# SAFETY DATA SHEET

**THIFENSULFURON + TRIBENURON 500 + 250 g/kg WG**

This safety data sheet complies with the requirements of:
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008

**SDS # :** FO002242-4-A
**Revision date:** 2018-09-13
**Format:** EU
**Version** 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Code(s)** FO002242-4-A

**Product Name** THIFENSULFURON + TRIBENURON 500 + 250 g/kg WG

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

**Recommended Use:** Herbicide

**Restrictions on Use:** Use as recommended by the label.

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

**Supplier**

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

For further information, please contact:

**Contact point** No information available

### 1.4. Emergency telephone number

**Emergency telephone**

Medical Emergencies:
1 800 / 331-3148 (ProPharma Group - U.S.A. & Canada)
1 651 / 632-6793 (ProPharma Group - All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture *Regulation (EC) No 1272/2008*

| | |
|---|---|
| **Acute aquatic toxicity** | Category 1 |
| **Chronic aquatic toxicity** | Category 1 |

### 2.2. Label elements

**Hazard pictograms**

**Signal Word**
WARNING

**Hazard Statements**
H410 - Very toxic to aquatic life with long lasting effects
EUH208 - Contains ( tribenuron-methyl ). May produce an allergic reaction
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

**Precautionary Statements**
P273 - Avoid release to the environment
P391 - Collect spillage
P501: Dispose of contents/container as hazardous waste.

**2.3. Other hazards**
Excessive dust formation may pose a dust explosion hazard. None of the ingredients in the product meets the criteria for being PBT or vPvB.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

The product is a mixture, not a substance.

**3.2 Mixtures**

| Chemical name | EC-No | CAS-No | Weight % | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|---|---|---|---|---|---|
| Thifensulfuron-methyl | - | 79277-27-3 | 50 | Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410) | No data available |
| Tribenuron-methyl | 401-190-1 | 101200-48-0 | 25 | Skin Sens. 1 (H317)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 1 (H410)<br>M = 100 | No data available |
| Morwet EFW | - | 105864-15-1 | 1-5 | Skin Irrit. 2 (H315)<br>Eye Dam. 1 (H318) | No data available |
| Formaldehyde condensate | - | 68425-94-5 | 1 - 5 | Eye Irrit.2; H319 | No data available |

## Section 4: FIRST AID MEASURES

**4.1. Description of first aid measures**

**Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Get medical attention if irritation develops and persists.

**Skin Contact** Immediately flush with plenty of water while removing contaminated clothing and/or shoes, and thoroughly wash with soap and water. Get medical attention immediately if symptoms occur.

**Inhalation** Move to fresh air. If person is not breathing, contact emergency medical services, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**Ingestion** Drink plenty of water. Do not induce vomiting or give anything by mouth to an unconscious

person. If vomiting does occur, rinse mouth and drink fluids again. Call a physician or poison control center immediately.

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

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

To the best of our knowledge, adverse effects in humans have not been reported. Generally, sulphonylurea herbicides cause lethargy, confusion, dizziness, seizures and coma on ingestion.

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

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

Notes to physician: A specific antidote for exposure to this material is not known. Gastric lavage and/or the administration of activated charcoal can be considered. After decontamination, treatment should be directed at the control of symptoms and the clinical condition.

## Section 5: FIRE FIGHTING MEASURES

**5.1. Extinguishing media**

**Suitable Extinguishing Media**
Dry chemical, CO2 or water spray.

**Unsuitable extinguishing media**
Avoid heavy hose streams.

**5.2. Special hazards arising from the substance or mixture**
The essential breakdown products are volatile, toxic, irritant and inflammable compounds such as nitrogen oxides, hydrogen chloride, carbon monoxide, carbon dioxide and various chlorinated organic compounds.

**5.3. Advice for firefighters**
Use water spray to cool fire exposed surfaces and protect personnel. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Dike to prevent runoff. Wear self-contained breathing apparatus and protective suit.

## Section 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal Precautions**
Isolate and post spill area. Remove all sources of ignition. Wear protective gloves/clothing and eye/face protection.

For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

**For emergency responders**
Use personal protection recommended in Section 8.

**6.2. Environmental precautions**
Keep people and animals away from and upwind of spill/leak. Keep material out of lakes,streams, ponds, and sewer drains. Keep out of waterways.

**6.3. Methods and material for containment and cleaning up**

**Methods for Containment**

Use non-sparking tools and equipment. If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should immediately be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with detergent and much water. Absorb wash liquid onto inert absorbent such as universal binder, Fuller’s earth, bentonite or other absorbent clay and collect in suitable containers. The used containers should be properly closed and labelled.

