

Material Safety Data Sheet

(Material Safety Data Sheet)

PRODUCT NAME

Powerful Dust Remover DR-747 (250g, 320g)
(Powerful Dust Remover DR-747 (250g, 320g))

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MSDS Number: AA00190-0000000106

[This material was prepared in accordance with Article 110 of the Industrial Safety and Health Act]

1. Information about chemical products and companies

A. Product name: Powerful dust remover DR-747 (250g, 320g) (Powerful dust remover DR-747 (250g, 320g))

B. Recommended uses and restrictions on use of the product:

Recommended Uses: Dust Remover

Restrictions on use: Use outdoors or in a ventilated area.

D. Supplier Information:

Company Name (Manufacturer): Nabakhem Co., Ltd.

Address (Manufacturer): 81, Bongjae-gil 63beon-gil, Dunpo-myeon, Asan-si, Chungcheongnam-do

Emergency number (manufacturer): TEL: (041)531-7992, FAX: (041)534-7991

2. Harmful hazards

A. Classification of hazards and risks

Classification of Chemicals	Classification of hazards and risks
flammable aerosol	1
flammable gas	1
High pressure gas	Liquefied gas
Skin corrosion/irritation	2
Severe eye damage/eye irritation	2
Reproductive toxicity	2
Specific target organ toxicity - single exposure	3 (anesthetic effect)

B. Warning label items including precautionary statements

nine minute	graph city
Pictograph	
Signal word	danger
Hazardous/dangerous statements	H222 Extremely flammable aerosol. H229 Pressurized container: may burst if heated. H220 Extremely flammable gas. H280 Gas under pressure: May explode if heated.

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		H315 Causes skin irritation. H319 Causes serious eye irritation. H361 Suspected of damaging fertility or the fetus. H336 May cause drowsiness or dizziness.
Precautions Stationery	prevention	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on open flame or other ignition sources. P251 Do not pierce or burn, even after use. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash affected area thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.
	react	P302+P352 IF ON SKIN: Wash with plenty of soap and water. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/attention. P312 If you feel unwell: Call a POISON CENTER or doctor/physician. P321 Wash skin with soap and water. Treat with soap and water. P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash before reuse. P377 Gas leak/fire; do not extinguish unless leak can be stopped safely. P381 In case of leak: Eliminate all sources of ignition.
	save	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked. P410+P403 Keep away from direct sunlight. Store in a well-ventilated place. P410+P412 Keep away from direct sunlight. Do not expose to temperatures above 50°C.
	dispose	P501 Dispose of contents/container in accordance with local, national and international waste disposal regulations.

D. Other hazards and risks not included in the hazard and risk classification criteria: No data

3. Name and content of ingredients

Chemical name	Alias	CAS number/identification number	content(%)
Dimethyl ether	methyl ether	115-10-6	100

4. Emergency measures

A. When in eyes: If chemicals get into your eyes, seek medical attention and treatment immediately. Chemicals

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In case of eye contact, rinse with plenty of water for at least 15 minutes.

B. In case of skin contact: Wash with plenty of soapy water for more than 15 minutes to remove the chemical. In case of skin disease

Seek medical advice. Wash contaminated clothing and shoes before reuse.

Remove and discard any clothing and shoes contaminated with chemicals.

If inhaled: Keep away from source of exposure. If not breathing, give artificial respiration. If chemical is inhaled:

If inhaled, seek medical advice and treatment immediately.

A. When swallowed: If swallowed in large quantities, seek medical attention.

B. Other doctor's notes: No data available

5. How to respond in case of explosion or fire

A. Appropriate (inappropriate) extinguishing agent

Suitable extinguishing media: water, dry chemical, carbon dioxide, foam.

Inappropriate extinguishing agent: No data available

B. Specific hazards arising from chemicals (hazardous substances generated during combustion): Decomposes at high temperatures to produce toxic gases

May explode when heated. Some may burn but do not ignite easily. Non-flammable, material

Although it does not burn itself, it may decompose when heated and produce corrosive/toxic fumes.

D. Protective equipment and precautions to wear when fighting fire: If possible without risk, keep containers away from the fire area.

Move. Cool the container with water spray for a considerable period of time after evolution. At both ends of the tank

Do not approach. In case of fire in the loading/unloading or storage area: After the fire is extinguished, it may take a considerable amount of time.

During the operation, cool the container by spraying water using an unmanned hose holder or monitor nozzle. If

If this is not possible, take the following precautions: Prevent access by non-related persons and isolate the hazard area.

Isolate and prohibit entry. Leave to burn. If there is a sound of safety devices operating due to fire,

If the tank or tank truck becomes discolored, evacuate immediately. For tanks, railcars or tank trucks: Evacuate

Radius: 0.8 Km (1/2 mile)

6. How to respond in case of a leak

A. Precautions and protective equipment required to protect the human body

Eliminate all ignition sources (lighted cigarettes, open flames, sparks) in the vicinity. Reduce vapor generation by spraying water.

Avoid contact with heat, sparks, flames or other ignition sources. Do not put water inside the container.

B. Measures necessary to protect the environment

Prevent vapors from spreading through drains, vents, or confined spaces.

D. Purification or removal method

Build a levee to collect the water for digestion. Cover the spill with inert material (e.g. dry sand or earth).

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Absorb the liquid and place in a chemical waste container. Absorb the liquid and wash the contaminated area with detergent and water.

Give it to me.

7. Handling and storage methods

A. Safe handling instructions: Store and handle in accordance with current laws and regulations.

B. Safe storage method: Store in a cool, dry place. Store in a well-ventilated area. Do not mix.

Separate from material.

