

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

---

### SECTION 1. IDENTIFICATION

#### Product identifier

##### **Product name**

AUTHORITY® 480 MUC HERBICIDE

#### Other means of identification

##### **Product code**

50001706

#### **Product Registration Number**

PCP #32449

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

##### **Recommended use**

Can be used as herbicide only.

#### **Restrictions on use**

Use as recommended by the label.

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

##### Manufacturer

FMC of Canada Ltd  
6755 Mississauga Road, Suite 204  
Mississauga, ON L5N 7Y2  
Canada  
Phone (AgHotline): 1-833-FMC-PPAC (1-833-362-7722),  
Web: <https://ag.fmc.com/ca/en>  
SDS-Info@fmc.com

##### Supplier Address

FMC of Canada Limited  
6755 Mississauga Road, Suite 204  
Mississauga, ON L5N 7Y2  
Canada

#### Emergency telephone

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)

Medical emergency:  
U.S.A. & Canada: +1 800 / 331-3148  
All other countries: +1 651 / 632-6793 (Collect)

---

### SECTION 2. HAZARDS IDENTIFICATION

#### **GHS classification in accordance with the Hazardous Products Regulations**

Specific target organ toxicity : Category 2 (hematopoietic system)  
- repeated exposure

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version  
1.1

Revision Date:  
06/12/2024

SDS Number:  
50001706

Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

### GHS label elements

Hazard pictograms



Signal Word

: WARNING

Hazard Statements

: H373 May cause damage to organs (hematopoietic system) through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**

P260 Do not breathe mist or vapors.

**Response:**

P314 Get medical advice/ attention if you feel unwell.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

Very toxic to aquatic life with long lasting effects.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture

### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Sulfentrazone	Sulfentrazone	122836-35-5	40
propane-1,2-diol	propane-1,2-diol	57-55-6	>= 5 - < 10
toluene	Toluene	108-88-3	>= 1 - <= 5

## SECTION 4. FIRST AID MEASURES

General advice

: Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.

If inhaled

: Move to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact

: Take off all contaminated clothing immediately.  
Wash contaminated clothing before re-use.  
Wash off immediately with plenty of water for at least 15 minutes.  
Get medical attention immediately if irritation develops and

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version  
1.1

Revision Date:  
06/12/2024

SDS Number:  
50001706

Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

persists.

- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Do not induce vomiting without medical advice.  
Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Exposure may result in convulsions, decreased locomotion, tearing, increased sensitivity to touch, bloody discharge from the nose and incoordination.  
May cause damage to organs through prolonged or repeated exposure.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- Notes to physician : Treat symptomatically.

---

## SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.  
High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.  
Chlorinated compounds  
Fluorinated compounds  
Sulfur oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides  
Hydrogen cyanide
- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.  
Use a water spray to cool fully closed containers.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Use personal protective equipment.  
If it can be safely done, stop the leak.  
Do not touch or walk through the spilled material.  
Never return spills in original containers for re-use.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
For disposal considerations see section 13.

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Never return spills in original containers for re-use.  
Collect as much of the spill as possible with a suitable absorbent material.  
Pick up and transfer to properly labeled containers.  
Keep in suitable, closed containers for disposal.

## SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.  
Avoid formation of respirable particles.  
Dispose of rinse water in accordance with local and national regulations.  
Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1 Revision Date: 06/12/2024 SDS Number: 50001706 Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
propane-1,2-diol	57-55-6	TWA (Vapour and aerosols)	50 ppm 155 mg/m <sup>3</sup>	CA ON OEL
		TWA (aerosol)	10 mg/m <sup>3</sup>	CA ON OEL

#### Personal protective equipment

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

#### Hand protection

Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

#### Eye protection

: Eye wash bottle with pure water  
Tightly fitting safety goggles

#### Skin and body protection

: Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Protective measures

: Plan first aid action before beginning work with this product.  
Always have on hand a first-aid kit, together with proper instructions.  
Ensure that eye flushing systems and safety showers are located close to the working place.  
Wear suitable protective equipment.  
In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

#### Hygiene measures

: Avoid contact with skin, eyes and clothing.  
Do not inhale aerosol.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC

### HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

Form	:	liquid
Color	:	off-white
Odor	:	alcohol-like
Odor Threshold	:	No data available
pH	:	5.3 - 6 (20 °C)
Boiling point/boiling range	:	No data available
Flash point	:	> 94 °C  Method: closed cup
Evaporation rate	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	10.07 lb/gal
Solubility(ies)		
Water solubility	:	dispersible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1      Revision Date: 06/12/2024      SDS Number: 50001706      Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

---

Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable
Metal corrosion rate	:	Not corrosive to metals.
Particle size	:	Not applicable

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid extreme temperatures. Avoid formation of aerosol.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	Stable under recommended storage conditions.

---

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

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

#### Product:

Acute oral toxicity	:	LD50 (Rat, female): 2,084 mg/kg Method: US EPA Test Guideline OPP 81-1
		LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Assessment: The component/mixture is minimally toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Rat): > 2.72 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: US EPA Test Guideline OPP 81-3 Assessment: The component/mixture is minimally toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 2,000 mg/kg Method: US EPA Test Guideline OPP 81-2

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

Assessment: The substance or mixture has no acute dermal toxicity

### Components:

#### **Sulfentrazone:**

- Acute oral toxicity : LD50 (Rat, female): 2,689 mg/kg  
Symptoms: ataxia, clonic convulsions, Fatality  
GLP: yes
- Acute inhalation toxicity : LC50 (Rat, male and female): > 4.13 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: EPA OPP 81 - 3  
Symptoms: ataxia, Breathing difficulties  
GLP: yes  
Remarks: no mortality
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg  
Method: EPA OPP 81-2  
GLP: yes  
Assessment: The component/mixture is minimally toxic after single contact with skin.

#### **propane-1,2-diol:**

- Acute oral toxicity : LD50 (Rat, male and female): 22,000 mg/kg
- Acute inhalation toxicity : LC0 (Rabbit): 31.7 mg/l  
Exposure time: 2 h  
Test atmosphere: vapor  
Remarks: no mortality
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

#### **toluene:**

- Acute oral toxicity : LD50 (Rat): 5,580 mg/kg
- Acute inhalation toxicity : LC50 (Rat, male): 25.7 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
  
LC50 (Rat, female): 30 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor
- Acute dermal toxicity : (Rabbit): 12,267 mg/kg

#### **Skin corrosion/irritation**

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

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version  
1.1

Revision Date:  
06/12/2024

SDS Number:  
50001706

Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

---

### **Product:**

Species : Rabbit  
Assessment : Not classified as irritant  
Method : US EPA Test Guideline OPP 81-5  
Result : No skin irritation

### **Components:**

#### **Sulfentrazone:**

Species : Rabbit  
Assessment : No skin irritation  
Method : EPA OPP 81-5  
Result : No skin irritation  
GLP : yes

#### **propane-1,2-diol:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### **toluene:**

Species : Rabbit  
Assessment : Repeated exposure may cause skin dryness or cracking.  
Result : Skin irritation

### **Serious eye damage/eye irritation**

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

### **Product:**

Species : Rabbit  
Result : No eye irritation  
Assessment : Not classified as irritant  
Method : US EPA Test Guideline OPP 81-4

### **Components:**

#### **Sulfentrazone:**

Species : Rabbit  
Result : No eye irritation  
Assessment : No eye irritation  
Method : EPA OPP 81-4  
GLP : yes

#### **propane-1,2-diol:**

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1      Revision Date: 06/12/2024      SDS Number: 50001706      Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

---

### **toluene:**

Species : Rabbit  
Result : No eye irritation

### **Respiratory or skin sensitization**

#### **Skin sensitization**

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

#### **Respiratory sensitization**

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

### **Product:**

Test Type : Skin sensitization  
Routes of exposure : Skin contact  
Species : Guinea pig  
Assessment : Not a skin sensitizer.  
Method : US EPA Test Guideline OPP 81-6  
Result : Does not cause skin sensitization.

### **Components:**

#### **Sulfentrazone:**

Test Type : Maximization Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitization.