**Methods for cleaning up**

Pick up and transfer to properly labeled containers.

**6.4. Reference to other sections**
See Section 8 "Exposure Controls/Personal Protection" for specific details. See section 13 for disposal information.

## Section 7: HANDLING AND STORAGE

**7.1. Precautions for safe handling**

**Handling**
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid dust formation. Wash thoroughly after handling. Like most organic powders, the substance can form explosive mixtures with air. Avoid dust formation and take precautionary measures against static discharge. Use explosion protected equipment. Keep away from sources of ignition and protect from exposure to fire and heat.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage**
The product is stable under normal conditions of warehouse storage. Protect from moisture. Protect against extremes of heat and cold. Keep in properly labeled containers. Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children. Keep/store only in original container.

**7.3. Specific end use(s)**

**Specific Use(s)**
The product is meant for the production of registered pesticides which may only be used for the applications for which they are registered.

**Risk Management Methods (RMM)**
The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

To the best of our knowledge, personal exposure limits have not been established for any of the ingredients in this product. However, personal exposure limits defined by local regulations may exist and must be observed. An exposure limit of 10 mg/m$^3$ (8-hr TWA) is recommended for other sulphonylureas.

| | |
|---|---|
| **Derived No Effect Level (DNEL)** | Thifensulfuron-methyl: 0.07 mg/kg bw/day<br>Tribenuron-methyl: 0.07 mg/kg bw/day. |
| **Predicted No Effect Concentration (PNEC)** | . |
| **Freshwater** | Thifensulfuron-methyl: 50 ng/l<br>Tribenuron-methyl: 100 ng/l |

**8.2. Exposure controls**

| | |
|---|---|
| **Engineering measures** | Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment. |

### Personal protective equipment

| | |
|---|---|
| **Eye/Face Protection** | For dust, splash, mist or spray exposure, wear chemical protective goggles. Maintain eye wash fountain and quick-drench facilities in work area. |
| **Hand Protection** | Wear chemical protective gloves made of materials such as nitrile or neoprene. |

| | |
|---|---|
| **Skin and Body Protection** | Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of appreciable or prolonged exposure, coveralls of barrier laminate may be required. |
| **Respiratory Protection** | The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter. |
| **Environmental exposure controls** | Do not release to the environment. |

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical State** | Solid |
| **Appearance** | Granules |
| **Odor** | Very faint |
| **Color** | Light brown |
| **Odor threshold** | No information available |
| **pH** | 5.6 |
| **Melting point/freezing point** | Thifensulfuron- methyl: 173°C<br>Tribenuron-methyl: 141°C |
| **Boiling Point/Range** | Decomposes upon heating |
| **Flash point** | No information available |
| **Evaporation Rate** | No information available |
| **Flammability (solid, gas)** | |
| Not highly flammable. | |
| **Flammability Limit in Air** | |
| **Upper flammability limit:** | No information available |
| **Lower flammability limit:** | No information available |
| **Vapor pressure** | Thifensulfuron-methyl : 7.5 x $10^{-9}$ Pa at 20°C<br>1.7 x $10^{-8}$ Pa at 25°C<br>Tribenuron-methyl : 5.33 x $10^{-7}$ Pa at 25°C |
| **Vapor density** | No information available |
| **Specific gravity** | 0.67 |
| **Water solubility** | Thifensulfuron- methyl: 0.223 g/l (pH 5, 25°C)<br>2.24 g/l (pH 7, 25°C)<br>8.83 g/l (pH 9, 25°C)<br>Tribenuron-methyl: 28 mg/l (pH 4, 25°C)<br>50 mg/l (pH 5, 25°C)<br>280 mg/l (pH 6, 25°C)<br>2040 mg/l (pH 7, 20°C) |
| **Solubility in other solvents** | Thifensulfuron- methyl: n-hexane < 0.1 g/l (25°C)<br>dichloromethane 27.5 g/l (25°C) |
| Tribenuron-methyl: acetone 43.8 g/l<br>hexane 0.028 g/l | |
| **Partition coefficient** | Thifensulfuron-methyl : log Kow = -1.7 (pH 7, 25°C)<br>Tribenuron-methyl : log Kow = 2.3 (pH 1.5)<br>log Kow = 2.25 (pH 4.0)<br>log Kow = 2.0 (pH 5.0)<br>log Kow = 1.25 (pH 6.0)<br>log Kow = -0.44 (pH 7.0) |
| **Autoignition temperature** | >400° C |
| **Decomposition temperature** | Thifensulfuron-methyl : 173° C<br>Tribenuron-methyl : ~175° C |
| **Viscosity, kinematic** | No information available |
| **Viscosity, dynamic** | No information available |
| **Explosive properties** | Not explosive. |
| **Oxidizing properties** | Non-oxidizing. |

