

Prepared according to 29 CFR 1900.1200

Date of issue/Date of Revision: 3/19/2021

Date of previous issue: 9/30/2020

Version: 4

**SAFETY DATA SHEET**  
**SUNSPRAY MLO**

**Section 1. Identification**

**Product name:** SUNSPRAY MLO  
**Synonyms:** SUNSPRAY MLO C5G US  
SUNSPRAY MLO 275 IBC US

**Relevant identified uses of the substance or mixture and uses advised against**

**Product use:** Pesticidal spray oil (only to be used as indicated on the label)

**Manufacturer:** HollyFrontier Tulsa Refining LLC  
1700 South Union Avenue  
Tulsa, OK 74107  
USA

[info@hollyfrontier.com](mailto:info@hollyfrontier.com)

Customer Service: (800) 456-4786

**Emergency telephone number:** CHEMTREC® (800) 424-9300

**Section 2. Hazards identification**

**Classification of the substance or mixture:** H304: ASPIRATION HAZARD - Category 1

**GHS label elements**

**Hazardous pictograms:**



**Signal word:** Danger

**Hazard statements:** H304 - May be fatal if swallowed and enters airways.

**Precautionary statements**

**Prevention:** Not applicable.

**Response:** IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

**Storage:** Store locked up.

**Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements:** Avoid contact with skin and clothing. Wash thoroughly after handling. Heated material can cause thermal burns.

**Hazards not otherwise classified:** Prolonged or repeated contact may dry skin and cause irritation.

**Section 3. Composition/information on ingredients**

**Substance/mixture:** Mixture

**CAS number/other identifiers**

**Product code:** 102402

EPA Registration Number: 86330-11

"Active Ingredient: Mineral Oil" stated on label required by USEPA-FIFRA in Revised Registration Eligibility Decision (RED) for Aliphatic Solvents. The specific CAS # and ingredient names listed below are the mineral oil(s) in this product.

Other ingredient: Emulsifier stated on label in a non-ionic emulsifier - ethoxylated fatty alcohol. The special CAS # and ingredient name is listed below in this product.

Ingredient name	%	CAS #	EC #
Distillates (petroleum), solvent-dewaxed light paraffinic	98-100	64742-56-9	265-159-2
Dodecan-1-ol, ethoxylated	0-2	9002-92-0	500-002-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Continue to rinse for at least 15 minutes.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact:** Wash skin thoroughly with soap and water or use recognized skin cleaner. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion:** Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

- Eye contact:** No known significant effects or critical hazards
- Inhalation:** Vapors and/or mists which may be formed at elevated temperatures may be irritating to eyes, nose, throat, upper respiratory tract and lungs.
- Skin contact:** Defatting to the skin. May cause skin dryness and irritation.
- Ingestion:** May be fatal if swallowed and enters airways.

**See toxicological information (Section 11).**

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments:** No specific treatment.
- Protection of medical responders:** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media:** In case of fire, use water spray (fog), foam, dry chemical or carbon dioxide. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

<b>Unsuitable extinguishing media:</b>	Do not use water jet.
<b>Specific hazards arising from the chemical:</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products:</b>	Decomposition products may include the following materials: carbon dioxide, carbon monoxide and other asphyxiants.
<b>Special protective actions for fire-fighters:</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
<b>Special protective equipment for fire-fighters:</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## **Section 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

<b>For non-emergency personnel:</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders:</b>	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."
<b>Environmental precautions:</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### **Methods and materials used for containment and clean-up**

<b>Small spill:</b>	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
<b>Large spill:</b>	Advise the Environmental Protection Agency (EPA) and appropriate agencies, if required. Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, waterways, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## **Section 7. Handling and storage**

### **Precautions for safe handling**

<b>Protective measures:</b>	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. High pressure skin injections are serious medical emergencies. Injury will not appear serious at first. Within a few hours, tissue will become swollen, discolored and extremely painful.
<b>Advice on general hygiene practices:</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities:** NFPA Class: Combustible liquid IIIB having a flash point higher than 93.3°C (200°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure Limits
Distillates (petroleum), solvent-dewaxed light paraffinic	ACGIH TLV (United States, 3/2019). TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction. NIOSH REL (United States, 10/2016). TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist. STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist. OSHA PEL (United States, 5/2018). TWA: 5 mg/m <sup>3</sup> 8 hours.
Dodecan-1-ol, ethoxylated	None.

**Appropriate engineering controls:** Good general ventilation should be sufficient to control worker exposure to airborne containments.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Personal Protective Measures

**Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye and face protection:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields or chemical splash goggles.

### Skin protection

**Hand protection:** Protective gloves are recommended to protect against contact with product. The gloves listed may provide adequate protection against permeation: neoprene, nitrile, and Viton® ≥ 14 mils. Gloves of other chemically resistant materials may not provide adequate protection.

