

According to the UN GHS revision 8

Creation Date: June 04, 2026

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1. IDENTIFICATION

1.1 GHS Product identifier

Product name: Diclofenac
Catalog Number: T0196
CAS Number: 15307-86-5

1.2 Other means of identification

Other names: -

1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

1.4 Supplier's details

Company: Targetmol Chemicals Inc.
Address: 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA
Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286
Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral
Reproductive toxicity, Category 2
Specific target organ toxicity - repeated exposure, Category 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

2.2 GHS label elements, including precautionary statements

Pictogram(s):



Signal word:

Danger

Hazard statement(s):

H302 Harmful if swallowed
H361 Suspected of damaging fertility or the unborn child
H372 Causes damage to organs through prolonged or repeated exposure
H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s):

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P203 Obtain, read and follow all safety instructions before use.

Prevention:

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.

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|------------------|--|
| Response: | P301+P317 IF SWALLOWED: Get medical help. P330 Rinse mouth. P318 IF exposed or concerned, get medical advice. P319 Get medical help if you feel unwell. P391 Collect spillage. |
| Storage: | P405 Store locked up. |
| Disposal: | P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |

2.3 Other hazards which do not result in classification

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Chemical name | Common names and synonyms | CAS number | EC number |
|---------------|---------------------------|------------|-----------|
| Diclofenac | - | 15307-86-5 | 239-348-5 |

4. FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

General advice

no data available

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Diclofenac sodium 1% gel and diclofenac epolamine transdermal system should be stored at 25 deg C but may be exposed to temperatures ranging from 15-30 deg C. Diclofenac gel should not be frozen.

Keep away from moisture

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|------------------------------|-------------------|
| Physical state | Solid |
| Color | White |
| Odour | no data available |
| Melting point/freezing point | 158°C(dec.)(lit.) |

| | |
|---|--|
| Boiling point or initial boiling point and boiling range | 83°C/0.7mmHg(lit.) |
| Flammability | no data available |
| Lower and upper explosion limit/flammability limit | no data available |
| Flash point | 58°C(lit.) |
| Auto-ignition temperature | no data available |
| Decomposition temperature | no data available |
| pH | no data available |
| Kinematic viscosity | no data available |
| Solubility | DMSO: 160 mg/mL (540.27 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| N-octanol-water partition coefficient | no data available |
| Vapour pressure | 1.07E-09mmHg at 25°C |
| Density and/or relative density | 1.431 g/cm3 |
| Relative vapour density | no data available |
| Particle characteristics | no data available |

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 Monkey oral 3200 mg/kg Diclofenac sodium

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: Diclofenac degradation in a freshwater inoculum from Lake Geifense, Switzerland and incubated for 37 days was found to be negligible(1). At low concentrations (3-35 µM), the compound was biodegraded when incubated in a river sediment consortia from the creek Muenzbach (Freiberg/Saxony), as indicated by the metabolite p-benzoquinone imine of 5-hydroxydiclofenac; concentrations of up to 260µM proved toxic(2). Diclofenac, present at 50 mg/L, reached 1.1% of its theoretical BOD in 75 days using a wastewater inoculum from the Jyvaskyla, Finland sewage treatment plant in the 301F Manometric respirometry test(3).

12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated for diclofenac(SRC), using a log Kow of 4.51(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC), provided the compound is not altered physically or chemically once released into the environment.

12.4 Mobility in soil

Using an agricultural soil from Corrstown, County Dublin, Ireland a log Koc of 2.39 was measured(1), corresponding to a Koc of 245(SRC). According to a classification scheme(2), this estimated Koc value suggests that diclofenac is expected to have moderate mobility in soil. The pKa of diclofenac is 4.15(3), indicating that this compound will exist almost entirely in the dissociated form in the environment and anions generally do not adsorb more strongly to organic carbon and clay than their neutral counterparts(4). Adsorption to sediments from Lake Greifensee, Switzerland was found to be negligible(5). When 500 ng/L diclofenac was mixed with one liter of lake water and 1 g sediment/L water, the aqueous phase showed no decrease in concentration following centrifugation and removal of sediment particles (5).

12.5 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

A DRUG SCREENING EXPERT

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available

14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

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|--|-------------|
| European Inventory of Existing Commercial Chemical Substances (EINECS) | Listed. |
| EC Inventory | Listed. |
| United States Toxic Substances Control Act (TSCA) Inventory | Not Listed. |
| China Catalog of Hazardous chemicals 2015 | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC) | Not Listed. |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | Not Listed. |
| Vietnam National Chemical Inventory | Listed. |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) | Not Listed. |
| Korea Existing Chemicals List (KECL) | Not Listed. |

16. OTHER INFORMATION

Information on revision

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

no data available

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