



Safety Data Sheet

Miller Exit®

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03
Canadian Workplace Hazardous Material Information System (WHMIS) 2015
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015
GHS (Globally Harmonized System)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Miller Exit®
Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Adjuvant
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Manufacturer Miller Chemical and Fertilizer, LLC
120 Radio Rd
Hanover, PA 17331
Tel.: 717-632-8921
Fax.: 717-646-1104

Internet <http://www.millerchemical.com>

E-mail info@millerchemical.com

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International 1+703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Classification Considered a hazardous substance or mixture according to the Globally Harmonized System (GHS)

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Physical Hazards

Not classified.

Health Hazards

Skin Irritant Category 2; H315

Serious eye damage/eye irritation. Category 2B; H320

Environmental Hazard

Not classified.

2.2. Label elements**Symbols/Pictograms****Signal Word**

Warning

Hazard Statements

H315 + H320 - Causes skin and eye irritation

Precautionary Statements**Prevention**

Obtain special instructions before use
Wash hands thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Response

Specific treatment (see supplemental first aid instructions on this label)
IF ON SKIN: Wash with plenty of soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If Skin irritation occurs and/or if eye irritation persists: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Additional information

Not applicable

Hazards not otherwise classified (HNOC)

None known

SECTION 3: Composition/information on ingredients**Pure substance/mixture**

Mixture

This product has been tested as a whole to determine its hazard - see section 11

Chemical Name	CAS NUMBER:	Weight-%
Ethoxylated Tallow Amine	61791-26-2	15-40
4-Nonylphenol, formaldehyde resin, propoxylated	37523-33-4	10-30
Solvent naphta (petroleum), heavy arom	64742-94-5	1-5
Naphthalene	91-20-3	0.1-1
1,2,4-Trimethylbenzene	95-63-6	0.1-1

Additional information

*The exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First aid measures**4.1. Description of first aid measures****General Advice**

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and hold eyelids apart and flush with a steady, gentle stream of water. Continue flushing for at least 15 minutes.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician or poison control center.

Ingestion

DO NOT INDUCE VOMITING. If vomiting occurs naturally, reduce the risk of aspiration by leaning their body forward. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Inhalation

Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Aspiration hazard

Not an expected route of exposure.

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

Irritating to eyes. Irritating to skin.

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

Treatment should be symptomatic and supportive. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable Extinguishing**

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MediaAlcohol-resistant foam. Carbon dioxide (CO₂). Water spray (fog). Dry chemical. Halon.**Unsuitable Extinguishing Media**

None known.

5.2. Special hazards arising from the substance or mixtureGenerates CO₂, CO and smoke.**5.3. Advice for firefighters****Special protective equipment for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

Fire-fighting measures

Water mist may be used to cool closed containers. No special fire protection measures are necessary. Standard procedure for chemical fires.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate non-essential personnel, eliminate ignition sources, and wear protective equipment (See Section VIII). Shut off source of leak only if safe to do so. Wear respiratory equipment if exposure limits are exceeded.

For non-emergency personnel

Keep unauthorized personnel away.

For emergency responders

Keep unauthorized personnel away. Use personal protection recommended in Section 8.

6.2. Environmental precautions

Avoid runoff to waterways and sewers.

6.3. Methods and material for containment and cleaning up

Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to waterways and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non-sparking tools. If required, notify state and local authorities.

Disposal Method Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted facility. Dispose of material in accordance with all Federal, State and Local regulations. Local regulations may be more stringent than Federal or State.

6.4. Reference to other sections

See Section 8 for exposure controls and personal protection. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear appropriate personal protective clothing to prevent skin contact. Avoid prolonged contact with material. Do not swallow.

7.2. Conditions for safe storage, including any incompatibilities For industrial use only. Keep container tightly closed and dry. Keep at temperatures between 41°F and 120°F. Keep out of reach of children.

Incompatible materials Oxidising agents.

