

**SAFETY DATA SHEET**  
OBEY Herbicide

SDS # : 006664-A  
Revision date: 2016-05-26  
Format: NA  
Version 1.03



**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** OBEY Herbicide

**Other means of identification**

**Product Code(s)** 006664-A

**Synonyms** 3,7-dichloroquinoline-8-carboxylic acid; Clomazone (F57020);  
2-(2-chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one (IUPAC name);  
2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone (CAS Name); F7436-13 ZC

**Active Ingredient(s)** Quinclorac; Clomazone

**Chemical Family** Quinoline derivative; Isoxazolidinones

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

**Recommended Use:** Herbicide

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

**Manufacturer Address**

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

**Emergency telephone number**

For leak, fire, spill or accident emergencies, call:  
1 800 / 424 9300 (CHEMTREC - U.S.A.)  
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

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

**2. HAZARDS IDENTIFICATION**

**Classification**

**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
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**GHS Label elements, including precautionary statements**

**EMERGENCY OVERVIEW**

**Warning**

**Hazard Statements**  
H332 - Harmful if inhaled



**Precautionary Statements - Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P312 - Call a POISON CENTER or doctor if you feel unwell

**Hazards not otherwise classified (HNOC)**

No hazards not otherwise classified were identified.

**Other Information**

Toxic to aquatic life with long lasting effects.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family** Quinoline derivative; Isoxazolidinones.

Chemical name	CAS-No	Weight %
Quinclorac	84087-01-4	13.2
Clomazone	81777-89-1	12
Sodium Nitrate	7631-99-4	1-5
Calcium chloride	10043-52-4	1-5
Methylene bisphenyl isocyanate (MDI)	101-68-8	0.1-1

Synonyms are provided in Section 1.

**4. FIRST AID MEASURES**

**Eye Contact** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

**Skin Contact** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

**Inhalation** Move to fresh air. If person is not breathing, call 911 (within the U.S. and Canada) or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**Ingestion** 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 a poison control center or doctor Do not give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed** Symptoms of overexposure include decreased activity, tearing eyes, bleeding from the nose and incoordination.

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

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**      Carbon dioxide (CO<sub>2</sub>), Water spray, Foam, Dry chemical.

**Specific Hazards Arising from the Chemical**

**Explosion data**

**Sensitivity to Mechanical Impact**      Not sensitive.  
**Sensitivity to Static Discharge**      Not sensitive.

**Protective equipment and precautions for firefighters**      Wear self-contained breathing apparatus and protective suit.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions**      Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

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

**Environmental Precautions**      See Section 12 for additional Ecological Information.

**Methods for Containment**      Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up**      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.

**7. HANDLING AND STORAGE**

**Handling**      Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

**Storage**      Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Keep/store only in original container.

**Incompatible products**      No information available

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

<b>Chemical name</b>	<b>ACGIH TLV</b>	<b>OSHA PEL</b>	<b>NIOSH</b>	<b>Mexico</b>
Methylene bisphenyl isocyanate (MDI) (101-68-8)	TWA: 0.005 ppm	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m <sup>3</sup>	IDLH: 75 mg/m <sup>3</sup> TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> Ceiling: 0.020 ppm Ceiling: 0.2 mg/m <sup>3</sup>	-
<b>Chemical name</b>	<b>British Columbia</b>	<b>Quebec</b>	<b>Ontario TWAEV</b>	<b>Alberta</b>
Calcium chloride (10043-52-4)	-	-	TWA: 5 mg/m <sup>3</sup>	-
Methylene bisphenyl isocyanate (MDI)	TWA: 0.005 ppm Ceiling: 0.01 ppm	TWA: 0.005 ppm TWA: 0.051 mg/m <sup>3</sup>	TWA: 0.005 ppm	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup>

(101-68-8)	Skin		CEV: 0.02 ppm
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**Appropriate engineering 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.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**                      For dust, splash, mist or spray exposure, wear chemical protective goggles.

**Skin and Body Protection**                Wear long-sleeved shirt, long pants, socks, and shoes.

**Hand Protection**                            Protective gloves

**Respiratory Protection**                  For dust, splash, mist or spray exposures wear a filtering mask.

**Hygiene measures**                         Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

**General information**                        If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Appearance</b>	Light yellow Liquid
<b>Physical State</b>	Liquid
<b>Color</b>	Light yellow
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available
<b>pH</b>	4.16 (1% aqueous dispersion)
<b>Melting point/freezing point</b>	Not applicable
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	> 105 °C / > 221 °F
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Density</b>	9.42 lb/gal
<b>Specific gravity</b>	1.1291
<b>Water solubility</b>	No information available
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular weight</b>	No information available
<b>Bulk density</b>	No information available

**10. STABILITY AND REACTIVITY**

**Reactivity**                                      None under normal use conditions

**Chemical Stability** Stable under recommended storage conditions.  
**Possibility of Hazardous Reactions** None under normal processing.  
**Hazardous polymerization** Hazardous polymerization does not occur.  
**Conditions to avoid** Heat, flames and sparks  
**Incompatible materials** No information available.  
**Hazardous Decomposition Products** Carbon oxides (COx), Nitrogen oxides (NOx), Chlorine, Hydrogen chloride.

**11. TOXICOLOGICAL INFORMATION**

**Product Information**

**LD50 Oral** > 5,000 mg/kg (rat)  
**LD50 Dermal** > 5,000 mg/kg (rabbit)  
**LC50 Inhalation** > 2.12 mg/L 4 hr (rat)

**Serious eye damage/eye irritation** Mildly irritating.  
**Skin corrosion/irritation** Slightly or non-irritating (rabbit).  
**Sensitization** Non-sensitizing

**Information on toxicological effects**

**Symptoms** No information available.

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

**Chronic toxicity** Quinclorac: Prolonged exposure caused decreased body weight, increased liver enzyme and focal chronic interstitial nephritis. Clomazone: Long-term exposure caused slight liver weight increase and hepatocyte enlargement in animal studies.