**9.2. Other information**

| | |
|---|---|
| **Softening point** | No information available |
| **Molecular weight** | No information available |
| **VOC content (%)** | No information available |
| **Relative density** | No information available |
| **Bulk density** | 0.67 g/cm$^3$ |
| **$K_{st}$** | No information available |

## Section 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

To our knowledge, the product has no special reactivities.

**10.2. Chemical stability**

The product is stable during normal handling and storage at ambient temperatures.

**Explosion data**
**Sensitivity to Mechanical Impact** No information available.
**Sensitivity to Static Discharge** No information available.

**10.3. Possibility of hazardous reactions**

**Hazardous polymerization**
Hazardous polymerization does not occur.

**Hazardous reactions**
None under normal processing.

**10.4. Conditions to avoid**

Heat, flames and sparks.

**10.5. Incompatible materials**

Strong oxidizing agents, Strong acids, Strong bases.

**10.6. Hazardous decomposition products**

See Section 5 for more information.

## Section 11: TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects**

**Acute toxicity**

**Product Information**
Product does not present an acute toxicity hazard based on known or supplied information.

| | |
|---|---|
| **LD50 Oral** | > 5000 mg/kg (rat) (Method OPPTS 830.1100) |
| **LD50 Dermal** | > 2000 mg/kg (rat) (Method: OECD 402) |
| **LC50 Inhalation** | > 5.01 mg/L 4 hr (rat) (Method: OECD 403) |

| | |
|---|---|
| **Skin corrosion/irritation** | Mildly irritating. (Method: OECD 404). |
| **Serious eye damage/eye irritation** | Mildly irritating. (Method: OECD 405). |
| **Sensitization** | Not a skin sensitizer. (OECD 429) (Method OPPTS 830.2600) |
| **Mutagenicity** | The product contains no ingredients known to be mutagenic. |
| **Carcinogenicity** | The product contains no ingredients known to be carcinogenic. |

| | |
|---|---|
| **Reproductive toxicity** | The product contains no ingredients known to have adverse effects on reproduction. |
| **STOT - single exposure** | No specific effects after single exposure have been observed. |
| **STOT - repeated exposure** | Thifensulfuron- methyl: LOEL: ~ 200 mg/kg bw/day, rat, 90-day (method OJ L133, 1988). |
| **Symptoms** | Generally, sulphonylurea herbicides cause lethargy, confusion, dizziness, seizures and coma on ingestion. |
| **Aspiration hazard** | The product contains no ingredients known to present an aspiration pneumonia hazard. |

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecotoxicity**

The ecotoxicity of the product is measured as:

Fish, Rainbow trout (Oncorhynchus mykiss), 96-h LC50: > 100 mg/l
Invertebrates, Daphnids (Daphnia magna), 48-h EC50: > 100 mg/l
Algae, Green algae (Pseudokirchneriella subcapitata), 72-h EC50: 0.161 mg/l
Plants, Duckweed (Lemna gibba), 7-day EC50: 1.07 µg/l
Earthworms, Eisenia foetida, 14-day LC50: > 1000 mg/kg soil
Insects, Bees (Apis mellifera L.), 48-h LD50, oral: > 220.4 µg/bee 48-h LD50, contact: > 200 µg/bee

.

### 12.2. Persistence and degradability

The active ingredients do not meet the criteria for being readily biodegradable. However, they are degraded in the environment. Degradation occurs both by chemical hydrolysis and by microbiological degradation. The product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.

### 12.3. Bioaccumulative potential

See section 9 for n-octanol/water partition coefficient. Bioaccumulation is unlikely.

### 12.4. Mobility in soil

**Mobility in soil**
Under normal conditions the active ingredients are of high to intermediate mobility in soil.

### 12.5. Results of PBT and vPvB assessment

None of the ingredients in the product meets the criteria for being PBT or vPvB.