#### **propane-1,2-diol:**

Test Type : Maximization Test  
Species : Guinea pig  
Result : negative

### **toluene:**

Test Type : Maximization Test  
Species : Guinea pig  
Result : Not a skin sensitizer.

### **Germ cell mutagenicity**

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

### **Components:**

#### **Sulfentrazone:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

Test Type: Mouse lymphoma assay  
Test system: mouse lymphoma cells  
Metabolic activation: Metabolic activation

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

### **propane-1,2-diol:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse  
Result: negative

### **toluene:**

Genotoxicity in vitro : Test Type: Ames test  
Result: negative  
  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro  
Species: Rat  
Result: negative

### **Carcinogenicity**

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

### **Components:**

#### **Sulfentrazone:**

Species : Rat, male and female  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative

Species : Mouse, male and female  
Application Route : Ingestion  
Exposure time : 18 month(s)  
Result : negative

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

### **propane-1,2-diol:**

Species : Rat  
Application Route : Oral

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

Exposure time : 2 Years  
Result : negative

### Reproductive toxicity

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

#### Components:

##### **Sulfentrazone:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
General Toxicity Parent: NOEL: 13.7 - 16.2 mg/kg bw/day  
General Toxicity F1: NOEL: 13.7 - 16.2 mg/kg bw/day  
Symptoms: Maternal effects.

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOEL: 25 mg/kg bw/day  
Developmental Toxicity: NOEL: 10 mg/kg bw/day  
Method: EPA OPP 83-3

Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: LOAEL: 50 mg/kg bw/day  
Developmental Toxicity: LOAEL F1: 25 mg/kg bw/day  
Symptoms: Skeletal malformations.  
Target Organs: spleen  
Method: EPA OPP 83-3

##### **propane-1,2-diol:**

Effects on fertility : Test Type: reproductive and developmental toxicity study  
Species: Mouse  
Application Route: Oral  
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Mouse  
Application Route: Oral  
Method: OECD Test Guideline 414  
Result: Animal testing did not show any effects on fertility.  
Remarks: Based on data from similar materials

##### **toluene:**

Effects on fetal development : Species: Rat  
Application Route: Inhalation  
Result: Teratogenic effects.  
Remarks: Adverse developmental effects were observed

Reproductive toxicity - As- : Some evidence of adverse effects on sexual function and

## **SAFETY DATA SHEET**

according to the Hazardous Products Regulations



# **AUTHORITY® 480 MUC HERBICIDE**

Version Revision Date: SDS Number: Date of last issue: 06/12/2024  
1.1 06/12/2024 50001706 Date of first issue: 08/26/2022

fertility, and/or on development, based on animal experiments.

## STOT-single exposure

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

### **Components:**

## Sulfentrazone-

Remarks : No significant adverse effects were reported.

### **toluene-**

Assessment : May cause drowsiness or dizziness

## STOT-repeated exposure

May cause damage to organs (hematopoietic system) through prolonged or repeated exposure.

### **Components:**

#### Sulfentrazone-

**Target Organ Assessment** : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

**toluene:**

Routes of exposure	: Inhalation
Target Organs	: inner ear
Assessment	: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

## Repeated dose toxicity

### **Components:**

## Sulfentrazone-

Species	:	Rat, male
NOAEL	:	19.9 mg/kg
LOAEL	:	65.8 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90-days
GLP	:	yes
Target Organs	:	hematopoietic system

Species	: Mouse, male
NOAEL	: 60 mg/kg
LOAEL	: 108.4 mg/kg
Application Route	: Oral - feed
Exposure time	: 90-days
Target Organs	: hematopoietic system

Species : Dog male

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version	Revision Date:	SDS Number:	Date of last issue: 06/12/2024
1.1	06/12/2024	50001706	Date of first issue: 08/26/2022

NOAEL	:	10 mg/kg
LOAEL	:	28 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90-days
Target Organs	:	hematopoietic system, Liver

### **propane-1,2-diol:**

Species	:	Rat, male and female
NOAEL	:	1,700 mg/kg
Application Route	:	Oral
Exposure time	:	2 Years
Species	:	Rat, male and female
NOAEL	:	1,000 mg/kg
LOAEL	:	160 mg/kg
Application Route	:	Inhalation
Exposure time	:	90 Days

### **toluene:**

Species	:	Rat
NOAEL	:	625 mg/kg
Application Route	:	Oral
Symptoms	:	central nervous system effects
Species	:	Rat
NOAEL	:	0.098 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapor
Species	:	Rat
LOAEL	:	2.261 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapor

### **Aspiration toxicity**

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

### **Components:**

#### **Sulfentrazone:**

The substance does not have properties associated with aspiration hazard potential.

#### **toluene:**

May be fatal if swallowed and enters airways.

#### **Neurological effects**

### **Components:**

#### **Sulfentrazone:**

Neurotoxicity observed in animals studies

## **SAFETY DATA SHEET**

according to the Hazardous Products Regulations



# **AUTHORITY® 480 MUC HERBICIDE**

Version Revision Date: SDS Number: Date of last issue: 06/12/2024  
1.1 06/12/2024 50001706 Date of first issue: 08/26/2022

### **Further information**

## Product:

Remarks : No data available

## **SECTION 12. ECOLOGICAL INFORMATION**

## **Ecotoxicity**

## **Components:**

## **Sulfentrazone:**

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 120 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: EPA OPP 72-1

LC50 (*Lepomis macrochirus* (Bluegill sunfish)): 93.8 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: EPA OPP 72-1

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 60.4 mg/l  
Exposure time: 48 h  
Test Type: flow-through test

NOEC (*Daphnia magna* (Water flea)): 14.1 mg/l  
Exposure time: 48 h  
Test Type: flow-through test

Toxicity to algae/aquatic plants : EC50 (algae): 32.8 mg/l  
Exposure time: 72 h

EC50 (*Pseudokirchneriella subcapitata* (green algae)): 0.031 mg/l  
Exposure time: 120 h

EC50 (*Lemna gibba* (duckweed)): 0.0288 mg/l  
Exposure time: 14 d

EC50 (*Navicula pelliculosa* (Diatom)): 0.042 mg/l  
Exposure time: 120 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 5.9 mg/l  
Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Crustaceans): 0.51 mg/l  
Exposure time: 21 d

Toxicity to terrestrial organisms : LD<sub>50</sub> (*Anas platyrhynchos* (Mallard duck)) : > 5,620 ppm

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

isms	End point: Acute oral toxicity  NOEL (Anas platyrhynchos (Mallard duck)): 3,160 ppm End point: Acute oral toxicity  LD50 (Colinus virginianus (Bobwhite quail)): > 5,620 ppm End point: Acute oral toxicity  NOEL (Colinus virginianus (Bobwhite quail)): 5,620 ppm End point: Acute oral toxicity  NOEL (Colinus virginianus (Bobwhite quail)): > 100 ppm End point: Reproduction Test  NOEL (Anas platyrhynchos (Mallard duck)): > 100 ppm End point: Reproduction Test  LD50 (Apis mellifera (bees)): > 25 µg/bee End point: Acute oral toxicity  LD50 (Apis mellifera (bees)): > 200 µg/bee End point: Acute contact toxicity
------	--

### Ecotoxicology Assessment

Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.
<b>propane-1,2-diol:</b>	
Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 34,100 mg/l Exposure time: 48 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 13,020 mg/l Exposure time: 7 d
Toxicity to microorganisms	: EC50 (Pseudomonas putida): > 20,000 mg/l Exposure time: 18 h

### toluene:

Toxicity to fish	: LC50 (Fish): 5.5 mg/l Exposure time: 96 h
Toxicity to daphnia and other	: EC50: 3.78 mg/l

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

aquatic invertebrates	Exposure time: 48 h
Toxicity to algae/aquatic plants	: NOEC (Skeletonema costatum (marine diatom)): 10 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	: NOEC (Oncorhynchus kisutch (coho salmon)): 1.4 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Ceriodaphnia sp.): 0.74 mg/l Exposure time: 7 d
Toxicity to microorganisms	: EC50 (Bacteria): 134 mg/l Exposure time: 3 h

### Persistence and degradability

#### Components:

##### **Sulfentrazone:**

Biodegradability	: Result: Not readily biodegradable.
Stability in water	: Degradation half life (DT50): 2.22 - 9.56 h
Photodegradation	: Remarks: Decomposes rapidly in contact with light.