7.3. Specific end use(s) Adjuvant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Solvent naphta (petroleum), heavy arom - 64742-94-5

OSHA Value - TWA. Control parameters - 500 ppm, 2,000 mg/m³. Basis - OSHA Z-1. The value in mg/m³ is approx.
Value - TWA. Control parameters - 400 ppm, 1,600 mg/m³. Basis - OSHA P0
ACGIH Value - TWA. Control parameters - 200 mg/m³. Basis - ACGIH. CNS impair: Central Nervous System impairmentURT irritant: Upper Respiratory Tract irritationskin irritant: Skin irritationP: Application restricted to conditions in which there are negligible aerosol exposuresA3: Confirmed animal carcinogen with unknown relevance to humansSkin: Danger of cutaneous absorptionvaries: variestotal hydrocarbon vapor

Naphthalene - 91-20-3

OSHA Value - TWA. Control Parameters - 10 ppm, 50 mg/m³. Basis - OSHA Z-1. Further information - The value in mg/m³ is approximate.
Value - TWA. Control parameters - 10 ppm, 50 mg/m³. Basis - OSHA P0.
Value - STEL. Control parameters - 15 ppm, 75 mg/m³. Basis - OSHA P0.
Immediately Dangerous to Life or Health Concentrations (IDLH). Control Parameters - 250 parts per million
OSHA - Final PELs -TWA 10 ppm TWA
50 mg/m³ TWA
ACGIH Value - TWA. Control parameters - 10 ppm. Basis - ACGIH. Further information - hemolytic anemia: Hemolytic anemiaURT irritant: Upper Respiratory Tract irritationcataract: CataractA3: Confirmed animal carcinogen with unknown relevance to humansSkin: Danger of cutaneous absorption
NIOSH Value - TWA. Control Parameters - 10 ppm, 50 mg/m³. Basis - Niosh REL.
Value - ST. Control parameters - 15 ppm, 75 mg/m³. Basis - NIOSH REL.
Canada - British Columbia - OEL - Skin Skin notation
Notations
Canada - Ontario - OEL - TWA EVs 10 ppm

1,2,4-Trimethylbenzene - 95-63-6

OSHA Value - TWA. Control parameters - 25 ppm, 125 mg/m³. Basis - OSHA P0.
ACGIH Value - TWA. Control Parameters - 25 ppm. Basis - ACGIH. Further information - CNS impair: Central Nervous System impairmenthematologic eff: Hematologic effectsasthma: Asthma.
NIOSH Value - TWA. Control parameters - 25 ppm, 125 mg/m³. Basis - NIOSH REL. Further information, hemimellitene is a mixture of the 1,2,3-isomer with up to 10% of related aromatics such as the 1,2,4-isomer.
Canada - Ontario - OEL - TWA EVs 25 ppm

Biological Limit Values No information available

8.2. Exposure controls

Engineering Measures Provide a good standard of controlled ventilation (5 to 10 air changes per hour). Use exhaust ventilation to keep airborne concentrations below exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

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Eye/Face Protection	Chemical goggles or face shield with safety glasses. Always wear eye protection when working with chemicals.
Skin and Body Protection	Wear suitable protective clothing.
Hand Protection	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134.
Environmental Exposure Controls	Dispose of in accordance with local regulations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical State	Liquid
Color	Amber to Brown
Odor	Moderate
pH	6.0 - 7.0 @ 20 °C
Melting point / Freezing point	Not applicable
Boiling Point / Boiling Range	435°F (224°C)
Freezing Point	<32 °F (0 °C)
Flash Point	626 °F (330° C) (TCC)
Evaporation Rate	Not determined
Flammability (solid, gas)	Not determined
Vapor Pressure	22.8 mmHg
Vapor Density	Not determined
Density	7.60 - 7.70 lbs/gal @ 68°F (20°C)
Water Solubility	Emulsifies
Partition coefficient	No information available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No information available.
Kinematic viscosity	No data available
Oxidizing Properties	Not applicable
Particle Size	No information available
Specific Gravity	0.9 - 0.93 g/mL @ 68°F (20°C) (H ₂ O=1 @ 4°C)
Percent Volatile	Not determined
VOC Content (%)	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No data available

9.2.2. Other safety characteristics

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

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10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	No specific hazard known
10.4. Conditions to avoid	High temperatures. Keep from freezing Sources of ignition
10.5. Incompatible materials	Strong oxidizing agents
10.6. Hazardous decomposition products	Carbon oxides

SECTION 11: Toxicological information

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

Inhalation	Avoid breathing vapor or mist
Skin	Causes skin irritation
Eyes	Mildly irritating to eyes.
Ingestion	Avoid ingestion Do not induce vomiting without medical advice
Aspiration hazard	Not an expected route of exposure.

