



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **TRIFLURALIN 480 EC**
Chemical Name of Active Ing: 2,6-dinitroaniline derivative
Product Use: Herbicide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson
Telephone: +64 3 543 8275
Email: nzorders@adama.com

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 2 July 2019

Section 2. Hazards Identification

This substance is hazardous according to the *Hazardous Substances (Classification) Notice 2017*

EPA Approval No: HSR000576

Pictograms



Toxic/Irritant



Chronic



Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.5B	H317	May cause an allergic skin reaction.	Skin Sens. 1
6.9A	H372	Causes damage to organs through prolonged or repeated exposure.	STOT RE 1
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Aquatic Chronic 1
9.2A	H421	Very toxic to the soil environment.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust.
P264	Wash hands thoroughly after handling.

P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt %	CAS NUMBER.
Trifluralin	48	1582-09-8
Liquid Hydrocarbon	46	Proprietary
Other non-hazardous ingred.	To bal	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	Remove contaminated clothing and wash before reuse. Gently wash skin with water and soap for 15 minutes or until chemical is removed. If skin irritation occurs: Get medical advice/ attention.
If Swallowed	Do NOT induce vomiting. Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Harmful if swallowed.

Inhalation: Not applicable.

Skin: Causes mild skin irritation. May cause an allergic skin reaction.

Eye: Causes serious eye irritation.

Chronic: Causes damage to organs through prolonged or repeated exposure.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Fire decomposition products from this product are likely to be toxic and corrosive if inhaled.
Suitable Extinguishing media	Carbon dioxide, dry chemical, foam, water fog.
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus and total protection required in enclosed areas.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Wear suitable protective clothing, gloves and eye/face protection. Evacuate all unnecessary personnel.

Environmental precautions

In the event of a major spill, prevent spillage from entering into drains and water courses.

Methods and material for containment and cleaning up

Absorb remainder in sand or other inert material. Dispose of in an authorized waste collection. Dispose as per Section 15.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not breathe dust.
- Ventilation is required.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Keep exposure to this product to a minimum, and minimise the quantities kept in work areas.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store in original, unopened container in cool, dry place, well ventilated place, out of direct sunlight and away from stockfeed or foodstuffs.

As a Class 9 Substance with Ecotoxicity Classifications storage of Trifluralin Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management.

Section 8**Exposure Controls / Personal Protection****WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

No special ventilation requirements are normally necessary for this product.

Personal Protection Equipment

Eyes	Protective glasses or safety goggles/face shield.
Hands and Skin	Impervious gloves. Wear protective clothing, and preferably an apron. Suggested protective clothing made of rubber or PVC. Make sure all skin is covered.
Respiratory	Respiratory protection is not required if good ventilation is maintained.
General	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9**Physical and Chemical Properties**

Appearance	Orange Liquid
Odour	Characteristic hydrocarbon odour
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	Not applicable
Melting Point	Not applicable
Flash Point	Not applicable
Flammability	Not Flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Specific Gravity	Not applicable
Solubilities in water	Emulsifiable
LogP octanol/water:	Not applicable
Auto-ignition Temperature	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Keep away from sources of sparks or ignition and protect from light. Keep in cool place, preferably below 30°C.
Incompatible Materials	Incompatible with: strong acids, strong bases, strong oxidizing agents sparks and ignition.
Hazardous Decomposition Products	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds and oxides

of nitrogen's. Occasionally hydrogen cyanide gas.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed.
Dermal	Not applicable.
Inhalation	Not applicable.
Skin	Causes mild skin irritation.
Eye	Causes serious eye irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure.

Common name: Trifluralin

Chronic toxicity: NOEL (beagle dog): 18.75 mg/kg/day
Carcinogenicity: 2 year study (rat) 325 mg/kg/day
Mutagenicity: Not mutagenic
Reproduction toxicity: NOEL (rat): 225 mg/kg/day
Other information : Teratogenicity – Does not appear to be teratogenic

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life with long lasting effects.
9.2A = Very toxic to the soil environment.

Ecotoxicity:

Fish			
LC50 (96 hours)	rainbow trout	=	0.02 – 0.06mg/L
	bluegill sunfish	=	0.05 – 0.07mg/L
	channel catfish	=	1.4-3.4 mg/L
Daphnia similis			
LC50 (48 hours)		=	0.5-.06 mg/L

Common name: Trifluralin

Mobility:

Persistence/degradability: Moderate to high persistence in soil. Half-life time (t_{1/2}): 45 to 60 days to 6 to 8 months
Subject to degradation by soil microorganisms. May be decomposed by UV light or may volatilize.

Bioaccumulative potential: Found adsorbed to soil sediments and particulates in the water columns

Toxic to fish and aquatic organisms. Toxic to Earthworms Nontoxic: Bees

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle.

Precautions and methods to avoid:

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

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



Road and Rail Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, (Trifluralin)

Air Transport

UN No: 3077
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, (Trifluralin)

Marine Transport

UN No: 3077
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, (Trifluralin)
Marine Pollutant Yes

Special Provisions:

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR000576

HSNO Classification: 6.1D(oral), 6.3B, 6.4A, 6.5B, 6.9A, 9.1A, 9.2A

Refer to EPA website www.epa.govt.nz for controls document - HSR000576

HSW (HS) Regulations 2017	Trigger Quantity/Regulation
HSW(Hazardous substance) Regulations Part 4 Certified Handlers and supervision and training of workers	HSW Reg 4.5 – 4.6 Information, instruction, training and supervision.
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100L (9.1A)

Product Name: TRIFLURALIN 480 EC
Date of SDS: 2 July 2019

Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
Tracking (Schedule 26)	Not required
HSNO Additional Controls (Restrictions of use)	
77A	The substance must not be applied onto or into water.
Hazardous Property Controls Notice 2017	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 pesticides
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P7297

Section 16	Other Information
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Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been issued by TCC (NZ) Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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Please contact the ADAMA, if further information is required.

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