##### **propane-1,2-diol:**

Biodegradability	: Result: Readily biodegradable. Biodegradation: 23.6 % Exposure time: 64 d Method: OECD Test Guideline 306
------------------	--

##### **toluene:**

Biodegradability	: Result: Readily biodegradable.
------------------	----------------------------------

### Bioaccumulative potential

#### Product:

Bioaccumulation	: Remarks: No data available
-----------------	------------------------------

#### Components:

##### **Sulfentrazone:**

Bioaccumulation	: Species: Lepomis macrochirus (Bluegill sunfish) GLP: yes Remarks: Low potential for bioaccumulation
-----------------	---

Partition coefficient: n-octanol/water	: Pow: 9.8 pH: 7
--	---------------------

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1	Revision Date: 06/12/2024	SDS Number: 50001706	Date of last issue: 06/12/2024 Date of first issue: 08/26/2022
----------------	------------------------------	-------------------------	---

### propane-1,2-diol:

Partition coefficient: n-octanol/water : log Pow: -1.07

### toluene:

Bioaccumulation : Bioconcentration factor (BCF): 90

Partition coefficient: n-octanol/water : log Pow: 2.73 (20 °C)

### Mobility in soil

#### Components:

#### Sulfentrazone:

Mobility : Medium: Water  
Remarks: Predicted distribution to environmental compartments

Distribution among environmental compartments : Koc: 43 ml/g, log Koc: 1.63  
Remarks: Highly mobile in soils

Stability in soil : Remarks: Very persistent in soil.

### Other adverse effects

#### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.  
Toxic to aquatic life with long lasting effects.

---

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

---

## SECTION 14. TRANSPORT INFORMATION

#### International Regulations

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version	Revision Date:	SDS Number:	Date of last issue: 06/12/2024
1.1	06/12/2024	50001706	Date of first issue: 08/26/2022

### UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sulfentrazone)
Class	:	9
Packing group	:	III
Labels	:	9
Environmentally hazardous	:	yes

### IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

### IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sulfentrazone)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### Domestic regulation

#### TDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sulfentrazone)
Class	:	9
Packing group	:	III
Labels	:	9
ERG Code	:	171
Marine pollutant	:	yes(Sulfentrazone)

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version 1.1      Revision Date: 06/12/2024      SDS Number: 50001706      Date of last issue: 06/12/2024  
Date of first issue: 08/26/2022

---

### SECTION 15. REGULATORY INFORMATION

**Canadian PBT Chemicals** : This product contains the following components on the DSL that are classified as Persistent, Bioaccumulative and/or Toxic (PBT) under CEPA:  
octamethylcyclotetrasiloxane [D4]

**NPRI Components** : Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched

**The ingredients of this product are reported in the following inventories:**

TCSI : Not in compliance with the inventory

TSCA : Product contains substance(s) not listed on TSCA inventory.

AIIC : Not in compliance with the inventory

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.  
  
2',4'-DICHLORO-5'-(4-DIFLUOROMETHYL-4,5-DIHYDRO-3-METHYL-5-OXO-1H-1,2,4-TRIAZOL-1-YL)METHANESULFONANILIDE

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

NZIoC : Not in compliance with the inventory

TECI : Not in compliance with the inventory

**Canadian lists**

No substances are subject to a Significant New Activity Notification.

---

### SECTION 16. OTHER INFORMATION

**Full text of other abbreviations**

CA ON OEL : Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.

CA ON OEL / TWA : Time-Weighted Average Limit (TWA)

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## AUTHORITY® 480 MUC HERBICIDE

Version	Revision Date:	SDS Number:	Date of last issue: 06/12/2024
1.1	06/12/2024	50001706	Date of first issue: 08/26/2022

Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

### Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to insure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

CA / EN

### Prepared by:

FMC Corporation

FMC and the FMC Logo are trademarks of FMC Corporation and/or an affiliate.

© 2021-2024 FMC Corporation. All Rights Reserved.

End of Material Safety Data Sheet