 15 minutes. Make sure to wash every corner of lids and eyeballs. Get medical attention by an ophthalmologist if needed.
Skin contact	:	Immediately remove contaminated clothing including shoes and wash affected area with plenty of water. If irritations occur, get medical attention if needed.
Inhalation	:	Immediately move person into fresh air and keep at rest. Get medical attention if needed.
Ingestion	:	DO NOT induce vomiting and rinse mouth with water; give to the person one or two cups of water or milk. Get immediate medical treatment.

## FIRE FIGHTING MEASURES

Flammability	:	Nonflammable
Extinguishing media	:	-

## ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protection (e.g. eye protector, rubber gloves, rubber boots and protective mask, etc.). Absorb liquid by dry sand or inert adsorbent or conduct to a safe place and wash out with plenty of water after dilution and neutralization by slaked lime and/or calcined soda.

#### HANDLING AND STORAGE

- Handling : Wear, if needed, appropriate protection (e.g. eye protector, rubber gloves, rubber boots and long-sleeved blouse, etc.) to avoid direct contact with skin, eyes and clothes. Handle the container with care.
- Storage : After use, store in a sealed container away from entry of dust and moisture. Store away from direct sunlight and rain water and in a cool, dark and well-ventilated place.

#### EXPOSURE CONTROLS / PERSONAL PROTECTION

- Occupational exposure control limits : None
- Occupational exposure limits
- Japan Society for Occupational Health : None
- ACGIH : None
- Work hygienic practices : Eyewash/body wash facility near working area recommended.
- Personal protective equipment
- Respiratory protection : Acid gas mask if necessary
- Eye protection : Goggles
- Hand protection : Rubber gloves
- Foot protection : Rubbers boots
- Skin and body protection : Long-sleeved blouse

#### PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Clear and colorless liquid
- Boiling point : Approx. 100°C
- Vapor pressure : - Pa (°C)
- Solubility : Arbitrarily soluble to water.
- Flushing point : - °C
- Specific gravity : 1.33±0.01 (25°C)

#### STABILITY AND REACTIVITY

- Burning point : Not available
- Firing point : Not available
- Explosion limit : Not available
- Flammability : Nonflammable
- Ignition quality : Not available
- (hypergolicity and water reactivity)
- Oxydability : Available
- Autoreactivity / explodability : Not available
- Dust explodability : Not available
- Stability / reactivity : Cause metal to corrode and generate hydrogen which may explode when mixed with air. React with most

metals.

### TOXICOLOGICAL INFORMATION

Dermal corrosivity	:	Prolonged exposure may irritate.
Irritant property (skin, eyes)	:	Prolonged exposure may irritate skin and eyes.
Sensitizing property	:	Not available
Acute (including LD <sub>50</sub> )	:	Not available
Subacute	:	Not available
Chronic	:	Not available
Carcinogenicity	:	Not available
Mutagenicity	:	Not available
Reproductive effects	:	Not available
Teratogenicity	:	Not available
Others (Including toxic gases generation by water-reaction)	:	Not available

### ECOLOGICAL INFORMATION

Degradability	:	Not available
Accumulability	:	Not available
Fish toxicity	:	Not available
Others	:	Acid when dissolved in water. Toxic against aquatic lives.

### DISPOSAL CONSIDERATIONS

Dispose the effluents to the sewage treatment facilities in accordance with the provisions of ordinances. Or the effluents and containers shall be properly treated pursuant to all the relevant regulations by entrusting their disposal to the waste treatment companies authorized by the prefectural governors.

### TRANSPORT INFORMATION

Comply with the instructions set forth in "Handling and storage". Make sure the containers are not leaky, load them avoiding overturning, falling and damages, and take measures to prevent collapse of cargo.

### REGULATORY INFORMATION

Article 57-2 of the Industrial Safety and Health Act: Material to be advised (Appendix 9 of government decree)  
45% phosphoric acid

### OTHER INFORMATION

Descriptions given above are established based on data and information currently available, but in no way do they guarantee the relevancy of such data/information or of the evaluations thereof. Moreover, since these instructions apply to normal use of the product, safety measures appropriate for intended purpose should be newly undertaken in case of particular uses.