

SAFETY DATA SHEET

Date of Issue: Jan 20, 2017**Technical Review Date:** Jan 20, 2017**Version:** D0001.001

Section 1 - Product and Company Identification

EM

A. Product name

- EM

B. Recommended use and restriction on use

- General use : NOT AVAILABLE.

- Restriction on use : NOT AVAILABLE.

C. Manufacturer / Supplier / Distributor information○ **Manufacturer****information**

- Company name : DON CO., LTD
 - Address 1 : 157, GUNGPYEONG-RI, DOCHEOK-MYEON
 - Address 2 : GWANGJU-SI, GYEONGGI-DO, KOREA
 - Dept. : QUALITY CONTROL DEPT.
 - Telephone number : 82-31-769-2475(DON HEAD OFFICE)
 - Emergency telephone number : 82-31-769-2475 (443)
 - Fax number : 82-31-769-2479
 - E-mail address : dcresearch@don21c.com
- **Supplier/Distributor information**
- Company name : DON CO., LTD
 - Address 1 : 157, GUNGPYEONG-RI, DOCHEOK-MYEON
 - Address 2 : GWANGJU-SI, GYEONGGI-DO, KOREA
 - Dept. : OVERSEAS SALES/BUSINESS/MARKETING DEPT.
 - Telephone number : 82-31-769-2475(DON HEAD OFFICE)
 - Emergency telephone number : 82-31-769-2475 (407)
 - Fax number : 82-31-769-2479
 - E-mail address : don@don21c.com
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Section 2 - Hazards Identification, Including Emergency Overview

EM

A. Hazard classification

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200.

B. Label elements

- **Signal word**
NOT APPLICABLE.
- **Symbols**
NOT APPLICABLE.
- **Pictograms**
NOT APPLICABLE.

B. Other hazards

NONE KNOWN.

Section 3 - Composition/Information on Ingredients**EM**

A. Ingredient Name: EM

NAME	%	CAS NO	CLASSIFICATION
Magnesium difluoride	99.9	7783-40-6	N/A

* EXACT PERCENTAGES ARE BEING WITHHELD AS A TRADE SECRET.

Section 4 - First Aid Measures**EM**

A. Description of first-aid measures

- **Inhalation**
AFTER INHALATION: FRESH AIR.
- **Skin contact**
AFTER SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.
RINSE SKIN WITH WATER/SHOWER.
- **Eye contact**
AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER.

- **Ingestion**

AFTER SWALLOWING: MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST).

CONSULT DOCTOR IF FEELING UNWELL.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

B. Most important symptoms and effects, both acute and delayed

IRRITANT EFFECTS

C. Indication of any immediate medical attention and special treatment needed

NO INFORMATION AVAILABLE.

Section 5 - Fire Fighting Measures

EM

A. Extinguishing media

- **Suitable extinguishing media**

USE EXTINGUISHING MEASURES THAT ARE APPROPRIATE TO LOCAL CIRCUMSTANCES AND THE SURROUNDING ENVIRONMENT.

- **Unsuitable extinguishing media**

FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF EXTINGUISHING AGENTS ARE GIVEN.

B. Special hazards arising from the substance or mixture

NOT COMBUSTIBLE.

AMBIENT FIRE MAY LIBERATE HAZARDOUS VAPORS.

C. Advice for firefighters

- **Special protective equipment for fire-fighters**

IN THE EVENT OF FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS.

D. Further information

SUPPRESS (KNOCK DOWN) GASES/VAPORS/MISTS WITH A WATER SPRAY JET.

Section 6 - Accidental Release Measures

EM

WEAR APPROPRIATE PROTECTIVE DEVICES (SEE SECTION 8 EXPOSURE CONTROLS/
3/11 page

PERSONAL PROTECTION). AVOID CONTACT WITH EYES AND SKIN.
DO NOT INHALE THE PRODUCT.

A. Environmental precautions

NO SPECIAL PRECAUTIONARY MEASURES NECESSARY.

B. Methods and materials for containment and cleaning up

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS.
OBSERVE POSSIBLE MATERIAL RESTRICTIONS.
TAKE UP DRY. DISPOSE OF PROPERLY. CLEAN UP AFFECTED AREA.
AVOID GENERATION OF DUSTS.
OBSERVE POSSIBLE MATERIAL RESTRICTIONS.
TAKE UP DRY. DISPOSE OF PROPERLY.
CLEAN UP AFFECTED AREA. AVOID GENERATION OF DUSTS.

C. Reference to other sections

SEE SECTION 7 FOR INFORMATION ON SAFE HANDLING.
SEE SECTION 8 FOR INFORMATION ON PERSONAL PROTECTION EQUIPMENT.
SEE SECTION 13 FOR DISPOSAL INFORMATION.