11.1. Information on toxicological effects

Ethoxylated Tallow Amine

Oral LD50	620 mg/kg (rat)
Dermal LD50	> 10000 mg/kg (rat)
Serious eye damage/eye irritation	Risk of serious damage to eyes
Skin Corrosion/Irritation	Irritating to skin.
Carcinogenicity	The product does not contain any component present at concentration greater than or equal to 0.1% listed as carcinogen/possibly carcinogen for NTP, IARC and OSHA.

4-Nonylphenol, formaldehyde resin, propoxylated

LD50s and LC50s	No Data available.
Serious eye damage/eye irritation	Irritating to eyes

Solvent naphta (petroleum), heavy arom

LD50s and LC50s	590 mg/m ³ Inhalation LC50 Rat 4 h
Oral LD50	> 6000 mg/kg (rat)
Skin Corrosion/Irritation	Repeated exposure may cause skin dryness or cracking The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Specific target organ toxicity - Single exposure May cause drowsiness and dizziness

Naphthalene

LD50s and LC50s	0.4 mg/L Inhalation LC50 Rat 4 h
Oral LD50	>2000 mg/kg (rat)

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Dermal LD50

> 2,500 mg/kg Rat

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

IARC**Group 2A - Probably****Carcinogenic to Humans**

Group 2B: Possibly carcinogenic to human

Group 2B - Possibly**Carcinogenic to Humans**

Monograph 53 [1991]

NTP (National Toxicology Program)

Monograph 82 [2002]

Serious eye damage/eye irritation

Reasonably anticipated to be a human carcinogen

No eye irritation

OECD 405

Skin Corrosion/Irritation

No skin irritation

OECD 404

Skin Sensitization

Does not cause sensitization

OECD 406

1,2,4-Trimethylbenzene**LD50s and LC50s**18 g/m³ Inhalation LC50 Rat 4 h**Inhalation LC50**

> 10 mg/l.

Exposure time: 4 hours/

Test atmosphere: vapor.

Serious eye damage/eye irritation

Irritating to eyes

Skin Corrosion/Irritation

Irritating to skin.

Specific target organ toxicity

May cause respiratory irritation

- Single exposure**Acute Toxicity**

Product tested as whole.

LD50 Oral (rat) > 5000 mg/kg

LD50 Dermal (rat) > 5000 mg/kg

LC50 Inhalation > 5.88 mg/L

Respiratory Sensitization

No data available

Serious eye damage/eye irritation

Mildly irritating to eyes. Product tested as whole.

Skin Corrosion/Irritation

Irritating to skin. Product was tested.

Skin Sensitization

Not expected to be a skin sensitizer. Product was tested.

Mutagenicity

No data available

Germ cell mutagenicity

No data available

Reproductive Toxicity

No data available

Carcinogenicity

Suspected of causing cancer. Carcinogenetic Category 2 ingredient makes up less than 1% in mixture. Warning label is optional under OSHA, but ingredient will be listed in Section 3 of SDS.

11.2. Information on other hazards**11.2.1. Endocrine disrupting properties**

No endocrine disruptors present in concentrations >= 0.1%

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11.2.2. Other information Not applicable

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic life with long lasting effects This product is a spray adjuvant. Large spills could possibly damage vegetation. Contamination of waterways could possibly cause fish kills. Prevent spilled substance from entering water supplies or water courses.

Ethoxylated Tallow Amine**Aquatic toxicity**

This material is toxic to aquatic life.

Persistence / Degradability

Expected to be biodegradable

Bioaccumulative potential:

Bioconcentration potential in aquatic organisms is moderate.

LC50

48-Hour, Daphnia pulex: 2.35mg/L.

96-Hour LC50

Blue gills: 1.3 mg/L

4-Nonylphenol, formaldehyde resin, propoxylated**Persistence / Degradability**

No data available

Bioaccumulative potential:

No data available

Mobility

Data not available

BOD

No data available

Solvent naphta (petroleum), heavy arom**Persistence / Degradability**

No data available

Bioaccumulative potential:

No data available

Mobility

Data not available

LC50

> 1 - 10 mg/l

96-Hour LC50 Fish

BOD

No data available

Naphthalene**Aquatic toxicity**

Toxicity to fish : LC50: > 0.1 - 1 mg/l

Exposure time: 96 h

Species: Fish

Toxicity to daphnia and other aquatic invertebrates.

