

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
 Issue date: 5/22/2019 Revision date: 6/6/2023 Version: 2.0

SECTION 1: Identification
1.1. Identification

Product form : Aerosol
 Trade name : 2MDL

1.2. Recommended use and restrictions on use

Recommended use : Cleaning Electrical Contacts
 Restrictions on use : No additional information available

1.3. Supplier

Supplier
 FirstPower Group, LLC
 8941 Dutton Drive
 Twinsburg, Ohio 44087
 USA
 T +1 330-963-2050


1.4. Emergency telephone number

Emergency number : Call Chemtrec: +1-800-424-9300/+1-703-527-3887

SECTION 2: Hazard(s) identification
2.1. Classification of the substance or mixture

GHS US classification
 Flammable aerosol Category 1 H222 Extremely flammable aerosol
 Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling

Hazard pictograms (GHS US) : 

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H222 - Extremely flammable aerosol

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 - Do not spray on an open flame or other ignition source.
 P251 - Pressurized container: Do not pierce or burn, even after use.
 P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of § 1910.1200

Name	Product identifier	%	GHS US classification
2-methoxy-1-(2-methoxypropoxy)propane	CAS-No.: 111109-77-4	> 90 – < 100	Flam. Liq. 4, H227
Nitrogen (Propellant)	CAS-No.: 7727-37-9	< 10	Press. Gas (Comp.), H280

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Get medical attention if symptoms occur.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. When in doubt or if symptoms are observed, get medical advice.

First-aid measures after ingestion : Rinse mouth out with water. Do NOT induce vomiting. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause shortness of breath, tightness of the chest, a sore throat and cough.

Symptoms/effects after skin contact : Prolonged or repeated contact may cause skin to become dry.

Symptoms/effects after eye contact : Direct contact with the eyes is likely slightly irritating. Redness. Itching. Lacrimation. Blurred vision.

Symptoms/effects after ingestion : Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Alcohol-resistant foam. Dry powder. Carbon dioxide (CO₂). Use extinguishing agent suitable for surrounding fire.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Extremely flammable aerosol. Contact with combustible material may cause fire. Burning produces stinking and toxic fumes. In case of fire and/or explosion do not breathe fumes.

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Explosion hazard	: Contains gas under pressure; may explode if heated.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon monoxide. Carbon dioxide. Hydrogen fluoride. Carbonyl fluoride.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Evacuate the danger area. Eliminate all ignition sources if safe to do so. Move containers from fire area if it can be done without personal risk. Exercise caution when fighting any chemical fire. Fight fire with normal precautions from a reasonable distance. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Evacuate unnecessary personnel. Ventilate spillage area. Avoid breathing spray. Do not get in eyes, on skin, or on clothing. No action shall be taken without appropriate training or involving any personal risk. No flames, no sparks. Eliminate all sources of ignition.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Use non-sparking tools. No naked flames, sparks, and do not smoke.

6.2. Environmental precautions

Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Stop leak, if possible without risk. Do not touch or walk on the spilled product. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Move containers from spill area. Leave the product to evaporate. Absorb remaining liquid with sand or inert absorbent and remove to safe place. Clean area with detergent and water after spill clean-up. Prevent entry to sewers and public waters. Use non-sparking tools. Keep in suitable, closed containers for disposal. Dispose of as hazardous waste.
Other information	: Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Ensure good ventilation of the work station. Avoid breathing spray. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid release to the environment. Eliminate all ignition sources if safe to do so. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Empty containers retain product residue and can be hazardous.
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Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep away from heat and sources of ignition. Store away from other materials. Refer to Section 10 on Incompatible Materials. Keep away from food, drink and animal feedingstuffs. Do not store in unlabelled containers. Store in accordance with local, regional, national or international regulation.

Incompatible products : Strong oxidizing agents.

Incompatible materials : Direct sunlight. Heat sources. Ignition sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

Nitrogen (7727-37-9)

USA - ACGIH - Occupational Exposure Limits

Local name	Nitrogen
Remark (ACGIH)	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH 2023

2-methoxy-1-(2-methoxypropoxy)propane (111109-77-4)

No additional information available

Monitoring methods

Monitoring methods	Refer to all applicable national, international and local regulations or provisions.
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8.2. Appropriate engineering controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety procedures. Provide local exhaust or general room ventilation. Ensure exposure is below occupational exposure limits (where available). Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the NIOSH standards and in discussion with the supplier of the protective equipment.

Hand protection:

Chemical resistant gloves (according to NIOSH standard). Recommended materials. butyl rubber. Ethyl Vinyl Alcohol Laminate (EVAL). Natural rubber. Neoprene. Polyvinylchloride (PVC). Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Selection of protective gloves should be made based on the type of task performed.