**Mutagenicity** Quinclorac; Clomazone: Not genotoxic in laboratory studies  
**Carcinogenicity** Quinclorac; Clomazone: No evidence of carcinogenicity from animal studies  
**Neurological effects** Quinclorac: No neurotoxicity observed in animal studies. Clomazone: Not neurotoxic.  
**Reproductive toxicity** Quinclorac; Clomazone: No toxicity to reproduction in animal studies.  
**Developmental toxicity** Quinclorac; Clomazone: Not teratogenic in animal studies.  
**STOT - single exposure** Not classified.  
**STOT - repeated exposure** Not classified.  
**Target organ effects** Quinclorac: Liver, kidney Clomazone: Liver  
**Neurological effects** Quinclorac: No neurotoxicity observed in animal studies. Clomazone: Not neurotoxic.  
**Aspiration hazard** No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium Nitrate 7631-99-4		Group 2A		
Methylene bisphenyl isocyanate (MDI) 101-68-8		Group 3		

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

<b>Quinclorac (84087-01-4)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Quinclorac	72 h EC50	Algae	6.53	mg/L
	48 h EC50	Daphnia	29.8	mg/L
	96 h LC50	Fish	>100	mg/L
	21 d NOEC	Crustacea	50.4	mg/L

<b>Clomazone (81777-89-1)</b>
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Active Ingredient(s)	Duration	Species	Value	Units
Clomazone	72 h EC50	Algae	0.136	mg/L
	48 h EC50	Crustacea	12.7	mg/L
	96 h LC50	Fish	15.5	mg/L
	21 d NOEC	Fish	2.30	mg/L
	21 d NOEC	Crustacea	2.2	mg/L
	96 h NOEC	Algae	0.05	mg/L

**Persistence and degradability**      Quinclorac: Persistent. Does not readily hydrolyze. Not readily biodegradable. Clomazone: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.

**Bioaccumulation**                      Quinclorac, Clomazone: The substance does not have a potential for bioconcentration.

**Mobility**                                  Quinclorac: Mobile; Has potential to reach ground water. Clomazone: Moderately mobile; Has some potential to reach groundwater.

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods**              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.

**Contaminated Packaging**              Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

**14. TRANSPORT INFORMATION**

**DOT**    This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

**TDG**    Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

**UN/ID no**                                      UN3082  
**Proper Shipping Name**                  Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class**                                9  
**Packing Group**                             III  
**Marine Pollutant**                         Clomazone.  
**Description**                                UN3082, Environmentally hazardous substance, liquid, n.o.s. (Clomazone), 9 PG III

**ICAO/IATA**  
**UN/ID no**                                      UN3082  
**Proper Shipping Name**                  Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class**                                9  
**Packing Group**                             III  
**Description**                                UN3082, Environmentally hazardous substance, liquid, n.o.s. (Clomazone), 9, PG III, Marine Pollutant

**IMDG/IMO**  
**UN/ID no**                                      UN3082  
**Proper Shipping Name**                  Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class**                                9  
**Packing Group**                             III  
**EmS No.**                                      F-A, S-F  
**Marine Pollutant**                         Clomazone  
**Description**                                UN3082, Environmentally hazardous substance, liquid, n.o.s. (Clomazone), 9, PG III, Marine Pollutant

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Methylene bisphenyl isocyanate (MDI) - 101-68-8	101-68-8	0.1-1	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard	No
Chronic health hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium Hydroxide 1310-73-2	1000 lb			X
Formaldehyde 50-00-0	100 lb			X
Acetic Acid 64-19-7	5000 lb			X
Naphthalene 91-20-3	100 lb	X	X	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Sodium Hydroxide 1310-73-2	1000 lb 454 kg	
Formaldehyde 50-00-0	100 lb 45.4 kg	100 lb
Acetic Acid 64-19-7	5000 lb 2270 kg	
Naphthalene 91-20-3	100 lb 45.4 kg	
Methylene bisphenyl isocyanate (MDI) 101-68-8	5000 lb 2270 kg	

**FIFRA Information**

*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. Following is the hazard information as required on the pesticide label:*

**CAUTION**

*Causes moderate eye irritation.*

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals.

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**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium Nitrate 7631-99-4		X	X
Methylene bisphenyl isocyanate (MDI) 101-68-8	X	X	X

**International Inventories**

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Quinclorac 84087-01-4		X	X		X		X	X
Clomazone 81777-89-1					X	X		
Sodium Nitrate 7631-99-4	X	X	X	X	X	X	X	X
Calcium chloride 10043-52-4	X	X	X	X	X	X	X	X
Methylene bisphenyl isocyanate (MDI) 101-68-8	X	X	X	X	X	X	X	X

**Mexico - Grade** Slight risk, Grade 1

Chemical name	Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use - Threshold Quantities	Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities
Formaldehyde	100 2500 kg/yr	100 kg/yr
Methylene diphenyl diisocyanate (polymeric)	100 5000 kg/yr	100 kg/yr
Methylene bisphenyl isocyanate (MDI)	100 5000 kg/yr	100 kg/yr

**WHMIS Hazard Class** Non-controlled

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazards</b> 1	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Special Hazards</b> -
<b>HMIS</b>	<b>Health Hazards</b> 1*	<b>Flammability</b> 1	<b>Physical hazard</b> 0	<b>Personal Protection</b> X

Revision date: 2016-05-26  
 Reason for revision: (M)SDS sections updated

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manner inconsistent with its labeling. Further, 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.

**Prepared By:**

FMC Corporation

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**End of Safety Data Sheet**