8. Exposure prevention and personal protective equipment

A. Exposure standards for chemical substances, biological exposure standards:

Dimethyl ether;

Domestic regulations: No data

ACGIH Regulations: No data available

Biological exposure standards: No data available

B. Appropriate engineering management: Use under appropriate ventilation facilities.

D. Personal protective equipment

- Respiratory protection: Wear a mask that can protect your respiratory system from flying dust.
- Eye protection: Wear safety glasses that can be used over safety glasses to protect against flying objects or harmful liquids.
- Install eyewash fountains and emergency wash facilities (shower type) near the work area.
- Hand protection: Wear protective gloves.
- Body protection: Wear appropriate protective clothing.

9. Physical and chemical properties

A. Appearance: No data available

B. Smell: Ether smell

D. Odor threshold: No data available

A. pH: No data available

Melting point/freezing point: No data available

B. Initial boiling point/boiling range: Dimethyl ether -23.6 °C

4. Flash point: Dimethyl ether -80°C

Ah. Evaporation rate: No data available

Yes. Flammability (solid, gas): No data available

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Tea. Upper/lower flammability or explosive limits: Dimethyl ether 26.7 / 3.4 %

Ka. Vapor pressure: No data available

TA. Solubility: Soluble

Wave. Vapor density: No data available

Ha. Specific gravity: 0.61 ± 0.05

N. Octanol/water partition coefficient: No data available

You. Autoignition temperature: No data available

Decomposition temperature: No data available

Ru. Viscosity: No data available

Molecular weight: No data available for mixture

10. Stability and Responsiveness

A. Chemical stability and possibility of hazardous reactions: Stable at room temperature and pressure.

B. Conditions to avoid: Avoid heat, flame, sparks and other ignition sources. Avoid contact with incompatible substances.

D. Substances to avoid: No data available

A. Hazardous substances generated during decomposition: No data available

11. Information on toxicity

- Dimethyl ether -

a. Information on likely routes of exposure: No data available

B. Health Hazard Information

Acute toxicity:

- Oral: No data available

- Percutaneous: No data available

- Inhalation: Gas LC50 308.5 mg/l 4 hr rat

※Source: International Uniform Chemical Information Database (IUCLID)

Skin corrosion/irritation: Vapors and liquid cause skin irritation.

※Source: National Library of Medicine/Hazardous Substances Data Bank (NLM/HSDB)

Serious eye damage or irritation: Vapors and liquid cause eye irritation.

※Source: National Library of Medicine/Hazardous Substances Data Bank (NLM/HSDB)

Respiratory hypersensitivity: No data available

Skin sensitization: No data available

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Carcinogenicity: No data available

Germ cell mutagenicity: Negative in microbial reverse mutation test

※Source: International Uniform Chemical Information Database (IUCLID)

Reproductive toxicity: There are reports of effects on fetuses and embryos in experimental animals. ※Source: (TOMES; RTECS)

Specific target organ toxicity (single exposure): Affects the central nervous system, causing loss of consciousness upon exposure.

※Source: International Chemical Safety Cards (ICSC)

Specific target organ toxicity (repeated exposure): Repeated exposure to rats via inhalation for 13 weeks resulted in behavioral, health status, and food

No significant differences were found in intake and food ratio.

※Source: International Uniform Chemical Information Database (IUCLID)

Aspiration hazard: No data available

12. Impact on the environment

A. Ecotoxicity:

Dimethyl ether;

Fish; No data available

Crustaceans; no data available

Birds; No data available

B. Persistence and degradability:

Dimethyl ether;

Persistence; 0.1 log Kow ※Source: International Chemical Safety Cards (ICSC)

Degradability; No data available

D. Bioaccumulation:

Dimethyl ether;

Concentration; No data available

Biodegradability; 5 (%) 28 days

※Source: International Uniform Chemical Information Database (IUCLID)

A. Soil mobility:

Dimethyl ether; 27

※Source: National Library of Medicine/Hazardous Substances Data Bank (NLM/HSDB)

B. Other adverse effects: No data available

13. Precautions when disposing

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A. Disposal method: Dispose of in accordance with applicable regulations.

B. Disposal precautions: Dispose of contents container in accordance with the relevant laws and regulations.

14. Information required for transportation

A. UN Number: 1950

B. UN proper shipping name: Aerosols

D. Hazard Class for Transport: 2.1

Ra. Courage class: No data available

B. Marine pollutants (applicable/not applicable): No data

Special safety precautions that users need to know or require in relation to transportation or means of transportation:

Emergency measures in case of fire; FD

Emergency measures in case of leakage; SU

15. Legal Regulatory Status

A. Regulations under the Industrial Safety and Health Act:

Dimethyl ether; Substance subject to submission of Process Safety Report (PSM) (flammable gas)

※Submission target of Process Safety Report (PSM): Applicable when using flammable gas exceeding 5,000ℓ per day

B. Regulations under the Chemical Substances Control Act: Not applicable

D. Regulations under the Hazardous Materials Safety Management Act: Not applicable

A. Regulations under the Waste Management Act: Not applicable

B. Other domestic and foreign laws and regulations:

Dimethyl ether;

domestic regulations;

Persistent Organic Pollutant Management Act: Not applicable

Foreign regulations;

US Management Information (CERCLA Regulations): Not applicable

EU classification information (confirmed classification result): F+; R12

EU classification information (risk phrases): R12

EU classification information (safety phrases): S2, S9, S16, S33

16. Other Notes

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A. Source of data: Based on the data of each raw material company and the MSDS of the Occupational Safety and Health Agency, as prescribed by the Industrial Safety and Health Act

It was written according to the form.

B. Original Date of Creation: 2022. 03. 23

D. Number of revisions and last revision date: 1st/2023.04.18

Ra. Other

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