



TIDE INTERNATIONAL USA, INC.

—A DIVISION OF TIDE GROUP

MAIN OFFICE : 21 HUBBLE, IRVINE, CA 92618, USA

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Safety Data Sheet (SDS) of Tide MSM 60DF Herbicide

Section 1 – Chemical Product and Company Identification

Product name	Tide MSM 60DF Herbicide
Synonyms name	None
Chemical Class	Sulfonylurea
Recommended Use	Herbicide
Company details	
Importer	Tide International USA, Inc. 21 Hubble, Irvine, CA 92618
EPA Reg. No.	84229-8
Emergency phone	Chemtrec 1-800-424-9300 Tide International USA, Inc. 1-949-679-3535

Section 2 – Hazard(s) Identification

Classified as Hazardous according to criteria of the Hazard Communication Standard (HCS) or 29 CFR §1910.1200 (2012).

Classification of the substance or mixture:

- Acute Inhalation (Category 4)
- Eye irritation (Category 2B)
- Acute aquatic toxicity (Category 1)
- Aquatic Chronic (Category 1)

Label elements

HCS labeling

Hazard pictograms (HCS)



Signal Word: WARNING

GHS Hazard Statements:



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Causes eye irritation

Harmful if inhaled

Very toxic to aquatic life with long lasting effects.

Other hazard information:

NFPA Ratings: Health-2 Flammability-0 Reactivity-0

Signs and Symptoms of Systemic Effects:

Systemic poisoning by sulfonyleurea based compounds is unlikely, unless large quantities have been ingested. No accounts of poisoning by Metsulfuron-methyl are currently available.

Environmental hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

This herbicide is injurious to plants at extremely low concentrations. Non target plants may be adversely affected from drift and runoff.

Section 3 - Composition / Information on Ingredients

Active ingredient	CAS No.	Content (w/w,%)	ACIGH TLV
Metsulfuron-methyl Methyl 2-(4-methoxy-6-methyl-1,3,5-triazine-2-ylcarb amoylsulfamoyl)benzoate	74223-64-6	60.0% min.	NA
Morwet D425 Powder	/	5.0~10.0%	NA
Morwet EFW	105864-15-1	1.0~5.0%	NA
Ammonium Sulfate	7783-20-2	16.6% max	NA
Other ingredient deemed not to be hazardous	Proprietary	Balance	-

Section 4 – First-Aid Measures

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical advice/attention.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If inhaled: Remove person to fresh air and keep comfortable for breathing. If person is not breathing,



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call 911 for an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a POISON CENTER or doctor/physician if you feel unwell.

Note to physician: There is no specific antidote. Treat symptomatically.

Section 5 – Fire-Fighting Measures

Flashpoint: Not a fire or explosion hazard.

Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Combustible: Not a fire and explosion hazard. May be ignited by heat or open flame.

Means of Extinction: Water Spray, Foam, Dry Chemical, CO₂.

Hazardous combustion products: May produce gases such as oxides of carbon, hydrogen, nitrogen and sulfur.

Fire fighting instructions: Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment. Use water spray. Runoff from fire control may be a pollution hazard. If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

Section 6 - Accidental Release Measures

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Keep material out of lakes, streams, ponds, and sewer drains. Use a wet sweeping compound or water to prevent dust formation.

Sweep up and shovel into suitable containers for disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

Section 7- Handling and Storage

KEEP OUT OF REACH OF CHILDREN!

Handling:

Use only outdoors or in a well-ventilated area. Avoid release to the environment. Keep away from heat, sparks and flames. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with eyes, skin, or clothing. Wash hands thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.



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Storage:

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

Section 8 - Exposure Controls/Personal Protection

Exposure limit values

Components.	CAS-No	Control parameters	Basis
Metsulfuron-methyl	74223-64-6	NA	NA

Engineering controls

Use only with adequate ventilation.

Personal protection

Always follow the label instructions when handling this product.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Coveralls.

Shoes plus socks.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

Hand Protection:



Protective gloves

Eye Protection: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.



Tightly sealed goggle

Skin and Body Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, shoes



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and socks. An emergency shower or water supply should be readily accessible to the work area.

Specific Hygiene Measures: Wash hands thoroughly after handling. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash clothing and other absorbent materials that have been exposed to this product. Follow the manufacturer's instructions for cleaning and maintaining PPE.

Environmental controls

See Sections 6, 7, 12, 13.

Section 9 - Physical and Chemical Properties

Appearance: Beige granular solid

Odor: No discernable odor

Odor threshold: No Data Available

pH: 5.47

Melting point/freezing point: No Data Available

Initial boiling point and boiling range: No Data Available

Flammability: Non combustible material.

Explosibility: Not have explosive characteristics.

Evaporation rate: No Data Available

Vapor pressure: 3.3×10^{-7} mPa (25oC, metsulfuron-methyl)

Vapor density: No Data Available

Bulk Density: 0.545g/cm³ at indoor ambient temperature

Solubility: Dispersible

Octanol/water partition coefficient: Kow Log P is 0.0018 (pH 7, 25oC for metsulfuron-methyl)

Auto-ignition temperature: No Data Available

Decomposition temperature: No Data Available

Viscosity: No Data Available

These physical data are typical values based on material test but may vary from sample to sample. Typical values should not construed as a guaranteed analysis and any specific lot or as specification items.