### 12.6. Other adverse effects

None known

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from residues / unused products**

Dispose of in accordance with the European Directives on waste and hazardous waste. Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

| | |
|---|---|
| **Contaminated Packaging** | Where possible recycling is preferred to disposal or incineration. Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions. Refer to product label for specific residue removal instructions. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

## Section 14: TRANSPORT INFORMATION

**IMDG/IMO**

| | |
|---|---|
| **14.1 UN/ID no** | 3077 |
| **14.2 Proper Shipping Name** | Environmentally hazardous substance, solid, n.o.s. (thifensulfuron-methyl and tribenuron-methyl) |
| **14.3 Hazard class** | 9 |
| **14.4 Packing Group** | III |
| **14.5 Marine Pollutant** | Yes |
| **Environmental Hazard** | Marine Pollutant |
| **14.6 Special Provisions** | Do not release to the environment |
| **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** | The product is not transported in bulk by ship. |

**RID**

| | |
|---|---|
| **14.1 UN/ID no** | 3077 |
| **14.2 Proper Shipping Name** | Environmentally hazardous substance, solid, n.o.s. (thifensulfuron-methyl and tribenuron-methyl) |
| **14.3 Hazard class** | 9 |
| **14.4 Packing Group** | III |
| **14.5 Environmental Hazard** | Marine Pollutant |
| **14.6 Special Provisions** | Do not release to the environment |

**ADR/RID**

| | |
|---|---|
| **14.1 UN/ID no** | 3077 |
| **14.2 Proper Shipping Name** | Environmentally hazardous substance, solid, n.o.s. (thifensulfuron-methyl and tribenuron-methyl) |
| **14.3 Hazard class** | 9 |
| **14.4 Packing Group** | III |
| **14.5 Environmental Hazard** | Marine Pollutant |
| **14.6 Special Provisions** | Do not release to the environment |

**ICAO/IATA**

| | |
|---|---|
| **14.1 UN/ID no** | 3077 |
| **14.2 Proper Shipping Name** | Environmentally hazardous substance, solid, n.o.s. (thifensulfuron-methyl and tribenuron-methyl) |
| **14.3 Hazard class** | 9 |
| **14.4 Packing Group** | III |
| **14.5 Environmental Hazard** | Marine Pollutant |
| **14.6 Special Provisions** | Do not release to the environment |

## Section 15: REGULATORY INFORMATION

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**WGK Classification**
It must be excluded that pesticides get into water. They must therefore be stored in accordance with the safety requirements as they apply to substances of the water hazard class (WGK) 3 (this makes it unnecessary to classify plant protection products in WGK and label them accordingly).

**European Union**

**Authorizations and/or restrictions on use:**
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**
Not Applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**
DANGEROUS FOR THE ENVIRONMENT

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**
Not Applicable

**International Inventories**

| Chemical name | TSCA (United States) | DSL (Canada) | EINECS/ELINCS (Europe) | ENCS (Japan) | China (IECSC) | KECL (Korea) | PICCS (Philippines) | AICS (Australia) |
|---|---|---|---|---|---|---|---|---|
| Tribenuron-methyl 101200-48-0 | | | X | | X | | | |
| Formaldehyde condensate 68425-94-5 | | | | X | | | | |

**15.2. Chemical safety assessment**

A Chemical Safety Assessment has not yet been completed for this substance

## Section 16: OTHER INFORMATION

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

**Full text of R-phrases referred to under sections 2 and 3**
No information available

**Legend**

| | |
|---|---|
| **ADR:** | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| **CAS:** | CAS (Chemical Abstracts Service) |
| **Ceiling:** | Maximum limit value: |
| **DNEL:** | Derived No Effect Level (DNEL) |
| **EINECS:** | EINECS (European Inventory of Existing Chemical Substances) |
| **GHS:** | Globally Harmonized System (GHS) |
| **IATA:** | International Air Transport Association (IATA) |
| **ICAO:** | International Civil Aviation Organization |
| **IMDG:** | International Maritime Dangerous Goods (IMDG) |
| **LC50:** | LC50 (lethal concentration) |
| **LD50:** | LD50 (lethal dose) |
| **PBT:** | Persistent, Bioaccumulative, and Toxic (PBT) Chemicals |
| **RID:** | Regulations Concerning the International Transport of Dangerous Goods by Rail |
| **STEL:** | Short term exposure limit |
| **SVHC** | SVHC: Substances of Very High Concern for Authorization: |
| **TWA:** | time weighted average |
| **vPvB:** | very Persistent and very Bioaccumulative |
| **Revision date:** | 2018-09-13 |
| **Reason for revision:** | Initial Release. |

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**Prepared By:**

FMC Corporation



**End of Safety Data Sheet**