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Eye protection:

Use splash goggles when eye contact due to splashing is possible

Skin and body protection:

Wear suitable protective clothing. Skin protection appropriate to the conditions of use should be provided

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. All respirators must conform to specifications for efficiency and performance indicated by OSHA Standard 29 CFR 1910.134 and NIOSH Standards

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Color	: Colorless
Odor	: Slight
Odor threshold	: No data available
pH	: No data available
Melting point	: < -71 °C (-95.8 °F)
Freezing point	: No data available
Boiling point	: 175 °C (347 °F)
Flash point	: 65 °C (149 °F, ASTM D3828 Closed Cup)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 0.55 mm Hg (20 °C, 68 °F)
Relative vapor density at 20°C	: 5.59
Relative density	: 0.904
Solubility	: Water: 35 %
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 1.14 mm ² /s (25 °C, 77 °F)
Viscosity, dynamic	: No data available
Explosion limits	: Lower explosion limit: 0.85 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Contains gas under pressure; may explode if heated.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization: Will not occur.

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10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid open fire or flames. Heat or source of heat. Direct sunlight. High temperature.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: 1.14 mm ² /s (25 °C, 77 °F)
Symptoms/effects after inhalation	: May cause shortness of breath, tightness of the chest, a sore throat and cough.
Symptoms/effects after skin contact	: Prolonged or repeated contact may cause skin to become dry.
Symptoms/effects after eye contact	: Direct contact with the eyes is likely slightly irritating. Redness. Itching. Lacrimation. Blurred vision.
Symptoms/effects after ingestion	: Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.
Other information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Do not allow product to spread into the environment.

12.2. Persistence and degradability

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Persistence and degradability	Biodegradability in water: no data available.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	No data available concerning bioaccumulation.
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12.4. Mobility in soil

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Ecology - soil

No additional information available.

12.5. Other adverse effects

Effect on global warming : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Container under pressure. Do not drill or burn even after use. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA No : UN1950
UN-No. (TDG) : UN1950
UN-No. (IMDG) : 1950
UN-No. (IATA) : 1950

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols
Proper Shipping Name (TDG) : AEROSOLS
Proper Shipping Name (IMDG) : AEROSOLS
Proper Shipping Name (IATA) : Aerosols, flammable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 2.1
Hazard labels (DOT) : 2.1



TDG

Transport hazard class(es) (TDG) : 2.1
Hazard labels (TDG) : 2.1



IMDG

Transport hazard class(es) (IMDG) : 2.1
Hazard labels (IMDG) : 2.1

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IATA

Transport hazard class(es) (IATA) : 2.1

Hazard labels (IATA) : 2.1



14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (TDG) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1950

DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 25 - Protected from sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

TDG

UN-No. (TDG) : UN1950

TDG Special Provisions : 80 - Despite section 1.17 of Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases), a person must not offer for transport or transport these dangerous goods unless they are in a means of containment that is in compliance with the requirements for transporting gases in Part 5 (Means of Containment), 107 - (1) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of UN1950, AEROSOLS, and UN2037, GAS CARTRIDGES, that contain dangerous goods included in Class 2.1 or Class 2.2 and that are transported on a road vehicle, a railway vehicle or a vessel on a domestic voyage, if the aerosols or gas cartridges have a capacity less than or equal to 50 mL.
(2) Subsection (1) does not apply to self-defence spray.

Explosive Limit and Limited Quantity Index : 1 L

Excepted quantities (TDG) : E0

Passenger Carrying Road Vehicle or Passenger : 75 L

Carrying Railway Vehicle Index

Emergency Response Guide (ERG) Number : 126

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IMDG

Special provision (IMDG)	: 63, 190, 277, 327, 344, 381, 959
Limited quantities (IMDG)	: SP277
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P207, LP200
Packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	: S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	: None
Stowage and handling (IMDG)	: SW1, SW22
Segregation (IMDG)	: SG69

IATA

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provision (IATA)	: A145, A167, A802
ERG code (IATA)	: 10L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S

2-methoxy-1-(2-methoxypropoxy)propane	CAS-No. 111109-77-4	> 90 – < 100%
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15.2. International regulations

CANADA

Nitrogen (7727-37-9)

Listed on the Canadian DSL (Domestic Substances List)

2-methoxy-1-(2-methoxypropoxy)propane (111109-77-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Nitrogen (7727-37-9)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 6/6/2023
Data sources : Supplier's safety documents.
Training advice : Training staff on good practice.

Full text of H-phrases

H222	Extremely flammable aerosol
H227	Combustible liquid
H280	Contains gas under pressure; may explode if heated

Indication of changes:

Sections 1-16.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.