Section 10 - Stability and Reactivity

Reactivity: Product will not undergo polymerization

Chemical stability: Stable under normal conditions. Hydrolysis at pH <7.

Possibility of hazardous reactions: Will not occur hazardous polymerization.

Conditions to avoid: Heat, Moisture and Light. Keep away from strong oxidizing agents.

Incompatible Materials: None reasonably foreseeable.

Hazardous decomposition products: Oxides of carbon, nitrogen and sulphur.



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Section 11 - Toxicological Information

Exposure routes: Eyes, skin, ingestion & inhalation.

Toxicity:

Acute oral toxicity	LD ₅₀ for female rat >5000 mg/kg
Acute dermal toxicity	LD ₅₀ for rabbits >2000mg/kg
Acute inhalation toxicity	LC ₅₀ (4h) >2.05mg/L
Skin irritation	No skin irritating.
Eye irritation	Mildly irritating to the eyes.
Sensitization	None skin sensitizing reaction in guinea pig.

Chronic Toxicity: Base on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Carcinogenicity: Not carcinogenic (rat); Not listed by ACGIH, NTP, IARC, or OSHA.

Reproduction: No teratogenic potential.

Developmental Toxicity: Animal tests with metsulfuron-methyl have not demonstrated developmental effects.

Neurotoxicity: No evidence of neurotoxicity.

Mutagenicity: Negative

Section 12 - Ecological Information

Ecotoxicity:

Avoid contamination of any water supply with chemical or empty container.

Avian toxicity: Metsulfuron-methyl

8 day oral LC50 (bobwhite quail): > 5620 mg/kg

LD50 (mallard duck): > 2510 mg/kg

Aquatic organism toxicity: Metsulfuron-methyl

Fish LC50 (96 h) for rainbow trout 413.7 mg/l, and the NOEC for survival is 180 mg/L

Daphnia EC50 (48 h) is about 13.74 mg/L.

EC50 (72hr) Green Algae: > 0.157 mg/L

Other non-target organism toxicity: Metsulfuron-methyl

Bees: LD50 (oral) Bee > 44.3 µg/bee; LD50 (contact) Bee: > 50 µg/bee

Worms: The LC50 for earthworms is greater than 1,000 mg/kg soil

Persistence/Degradability: The breakdown of Metsulfuron-methyl in solids is largely dependant on soil temperature, moisture content, and PH. The chemical will degrade faster under acidic conditions, and in soils with higher moisture content and higher temperature.

Bioaccumulative potential: No Potential.

Mobility in soil: Metsulfuron-methyl is relatively mobile in most soils, but will be retained longer in soils with higher percentages of organic matter. It is more mobile in alkaline soils than in acidic soils.



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Other adverse effects: Metsulfuron-methyl is stable to photolysis, but will break down in ultraviolet light. Half-life estimates in soil range from 14 to 180 days, with an average of 30 days. Metsulfuron-methyl is stable to hydrolysis at neutral and alkaline pHs. The estimated half-life in acidic water is 3 weeks.

Section 13 - Disposal Considerations

Dispose of contents and container in accordance with local regulations. End users must dispose of any unused product as per the label recommendations.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste facility.

Container Disposal:

Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Section 14 - Transport Information

DOT: Not Regulated by 49 CFR (DOT)

IMO/IMDG: Not Regulated by IMO/IMDG

IATA: Not Regulated by IATA

ADDITIONAL INFORMATION: Although material is not regulated by the DOT/IMO/IATA, it may be transported as a class 9 (UN 3077) under special provision SP1146 (DOT), 909 (IMDG) or A97 (IATA). The following description would apply using any one of the aforementioned special provisions:

D.O.T. Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Metsulfuron-methyl)
Technical Shipping Name:	Tide MSM 60DF Herbicide
Packing Group:	III
D.O.T. Hazard Class:	9
U.N./N.A. Number:	UN3077
Marine pollutant *	Yes

* SPECIAL NOTE: LIMITED QUANTITIES

If this product is shipped in inner packages containing less than 5kg (11 pounds) of product, the following applies:

As per US-DOT: 49CFR172.322(d)(2)(ii)

The MARINE POLLUTANT mark is not required on a combination packaging containing a marine pollutant, other than a severe marine pollutant, in inner packaging each of which contains 5kg (1.3 gallons) or less net capacity for liquid.



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Section 15 - Regulatory Information

FIFRA –

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 of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION:

Causes eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing dust or spray mist.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

This herbicide is injurious to plants at extremely low concentrations. Nontarget plants may be adversely affected from drift and runoff.

US Federal Regulations

TSCA list:

All components are listed or exempted.

SARA Title III - section 302 - notification and information None

SARA Title III - section 313 - toxic chemical release reporting None

SARA Title III - section 311/312 - hazard identification

Acute health hazardous

This product contains none of the components listed as Extremely Hazardous substances.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

State information:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

Canadian Regulations

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

Environmental

CERCLA

None of the chemicals in this material have an RQ.



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Section 16 - Other Information

SDS# TIC-HER842298

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Update date:

Revised for:

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