Section 7 - Handling and Storage

EM

A. Precautions for safe handling

OBSERVE LABEL PRECAUTIONS.

B. Conditions for safe storage, including any incompatibilities

STORE IN COOL, DRY CONDITIONS IN WELL SEALED RECEPTACLE.
PROTECT FROM CONTAMINATION.
PROTECT FROM HEAT AND DIRECT SUNLIGHT.
STORE LOCKED UP.

Section 8 - Exposure Controls & Personal Protection

EM

A. Exposure limits(s)

Magnesium difluoride 7783-40-6○ **ACGIH**TIME WEIGHTED AVERAGE(TWA) - THRESHOLD LIMITS: 0.1 mg/m³○ **NIOSH/GUIDE**RECOMMENDED EXPOSURE LIMIT (REL) - THRESHOLD LIMITS: 0.1 mg/m³○ **OSHA_TRANS**

NO INFORMATION AVAILABLE.

○ **Z1A**TIME WEIGHTED AVERAGE(TWA) - THRESHOLD LIMITS: 0.1 mg/m³○ **OSHA/Z2**

NO INFORMATION AVAILABLE.

Tin(IV) oxide 18282-10-5○ **ACGIH**TIME WEIGHTED AVERAGE(TWA) - THRESHOLD LIMITS: 2 mg/m³○ **NIOSH/GUIDE**RECOMMENDED EXPOSURE LIMIT (REL) - THRESHOLD LIMITS: 2 mg/m³○ **OSHA_TRANS**

NO INFORMATION AVAILABLE.

○ **Z1A**

NO INFORMATION AVAILABLE.

○ **OSHA/Z2**

NO INFORMATION AVAILABLE.

B. Engineering controls

TECHNICAL MEASURES AND APPROPRIATE WORKING OPERATIONS SHOULD BE GIVEN PRIORITY OVER THE USE OF PERSONAL PROTECTIVE EQUIPMENT.

C. Personal protective equipment○ **Respiratory protection**

REQUIRED WHEN DUSTS ARE GENERATED.

○ **Eye/face protection**

USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US)

○ **Hand protection**

CHEMICAL-RESISTANT, IMPERVIOUS GLOVES COMPLYING WITH AN APPROVED STANDARD SHOULD BE WORN AT ALL TIMES WHEN HANDLING CHEMICAL PRODUCTS IF A RISK

ASSESSMENT INDICATES THIS IS NECESSARY.

○ **Hygiene measures**

CHANGE CONTAMINATED CLOTHING. APPLICATION OF SKIN- PROTECTIVE BARRIER CREAM RECOMMENDED. WASH HANDS AFTER WORKING WITH SUBSTANCE.

○ **Others**

NO INFORMATION AVAILABLE.

Section 9 - Physical & Chemical Properties

EM

A. Physical state	SOLID(GRANULE)
B. Color	YELLOW & GREEN
B. Odor	ODORLESS
C. Odor threshold	NOT APPLICABLE.
D. pH	NO INFORMATION AVAILABLE.
E. Melting point/Freezing point	1,900 ~1,920 °C - lit.
F. Initial Boiling Point/Boiling Ranges	NO INFORMATION AVAILABLE.
G. Flash point	NO INFORMATION AVAILABLE.
H. Evaporation rate	NO INFORMATION AVAILABLE.
I. Flammability(Solid, gas)	THE PRODUCT IS NOT FLAMMABLE.
J. Upper/Lower Flammability or explosive limits	NO INFORMATION AVAILABLE.
K. Vapor pressure	NO INFORMATION AVAILABLE.
L. Solubility	NO INFORMATION AVAILABLE.
M. Vapor density	NO INFORMATION AVAILABLE.
N. Specific gravity	7.16 g/mL
O. Partition coefficient of n-octanol/water	NO INFORMATION AVAILABLE.
P. Autoignition temperature	NO INFORMATION AVAILABLE.
Q. Decomposition temperature	NO INFORMATION AVAILABLE.
R. Viscosity	NO INFORMATION AVAILABLE.
S. Molecular weight	NO INFORMATION AVAILABLE.

Section 10 - Stability & Reactivity Data

EM

A. Reactivity

THIS MATERIAL IS CONSIDERED TO BE NON REACTIVE UNDER NORMAL USE CONDITIONS.

B. Chemical stability

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

C. Conditions to avoid

EXPOSURE TO MOISTURE MAY AFFECT PRODUCT QUALITY.

D. Incompatible materials

NO INFORMATION AVAILABLE.

E. Hazardous decomposition products

HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

Section 11 - Toxicological Information**EM**

A. Information on toxicological effects**o Likely route of exposure**

EYE CONTACT, SKIN CONTACT, INGESTION

o Target Organs

RESPIRATORY SYSTEM

o Specific target organ systemic toxicity - single exposure

THE SUBSTANCE OR MIXTURE IS NOT CLASSIFIED AS SPECIFIC TARGET ORGAN TOXICANT, SINGLE EXPOSURE.

o Specific target organ systemic toxicity - repeated exposure

THE SUBSTANCE OR MIXTURE IS NOT CLASSIFIED AS SPECIFIC TARGET ORGAN TOXICANT, REPEATED EXPOSURE.

o Aspiration hazard

REGARDING THE AVAILABLE DATA THE CLASSIFICATION CRITERIA ARE NOT FULFILLED.

B. Carcinogenicity**o IARC**

NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.

o OSHA

NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY *OSHA*.

○ **NTP**

NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY *NTP*.

○ **ACGIH**

NO INGREDIENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY *ACGIH*.

C. Further information

HAZARDOUS PROPERTIES CANNOT BE EXCLUDED BUT ARE UNLIKELY WHEN THE PRODUCT IS HANDLED APPROPRIATELY.

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.

○ **Ingredients**

Magnesium difluoride 7783-40-6

NO INFORMATION AVAILABLE.

Tin(IV) oxide 18282-10-5

ACUTE ORAL TOXICITY

LD50 Rat: > 20,000 mg/kg (RTECS)

Section 12 - Ecological Information & Environmental Information

EM

A. Ecotoxicity

NO INFORMATION AVAILABLE.

B. Persistence and degradability

NO INFORMATION AVAILABLE.

C. Bioaccumulative potential

NO INFORMATION AVAILABLE.

D. Mobility in soil

NO INFORMATION AVAILABLE.

o Ingredients

Magnesium difluoride 7783-40-6

NO INFORMATION AVAILABLE.

Tin(IV) oxide 18282-10-5

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES

NOEC Daphnia magna (Water flea): > 100 mg/l; 48 h

(above the solubility limit in the test medium) (own results)

EC50 Daphnia magna (Water flea): > 100 mg/l; 48 h

(above the solubility limit in the test medium) (own results)

BIODEGRADABILITY

THE METHODS FOR DETERMINING THE BIOLOGICAL DEGRADABILITY ARE NOT APPLICABLE TO INORGANIC SUBSTANCES.

E. Additional ecological information

NO INFORMATION AVAILABLE.

Section 13 - Disposal Considerations

EM

A. Disposal methods

DISPOSE OF CONTENTS/ CONTAINER IN ACCORDANCE WITH THE LOCAL/REGIONAL /NATIONAL/INTERNATIONAL REGULATIONS.

DISPOSE OF WASTE PRODUCT IN A PERMITTED INDUSTRIAL WASTE FACILITY.

B. Uncleaned packaging

DISPOSAL MUST BE MADE ACCORDING TO OFFICIAL REGULATIONS.

Section 14 - Transport Information

EM

A. Land transport (DOT)

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

B. Air transport (IATA)

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

C. Sea transport (IMDG)

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

Section 15 - Regulatory Information**EM**

A. National and/or international regulatory information

- **POPs Management Law**
NOT APPLICABLE
- **Information of EU Classification**
 - * **Classification**
NOT APPLICABLE
 - * **Risk Phrases**
NOT APPLICABLE
 - * **Safety Phrase**
NOT APPLICABLE
- **U.S. Federal regulations**
 - * **OSHA PROCESS SAFETY (29 CFR 1910.119)**
NOT APPLICABLE
 - * **CERCLA Section 103 (40CFR302.4)**
NOT APPLICABLE
 - * **EPCRA Section 302 (40CFR355.30)**
NOT APPLICABLE
 - * **EPCRA Section 304 (40CFR355.40)**
NOT APPLICABLE
 - * **EPCRA Section 313 (40CFR372.65)**
NOT APPLICABLE
- **Rotterdam Convention listed ingredients**
NOT APPLICABLE
- **Stockholm Convention listed ingredients**
NOT APPLICABLE
- **Montreal Protocol listed ingredients**
NOT APPLICABLE

Section 16 - Other Information**EM**

A. Reference

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE. IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PERFORMANCE INFORMATION CONCERNING THE PRODUCT. NO EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE WITH RESPECT TO THE PRODUCT OR THE INFORMATION CONTAINED HEREIN.

THIS SAFETY DATA SHEET WAS COMPILED WITH DATA AND INFORMATION FROM THE FOLLOWING SOURCES: *OSHA, NITE, ESIS, NLM, SIDS, IPCS*

B. Issue date

- Jan 20, 2017

C. Revision number and Last date revised

- Rev. 1 , Jan 20, 2017

D. Other

- THIS SDS IS PREPARED ACCORDING TO *THE GLOBALLY HARMONIZED SYSTEM (GHS)*.

Description: EM

Date of Issue: Jan 20, 2017

Technical Review Date: Jan 20, 2017 .