: EC50: > 1 - 10 mg/l

Exposure time: 48 h

Species: Daphnia

Toxicity to algae : EC50: > 1 - 10 mg/l

Exposure time: 72 h

Species: algae

M-Factor (Acute) : 1

Persistence / Degradability

No data available

Bioaccumulative potential:

No data available

Mobility

Data not available

BOD

No data available

1,2,4-Trimethylbenzene**Aquatic toxicity**

Toxic to aquatic life with long lasting effects

Persistence / Degradability

No data available

Bioaccumulative potential:

No data available

Mobility

Data not available

NOEC

Toxicity to algae : NOEC: 0.1 - 1 mg/l

Exposure time: 504 h

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BODSpecies: algae
M-Factor (Chronic) : 1
No data available**12.2. Persistence and degradability**

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting propertiesNo endocrine disruptors present in concentrations $\geq 0.1\%$ **12.7. Other Adverse Effects**

None known

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal Methods**

If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extend of contamination may require use of specialized disposal methods. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information**Mode of Transportation (Road, Water, Air, Rail)**

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number or ID number

None

14.2. UN proper shipping name

None

14.3. Transport hazard class(es)

None

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- 14.4. Packing group** None
- 14.5. Environmental hazards** No
- 14.6. Special precautions for user** Not applicable
- 14.7. Maritime transport in bulk according to IMO instruments**
Not applicable

SECTION 15: Regulatory information

Global Inventories

Pure substance/mixture Mixture
This product has been tested as a whole to determine its hazard - see section 11

Chemical Name	CAS Number	Canada (DSL)	Mexico	TSCA: United States
Ethoxylated Tallow Amine	61791-26-2	Present (DSL)	Present	Present
4-Nonylphenol, formaldehyde resin, propoxylated	37523-33-4	Present (DSL)	N	Present
Solvent naphta (petroleum), heavy arom	64742-94-5	Present (DSL)	Present	Present
Naphthalene	91-20-3	Present (DSL)	Present	Present
1,2,4-Trimethylbenzene	95-63-6	Present (DSL)	Present	Present

Y: Complies ; A: Active ; - / N: Exempt / Not Listed

EPA

4-Nonylphenol, formaldehyde resin, propoxylated

SARA 304 This material does not contain any components with a section 304 EHS RQ.

Solvent naphta (petroleum), heavy arom

SARA 304 This material does not contain any components with a section 304 EHS RQ.

Naphthalene

SARA 304 This material does not contain any components with a section 304 EHS RQ.

SARA 313

Naphthalene;91-20-3;1 - 5 %

1,2,4-Trimethylbenzene

SARA 304 This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazardous Categorization

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Naphthalene, 91-20-3, 0 - 0.1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Naphthalene, 91-20-3, 0 - 0.1 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Naphthalene, 91-20-3, 0 - 0.1 %

CAA (Clean Air Act)

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Naphthalene, 91-20-3, 0 - 0.1 %

This product does not contain any chemicals subject to disclosure and listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

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U.S. State Right-to-Know Regulations

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Ethoxylated Tallow Amine	61791-26-2	N	N	N	N	N
4-Nonylphenol, formaldehyde resin, propoxylated	37523-33-4	N	N	N	N	N
Solvent naphta (petroleum), heavy arom	64742-94-5	N	N	N	N	N
Naphthalene	91-20-3	Y	N	Y	Y	Y
1,2,4-Trimethylbenzene	95-63-6	N	N	N	Y	Y

Y: Listed ; N: Not Listed

CANADA

WHMIS

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

SECTION 16: Other information

Prepared by

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Reason for Version

OSHA (Occupational Safety and Health Administration of the US Department of Labor).

Abbreviations and acronyms

OSHA (Occupational Safety and Health Administration of the US Department of Labor)
WHMIS (Workplace Hazardous Materials Information System)
GHS (Globally Harmonized System)
IARC (International Agency for Research on Cancer)
PPE (Personal Protection Equipment)
TWA (Time-Weighted Average)
TLV® (Threshold Limit Value)
STEL (Short Term Exposure Limit)
RQ (Reportable Quantity) (RQ/% in mixture)
DOT (Department of Transportation)
TDG (Transport of Dangerous Goods) Canada
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods)
ICAO (International Civil Aviation Organization)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet