



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 09-18-2025

Revision Number 1.2

## 1. Identification

### Product identifier

Product Name SYNFILM® GT 460

### Other means of identification

Product Code(s) RPMP035

Former Product Code(s) 301270

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Lubricant

Restrictions on use Consumer use

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Lubrication Engineers, Inc.  
1919 E. Tulsa  
Wichita, KS 67216  
USA  
1-800-537-7683

### Emergency telephone number

Website [www.royalpurpleind.com](http://www.royalpurpleind.com)

Emergency Telephone CHEMTREC: 1-800-424-9300 (NORTH AMERICA)  
+1-703-527-3887 (INTERNATIONAL)

## 2. Hazard(s) identification

### Classification of the substance or mixture

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Hazards not otherwise classified (HNOC)

Not applicable.

### Label elements

#### Hazard statements

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available.

**Other information**

No information available.

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

Not applicable.

**Mixture**

| Chemical name                         | CAS No.    | Weight-% | Trade secret |
|---------------------------------------|------------|----------|--------------|
| methylene bis(dibutyldithiocarbamate) | 10254-57-6 | 5 - 10   | *            |

Identifiers above that are not CAS RN are internally assigned unique identifiers. \*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. First-aid measures****Description of first aid measures**

|                     |                                                                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Remove to fresh air.                                                                                                                                |
| <b>Eye contact</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b> | Wash skin with soap and water. Get medical attention if irritation develops and persists.                                                           |
| <b>Ingestion</b>    | Rinse mouth. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.                                                |

**Most important symptoms and effects, both acute and delayed**

|                 |                                                          |
|-----------------|----------------------------------------------------------|
| <b>Symptoms</b> | See Section 11 for additional Toxicological Information. |
|-----------------|----------------------------------------------------------|

**Indication of any immediate medical attention and special treatment needed**

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

**5. Fire-fighting measures**

|                                                   |                                                                                                         |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>               | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable extinguishing media</b>             | Do not scatter spilled material with high pressure water streams.                                       |
| <b>Specific hazards arising from the chemical</b> | Not easily combustible. Product may ignite and burn at temperatures exceeding the flash point.          |

**Explosion data****Sensitivity to mechanical impact** None.**Sensitivity to static discharge** None.**Special protective equipment and precautions for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures****Personal precautions** Ensure adequate ventilation.**Methods and material for containment and cleaning up****Methods for containment** Prevent further leakage or spillage if safe to do so.**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.**7. Handling and storage****Precautions for safe handling****Advice on safe handling** Avoid contact with eyes and prolonged or repeated contact with skin.**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.**Conditions for safe storage, including any incompatibilities****Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.**8. Exposure controls/personal protection****Control Parameters****Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.**Biological occupational exposure limits** This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.**Appropriate engineering controls****Engineering controls** Apply technical measures to comply with the occupational exposure limits.**Individual protection measures, such as personal protective equipment****Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical

nature, hazards and use of this product and safety requirements of the local jurisdiction.

|                                 |                                                                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hand protection</b>          | Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.          |
| <b>Skin and body protection</b> | Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. |
| <b>Respiratory protection</b>   | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.              |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                                       |                |
|---------------------------------------|----------------|
| <b>Appearance</b>                     | Purple         |
| <b>Physical state</b>                 | Liquid         |
| <b>Odor (includes odor threshold)</b> | Characteristic |

| <u>Property</u>                                                  | <u>Values</u>        | <u>Method</u> |
|------------------------------------------------------------------|----------------------|---------------|
| <b>Melting point / freezing point</b>                            | No data available    |               |
| <b>Boiling point (or initial boiling point or boiling range)</b> | No data available    |               |
| <b>Flammability</b>                                              | No data available    |               |
| <b>Flammability Limit in Air</b>                                 |                      |               |
| Upper flammability or explosive limits                           | No data available    |               |
| Lower flammability or explosive limits                           | No data available    |               |
| <b>Flash point</b>                                               | 235.0000 °C / 455 °F | ASTM D92      |
| <b>Autoignition temperature</b>                                  | No data available    |               |
| <b>Decomposition temperature</b>                                 | No data available    |               |
| SADT (°C)                                                        | No data available    |               |
| <b>pH</b>                                                        | No data available    |               |
| pH (as aqueous solution)                                         | No data available    |               |
| <b>Kinematic viscosity</b>                                       | 460 cSt @ 40°C       | ASTM D445     |
| <b>Dynamic viscosity</b>                                         | No data available    |               |
| <b>Solubility</b>                                                | No data available    |               |
| Water solubility                                                 | No data available    |               |
| <b>Partition coefficient n-octanol/water (log value)</b>         | No data available    |               |
| <b>Vapor pressure (includes evaporation rate)</b>                | No data available    |               |
| <b>Density and/or relative density</b>                           | 0.885                | ASTM D4052    |
| Bulk density                                                     | No data available    |               |
| Liquid Density                                                   | No data available    |               |
| <b>Relative vapor density</b>                                    | No data available    |               |
| <b>Particle characteristics</b>                                  |                      |               |
| Particle Size                                                    | No data available    |               |
| Particle Size Distribution                                       | No data available    |               |

### Other information

### Information with regard to physical hazard classes

## 10. Stability and reactivity

|                           |                                 |
|---------------------------|---------------------------------|
| <b>Reactivity</b>         | No information available.       |
| <b>Chemical stability</b> | Stable under normal conditions. |

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** None known based on information supplied.

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** May be harmful if inhaled. Inhalation of vapors in high concentration may cause irritation of respiratory system.

**Eye contact** May cause slight eye irritation.

**Skin contact** May cause irritation. Prolonged skin contact may defat the skin and produce dermatitis.

**Ingestion** May be harmful if swallowed. May cause gastrointestinal discomfort if consumed in large amounts.

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Prolonged contact may cause redness and irritation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Acute toxicity** Based on available data, the classification criteria are not met.

### Component Information

| Chemical name                                        | Oral LD50             | Dermal LD50             | Inhalation LC50 |
|------------------------------------------------------|-----------------------|-------------------------|-----------------|
| methylene bis(dibutylidithiocarbamate)<br>10254-57-6 | = 16000 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | -               |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitization** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**DMSO Disclaimer** Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## 12. Ecological information

### Ecotoxicity

| Chemical name                                       | Algae/aquatic plants | Fish                                       | Toxicity to microorganisms | Crustacea |
|-----------------------------------------------------|----------------------|--------------------------------------------|----------------------------|-----------|
| methylene bis(dibutyldithiocarbamate)<br>10254-57-6 | -                    | LC50: >0.06mg/L (96h, Oncorhynchus mykiss) | -                          | -         |

**Persistence and degradability** No information available.

### Bioaccumulation

#### Component Information

| Chemical name                                       | Partition coefficient |
|-----------------------------------------------------|-----------------------|
| methylene bis(dibutyldithiocarbamate)<br>10254-57-6 | 8.42                  |

**Other adverse effects** No information available.

## 13. Disposal considerations

### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## 14. Transport information

### DOT

UN number or ID number Not regulated

### TDG

UN number or ID number Not regulated

### MEX

UN number or ID number Not regulated

### ICAO (air)

UN number or ID number Not regulated

**IATA**

UN number or ID number Not regulated

**IMDG**

UN number or ID number Not regulated

**15. Regulatory information****International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**International Inventories****TSCA** Complies.

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

|                      |                                                   |
|----------------------|---------------------------------------------------|
| <b>DSL/NDL</b>       | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |
| <b>IECSC</b>         | Contact supplier for inventory compliance status. |
| <b>KECL</b>          | Contact supplier for inventory compliance status. |
| <b>PICCS</b>         | Contact supplier for inventory compliance status. |
| <b>AIIC</b>          | Contact supplier for inventory compliance status. |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status. |
| <b>TCSI</b>          | Contact supplier for inventory compliance status. |

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**NZIoC** - New Zealand Inventory of Chemicals**TCSI** - Taiwan Chemical Substance Inventory**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

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)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:.

| Chemical name                                                                    | California Proposition 65 |
|----------------------------------------------------------------------------------|---------------------------|
| 1,2-Benzenedicarboxylic acid dic9-11 branched alkylesters, c10 rich - 68515-49-1 | Developmental             |
| Naphthalene - 91-20-3                                                            | Carcinogen                |
| Methyl alcohol - 67-56-1                                                         | Developmental             |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 1 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 1 | <b>Physical hazards</b> 0 | <b>Personal protection</b> - |

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| ACGIH   | American Conference of Governmental Industrial Hygienists                                       |
| ADN     | Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe) |
| ADR     | Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)             |
| AIIC    | Australian Inventory of Industrial Chemicals                                                    |
| ATE     | Acute Toxicity Estimate                                                                         |
| ASTM    | American Society for the Testing of Materials                                                   |
| bar     | Biological Reference Values for Chemical Compounds in the Work Area                             |
| BAT     | Biological tolerance values for occupational exposure                                           |
| BEL     | Biological exposure limits                                                                      |
| bw      | Body weight                                                                                     |
| Ceiling | Maximum limit value                                                                             |
| CMR     | Carcinogen, Mutagen or Reproductive Toxicant                                                    |
| DOT     | Department of Transportation (United States)                                                    |
| DSL     | Domestic Substances List (Canada)                                                               |
| EmS     | Emergency Schedule                                                                              |
| ENCS    | Existing and New Chemical Substances (Japan)                                                    |
| EPA     | Environmental Protection Agency                                                                 |
| GHS     | Globally Harmonized System                                                                      |
| HMIS    | Hazardous Materials Identification System                                                       |
| IARC    | International Agency for Research on Cancer                                                     |
| IATA    | International Air Transport Association                                                         |



|         |                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------|
| IBC     | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| ICAO    | International Civil Aviation Organization                                                           |
| IECSC   | Inventory of Existing Chemical Substances in China                                                  |
| IMDG    | International Maritime Dangerous Goods                                                              |
| IMO     | International Maritime Organization                                                                 |
| ISO     | International Organization for Standardization                                                      |
| KECI    | Korean Existing Chemicals Inventory                                                                 |
| LC50    | Lethal Concentration to 50% of a test population                                                    |
| LD50    | Lethal Dose to 50% of a test population (Median Lethal Dose)                                        |
| MARPOL  | International Convention for the Prevention of Pollution from Ships                                 |
| NFPA    | National Fire Protection Association                                                                |
| NIOSH   | National Institute for Occupational Safety and Health                                               |
| n.o.s.  | Not Otherwise Specified                                                                             |
| NOAEC   | No Observed Adverse Effect Concentration                                                            |
| NOAEL   | No Observed Adverse Effect Level                                                                    |
| NOELR   | No Observable Effect Loading Rate                                                                   |
| NTP     | National Toxicology Program (United States)                                                         |
| NZIoC   | New Zealand Inventory of Chemicals                                                                  |
| OECD    | Organization for Economic Cooperation and Development                                               |
| OEL     | Occupational exposure limits                                                                        |
| OSHA    | Occupational Safety and Health Administration of the US Department of Labor                         |
| PBT     | Persistent, Bioaccumulative and Toxic substance                                                     |
| PICCS   | Philippines Inventory of Chemicals and Chemical Substances                                          |
| PMT     | Persistent, Mobile and Toxic                                                                        |
| PPE     | Personal protective equipment                                                                       |
| QSAR    | Quantitative Structure Activity Relationship                                                        |
| RID     | Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)                 |
| SADT    | Self-Accelerating Decomposition Temperature                                                         |
| SAR     | Structure-activity relationship                                                                     |
| SARA    | Superfund Amendments and Reauthorization Act                                                        |
| SDS     | Safety Data Sheet                                                                                   |
| SL      | Surface Limit                                                                                       |
| STEL    | Short Term Exposure Limit                                                                           |
| STOT RE | Specific target organ toxicity - Repeated exposure                                                  |
| STOT SE | Specific target organ toxicity - Single exposure                                                    |
| TCSI    | Taiwan Chemical Substance Inventory                                                                 |
| TDG     | Transport of Dangerous Goods (Canada)                                                               |
| TSCA    | Toxic Substances Control Act (United States)                                                        |
| TWA     | Time-Weighted Average                                                                               |
| UN      | United Nations                                                                                      |
| VOC     | Volatile organic compounds                                                                          |
| vPvB    | Very Persistent and Very Bioaccumulative                                                            |
| vPvM    | Very Persistent and Very Mobile                                                                     |
| Sen+    | Sensitizer                                                                                          |
| Sk*     | Skin designation                                                                                    |
| **      | Hazard Designation                                                                                  |

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

|                      |                  |
|----------------------|------------------|
| <b>Prepared By</b>   | Compliance.      |
| <b>Revision date</b> | 09-18-2025       |
| <b>Revision Note</b> | Initial Release. |

**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**