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1. Identification

Product identifier used on the label

DRIVE® 75 DF HERBICIDE

Recommended use of the chemical and restriction on use

Recommended use*: herbicide

* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION 100 Park Avenue Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 63435 EPA Register number: 7969-130

Molecular formula: C10 H2 O2 N Cl2 Chemical family: quinoline derivative

Synonyms: quinclorac

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Aquatic Acute 3 Hazardous to the aquatic environment - acute

Label elements

Hazard Statement:

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H402 Harmful to aquatic life.

Precautionary Statements (Prevention):

P273 Avoid release to the environment.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection

point.

Hazards not otherwise classified

Labeling of special preparations (GHS):

May cause paraesthesia. quinclorac

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 6 - 7 % dermal

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 3 - 4 % Inhalation - dust

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:

HARMFUL IF INHALED.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

May cause moderate but temporary irritation to the eyes.

Prolonged or repeated skin contact may cause sensitization or allergic reactions.

KEEP OUT OF REACH OF CHILDREN.

KEEP OUT OF REACH OF DOMESTIC ANIMALS.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of dusts/mists/vapours.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
84087-01-4	75.0 %	quinclorac
14808-60-7	<= 1.0 %	crystalline silica
13463-67-7	<= 0.2 %	Titanium dioxide

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
84087-01-4	75.0 %	quinclorac
14808-60-7	<= 1.0 %	crystalline silica
	<= 25.0 %	Proprietary ingredients
13463-67-7	<= 0.2 %	Titanium dioxide

4. First-Aid Measures

Description of first aid measures

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General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: No known specific antidote. Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

foam, dry powder, carbon dioxide, water spray

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons,

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Dust explosion class: Kst value of 0.

Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed. Protect from temperatures above: 40 °C

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Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

crystalline silica OSHA PEL TWA value 2.4 millions of particles per cubic foot

of air Respirable;

The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher

exposure limits.

TWA value 0.1 mg/m3 Respirable; The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher

exposure limits.

TWA value 0.3 mg/m3 Total dust; The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher

exposure limits.

ACGIH TLV TWA value 0.025 mg/m3 Respirable fraction;

Titanium dioxide OSHA PEL PEL 15 mg/m3 Total dust ; TWA value 10

mg/m3 Total dust;

ACGIH TLV TWA value 10 mg/m3;

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

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Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form: granules, solid Odour: mild, characteristic

Odour threshold: Not determined due to potential health

hazard by inhalation.

Colour: tan pH value: 3.2

(10 g/I)not applicable, The substance / product Melting point:

decomposes therefore not determined. The product is a non-volatile solid., not

applicable

not applicable

Flash point: Flammability: Product is

combustible.

Lower explosion limit: As a result of our experience with this

product and our knowledge of its

composition we do not expect any hazard

as long as the product is used

appropriately and in accordance with the

intended use.

As a result of our experience with this Upper explosion limit:

product and our knowledge of its composition we do not expect any hazard

as long as the product is used

appropriately and in accordance with the

intended use. negligible

Vapour pressure:

Boiling point:

Bulk density: 565 - 595 g/l

4.7152 - 4.9488

Lb/USg

Vapour density: not applicable

Information on: quinclorac

Partitioning coefficient n--0.74(20 °C) (Directive 92/69/EEC, A.8)

octanol/water (log Pow):

Partitioning coefficient n--3.74(20 °C) (Directive 92/69/EEC, A.8)

octanol/water (log Pow):

Partitioning coefficient n-1.76 (20 °C) (Directive 92/69/EEC, A.8)

octanol/water (log Pow):

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Self-ignition not self-igniting The values mentioned temperature: are those of the active ingredient.

Thermal decomposition: 502.7 °F (VDI 2263, sheet 1, 1.4.1)

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrogen chloride, halogenated hydrocarbons,

Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. Risk of exothermic self-accelerating decomposition above the

indicated temperature.

Solubility in water: 64 mg/l (approx. 20 °C)

Molar mass: 239.04 g/mol

Evaporation rate: not applicable

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Not an oxidizer.

Dust explosion class:

Kst value of 0 (St 0)

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Incompatible materials

strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Prolonged thermal loading can result in products of degradation being given off., No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

502.7 °F (VDI 2263, sheet 1, 1.4.1)

Possible thermal decomposition products:

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carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. Risk of exothermic self-accelerating decomposition above the indicated temperature.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Slightly toxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Oral

Type of value: LD50 Species: rat (male/female) Value: > 2,200 mg/kg No mortality was observed.

Inhalation

Type of value: LC50 Species: rat Value: > 6.1 mg/l Exposure time: 4 h

No mortality was observed.

Dermal

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg No mortality was observed.

Irritation / corrosion

Assessment of irritating effects: May cause moderate but temporary irritation to the eyes. May cause moderate irritation to the skin.

Skin

Species: rabbit Result: Irritating.

Eve

Species: rabbit

Result: moderately irritating

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. Some individuals may develop an allergic dermatitis.

modified Buehler test Species: guinea pig

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Result: Non-sensitizing.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Quinclorac

Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Acutely harmful for aquatic organisms.

Toxicity to fish

Information on: Quinclorac

LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss (EPA 72-1, static) LC50 (96 h) > 100 mg/l, Lepomis macrochirus (EPA 72-1, static)

Aquatic invertebrates

Information on: Quinclorac

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EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants

Information on: Quinclorac

EC50 (96 h) > 100 mg/l (biomass), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

EC50 (96 h) > 100 mg/l (growth rate), Anabaena flos-aquae (OECD Guideline 201)

Chronic toxicity to fish

Information on: quinclorac

No observed effect concentration (38 d) 31 mg/l, Pimephales promelas

Chronic toxicity to aquatic invertebrates

Information on: quinclorac

No observed effect concentration (21 d) 110 mg/l, Daphnia magna

Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

Other terrestrial non-mammals

Information on: Quinclorac LC50, Anas platyrhynchos

With high probability not acutely harmful to terrestrial organisms.

LD50 > 100 ug/bee, Apis mellifera

With high probability not acutely harmful to terrestrial organisms.

Persistence and degradability

Elimination information

Not readily biodegradable (by OECD criteria).

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: quinclorac

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

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13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:

This product is not regulated by RCRA.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

EPCRA 311/312 (Hazard categories): Acute; Chronic

State regulations

State RTK	CAS Number	Chemical name
MA, NJ, PA	14808-60-7	crystalline silica
MA, NJ, PA	13463-67-7	Titanium dioxide

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CA Prop. 65:

CA PROP 65: An assessment has determined that there is no significant risk present.

HMIS III rating

Health: 3^m Flammability: 1 Physical hazard:0

Labeling requirements under 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 workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

HARMFUL IF INHALED. HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

May cause moderate but temporary irritation to the eyes.

Prolonged or repeated skin contact may cause sensitization or allergic reactions.

KEEP OUT OF REACH OF CHILDREN.

KEEP OUT OF REACH OF DOMESTIC ANIMALS.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of dusts/mists/vapours.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2014/12/09

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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