**Body protection:** Where splashing is possible, fully chemical resistant protective clothing (e.g. acid suit) and boots are recommended. Where insulated impervious protective gear to protect against the splash of product. The following materials are acceptable for use as protective clothing: neoprene, nitrile, and Viton® ≥ 14 mils. Wear appropriate footwear.

**Respiratory protection:** Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

"Active Ingredient: Mineral Oil" stated on label required by USEPA-FIFRA in Revised Registration Eligibility Decision (RED) for Aliphatic Solvents.

Other ingredient: Emulsifier stated on label in a non-ionic emulsifier - ethoxylated fatty alcohol.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Slight
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not applicable.
<b>Melting point:</b>	Pour point [ASTM D5950]: -15°C (5°F)
<b>Boiling point:</b>	264 to 436°C (507 to 817°F) [ASTM D2887]
<b>Flash point:</b>	Open cup [ASTM D92]: 172°C (342°F)
<b>Evaporation rate:</b>	Not available.
<b>Flammability (solid, gas):</b>	Not available.
<b>Lower and upper explosive</b>	Not available.
<b>Vapor pressure:</b>	< 0.00011 kPa (< 0.0008 mm Hg) [20°C (68°F)]
<b>Vapor density:</b>	Not available.
<b>Specific gravity:</b>	0.85 [16°C (60°F)] [ASTM D1298]
<b>Solubility:</b>	Miscible in water.
<b>Partition coefficient n-</b> <b>octanol/water:</b>	2 to ≥ 6
<b>Auto-ignition temperature:</b>	343°C (650°F) [ASTM D2155]
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Kinematic [40°C (104°F)]: 10.9 mm <sup>2</sup> /s (10.9 cSt) [ASTM D445]
<b>Molecular weight:</b>	311 g/mole [ASTM D2502]

## Section 10. Stability and reactivity

<b>Reactivity:</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability:</b>	This product is stable.
<b>Possibility of hazardous reactions:</b>	Under normal conditions of storage and use, hazardous reactions or polymerization will not occur.
<b>Conditions to avoid:</b>	Keep away from heat, sparks and flame.
<b>Incompatible materials:</b>	Reactive or incompatible with the following materials: oxidizing materials.
<b>Hazardous decomposition products:</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

**Likely Routes of Exposure:** Routes of entry anticipated: Oral, Dermal, Inhalation.

Distillates (petroleum), solvent-dewaxed light paraffinic

Acute Inhalation Toxicity:	LC50 Inhalation Dusts and mists, Rat, > 5.53 mg/l, 4 hours
Acute Dermal Toxicity:	LD50 Dermal, Rabbit, > 2000 mg/kg
Acute Oral Toxicity:	LD50 Oral, Rat, > 5000 mg/kg
Dodecan-1-ol, ethoxylated	
Acute Dermal Toxicity:	LD50 Dermal, Rat - Male, Female, > 2000 mg/kg
Acute Oral Toxicity:	LD50 Oral, Rat, 1 g/kg

<b>Skin corrosion/irritation:</b>	Non-irritant to skin. Heated material can cause thermal burn.
<b>Eye irritation:</b>	Non-irritating to the eyes. Heated material can cause thermal burns.
<b>Skin sensitization:</b>	No evidence of skin sensitization. Route of exposure: Skin (Species: Guinea pig; non-sensitizing)
<b>Respiratory sensitization:</b>	No data available.
<b>Germ cell mutagenicity:</b>	Not considered to be a germ cell mutagen.

**Carcinogenicity:** The mineral oils in the product contain < 3% DMSO extract (IP 346). Not considered to be carcinogenic.

**Reproductive toxicity:** Not considered to be toxic to the reproductive system.

**Teratogenicity:** Not considered to be teratogenic.

**Aspiration hazard:** ASPIRATION HAZARD - Category 1

**Specific target organ toxicity (single exposure):** Dodecan-1-ol, ethoxylated  
 Category 3 - Respiratory tract irritation

**Specific target organ toxicity (repeated exposure):** Not available.

**Potential chronic health effects**

**General:** Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.  
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 Other ingredient: Emulsifier stated on label in a non-ionic emulsifier - ethoxylated fatty alcohol.

## Section 12. Ecological information

### Toxicity

Distillates (petroleum), solvent-dewaxed light paraffinic

Acute EC50 > 100 mg/l, Algae, 72 hours  
 Acute EC50 > 100 mg/l, Daphnia, 48 hours  
 Acute LC50 > 100 mg/l, Fish, 96 hours

Dodecan-1-ol, ethoxylated

Acute LC50 6460 µg/l Fresh water, Daphnia - Daphnia magna, 48 hours  
 Acute LC50 1500 µg/l Fresh water, Fish - Salmo salar - Parr, 96 hours

**Persistence and degradability:**

Not readily biodegradable. Considered to be inherently biodegradable.

**Bioaccumulative potential:**

High.  
 LogPow 2 to ≥ 6

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>):**

Not available.

**Other adverse effects:**

No known significant effects or critical hazards.  
 "Active Ingredient: Mineral Oil" stated on label required by USEPA-FIFRA in Revised Registration Eligibility Decision (RED) for Aliphatic Solvents.  
 Other ingredient: Emulsifier stated on label in a non-ionic emulsifier - ethoxylated fatty alcohol.

**Consult product label for additional information.**

## Section 13. Disposal considerations

**Disposal methods:**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residue. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>IMDG</b>	<b>IATA</b>
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<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	--	--	--
<b>Transport hazard class(es)</b>	--	--	--
<b>Packing group</b>	--	--	--
<b>Environmental hazards</b>	No.	No.	No.
<b>Additional information</b>	--	--	--

**Special precautions for user:** **Transport within user's premises:** Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

### U.S. Federal regulations

**United States inventory (TSCA 8b):** All components are active or exempted.  
**Clean Water Act (CWA) 307:** Not applicable.

**FIFRA Information for SDS Section 15 (Regulatory information):** This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels for non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

#### CAUTION

Keep out of reach of children.  
Harmful if swallowed or absorbed through skin.  
Avoid contact with eyes, skin or clothing.  
Wash thoroughly with soap and water after handling before eating, drinking, chewing gum, using tobacco or using the toilet.  
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Contain Petroleum Distillates - Vomiting may cause aspiration pneumonia. Aspiration may occur after swallowing or vomiting and results in serious and sometimes delayed lung injury.

### SARA 302/304

#### Composition/information on ingredients

**SARA 304 RQ:** No products were found.  
**SARA 311/312** Not applicable.

**Classification** ASPIRATION HAZARD - Category 1  
HNOC - Defatting irritant

#### Composition/information on ingredients

Distillates (petroleum), solvent-dewaxed light paraffinic  
**Classification:** ASPIRATION HAZARD - Category 1  
HNOC - Defatting irritant

Dodecan-1-ol, ethoxylated  
**Classification:** ACUTE TOXICITY (oral) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### SARA 313

**Form R - Reporting requirements:** Not applicable.

### State regulations

**Massachusetts** The following components are listed: OIL MIST, MINERAL; MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED LIGHT PARAFFINIC

**New York** None of the components are listed.

**New Jersey** None of the components are listed.

**Pennsylvania** None of the components are listed.

**California Proposition 65** This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International regulations**

**Chemical Weapon Convention List Schedules I, II, & II Chemicals** Not listed.

**Montreal Protocol** Not listed.

**Stockholm Convention on Persistent Organic Pollutants** Not listed.

**Rotterdam Convention of Prior Informed Consent (PIC)** Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals** Not listed.

**International lists**

Australia Inventory (AICS) All components are listed or exempted.

Canadian Domestic Substance List (DSL) All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

European EINECS Inventory All components are listed or exempted.

Japan Existing & New Chemical Substances (ENCS) All components are listed or exempted.

Japan Inventory (ISHL) Not determined.

Korea Existing Chemical Inventory (KECI) All components are listed or exempted.

Malaysia Inventory (EHS Register) At least one component is not listed.

New Zealand Inventory of Chemicals (NZIoC) All components are listed or exempted.

Philippines Inventory (PICCS) All components are listed or exempted.

Taiwan Inventory (CSNN) All components are listed or exempted.

Turkey Inventory and Control of Chemicals (CICR) All components are listed or exempted.

"Active Ingredient: Mineral Oil" stated on label required by USEPA-FIFRA in Revised Registration Eligibility Decision (RED) for Aliphatic Solvents.

Other ingredient: Emulsifier stated on label in a non-ionic emulsifier - ethoxylated fatty alcohol.

**Section 16. Other information**

**Hazard Ratings:**

Key: 0 = least; 1 = slight; 2 = moderate; 3 = high; 4 = extreme

**HMIS Rating:** Health =3; Fire = 1; Reactivity = 0

**NFPA Rating:** Health =2; Fire = 1; Reactivity = 0

**Procedure used to derive the classification**

**Classification**

ASPIRATION HAZARD - Category 1

**Date of issue/Date of revision:** 3/19/2021

**Date of previous issue:** 9/30/2020

**Version:** 4

**Justification**

Expert judgement



**Key to abbreviations:**

ATE = Acute Toxicity Estimate  
AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow= logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("MARPOL" = marine pollution)  
N/A = Not available  
UN = United Nations

**Disclaimer**

The information and recommendations contained herein are, to the best of HollyFrontier Specialty Product's knowledge and belief, accurate and reliable as of the date issued. It is the user's responsibility to satisfy itself that the product is safe and suitable for the intended use and ensure proper health, safety, and other necessary information is followed. If buyer repackages this product, it is the repackager's responsibility to insure proper health, safety and other necessary information is included with and/or on the repackaged container. We make no representations as to the accuracy or completeness of the information and hazards contained herein and assume no responsibility regarding suitability of this information for the users intended purpose or for the consequence of its use.

