Flag Flagchem 江苏富莱格国际贸易有限公司
Flagchem International Co., Ltd.
Add: 29F, Soho Mansion, No 8 South Zhongshan Road, Nanjing, China Postcode: 210005 Tel: 86 25 83738100 Fax: 86 25 86890135 E-mail: sales@flagchem.com

Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: Oxyfluorfen 240 g/L EC

IUPAC Name: 2-chloro-a,a,a-trifluoro-p-tolyl 3-ethoxy-4-nitrophenyl ether

Synonyms: No data available

Company Identification: Flagchem International Co. Ltd

Address: 29th fl. Soho Mansion, 8 South Zhonqshan Road, Nanjang, China, тел: 0086-21-58690496

Section 2 - Composition, Information on Ingredients

CAS No	Chemical Name	Percent	EINECS/ELINCS
42874-03-3	2-chloro-a,a,a-trifluoro-p-tolyl 3-ethoxy-4-nitrophenyl ether	240 g/L	\

Section 3 - Hazards Identification Classification of the substance or mixture

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Skin irritation - Category 2
Eye irritation - Category 2A
Skin sensitisation - Sub-category 1B
Carcinogenicity - Category 2
Reproductive toxicity - Category 1B
Specific target organ toxicity - single exposure - Category 3
Aspiration hazard - Category 1

Label elements

Pictogram 

Hazard statement(s)

May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Suspected of causing cancer.
May damage fertility or the unborn child.

Precautionary statement(s)

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear eye protection/ face protection.
Wear protective gloves.
Use personal protective equipment as required.

Response
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

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

Other hazards
No data available

Section 4 - First Aid Measures

General advice

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled

Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

In case of skin contact

Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be available in work area.

In case of eye contact

Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be immediately available.

If swallowed

Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician

Repeated excessive exposure may aggravate preexisting lung disease. Skin contact may aggravate preexisting dermatitis. Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Administer 100% oxygen to relieve headache and a general sense of weakness. Determine methemoglobin concentration of blood every 3 to 6 hours for first 24 hours. It should return to normal within 24 hours. The treatment of toxic methemoglobinemia may include the intravenous administration of methylene blue. If methemoglobin >10-20% consider methylene blue 1-2 mg/kg body weight as 1% solution intravenously over 5 minutes followed by 15-30 cc flush (Price D, Methemoglobinemia, Goldfrank Toxicologic Emergencies, 5th ed., 1994). Also provide 100% oxygen. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5 - Fire Fighting Measures

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media

Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture

Hazardous combustion products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen fluoride. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards

Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures

Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Keep upwind of spill. Keep personnel out of low areas. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up

Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: See Section 13, Disposal Considerations, for additional information.

Section 7 - Handling and Storage Precautions for safe handling

Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage, including any incompatibilities

Store in a dry place. Store in original container. Keep container tightly closed. Do not store near food, foodstuffs, drugs or potable water supplies.

Section 8 - Exposure Controls, Personal Protection

Appropriate engineering controls

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

Eye/face protection
Use chemical goggles.

Hand protection:
Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber

("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection:
Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection
Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Control of environmental exposure
No data available

Section 9 - Physical and Chemical Properties

Appearance	
Physical	Liquid.
state Color Odor	Yellow
Boiling point (760 mmHg)	Sweet
Flash point	201.7 °C (395.1 °F)
Flammability (solid, gas)	89.9 °C
Lower explosion limit Upper	Flammable liquid No
explosion limit Vapor	thermal explosion No
Pressure Density	thermal explosion 0.29
Water solubility	hPa at 20 °C (68 °F)
Auto-ignition temperature	1.0720 g/ml at 20 °C
Decomposition temperature	Emulsifiable 346 °C (655 °F)
	290 °C (554 °F)

NOTE: The physical data presented above are typical values and should not be construed as a specification.

Section 10 - Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable in two years at typical use temperatures.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to avoid

Some components of this product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials

Avoid contact with: Acids. Amines. Bases. Halogens.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Hydrogen fluoride. Nitrogen oxides. Toxic gases are released during decomposition.

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product:
LD_{50}, Rat, female, 3,160 mg/kg
LD_{50}, Rat, male, 2,150 mg/kg

Flagchem International Co., Ltd
江苏富莱格国际贸易有限公司
FLAGCHEM INTERNATIONAL CO.,LTD.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:

LD_{50}, Rat, male and female, > 2,000 mg/kg **Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.

As product:

LC_{50}, Rat, male and female, 2 Hour, > 2115 mg/m³ **Skin corrosion/irritation**

Brief contact may cause severe skin irritation with pain and local redness. May cause drying and flaking of the skin. Prolonged contact may cause skin irritation, even a burn.

Serious eye damage/eye irritation

May cause moderate eye irritation which may be slow to heal. May cause slight corneal injury.

Sensitization

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause respiratory irritation.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s):

In animals, effects have been reported on the following organs:
Liver.
Blood.
Spleen.

Contains component(s) which have been reported to cause effects on the following organs in animals: Blood-forming organs (Bone marrow & Spleen). Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.

Liver.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.
Ingestion of naphthalene by humans has caused hemolytic anemia.
Central nervous system.
Excessive exposure to solvent(s) may cause respiratory irritation and central nervous system depression.

Carcinogenicity

Contains naphthalene which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.
For the active ingredient(s): An increase in spontaneously occurring tumors observed in mice is of questionable relevance. No increases in tumors were observed in rats.

Teratogenicity

For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Active ingredient did not cause birth defects in laboratory animals.

For the solvent(s): Did not cause birth defects or any other fetal effects in laboratory animals. N-methyl pyrrolidone has caused toxic effects to the fetus in laboratory animals at high dose levels with either mild or undetectable maternal toxicity.

Reproductive toxicity

For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Mutagenicity

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. Based on information for component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Aspiration Hazard
May be fatal if swallowed and enters airways.

Carcinogenicity

Component	List	Classification
Naphthalene	IARC	Group 2B: Possibly carcinogenic to humans
	US NTP	Reasonably anticipated to be a human carcinogen
	ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans.

Section 12 - Ecological Information Ecotoxicity

Bobwhite quail acute oral 14d-NOEC: 2250 mg/kg, weight; LD_{50} > 2250 mg/kg, Low toxicity.
Rainbow Trout 96-hour LC_{50}: 2.8 mg/L; NOEC: 0.63 mg/L, Median toxicity Daphnia Magna 48-hour EC_{50}: 0.33 mg/L; 48h-NOEC: 0.085 mg/L, High toxicity.
Algae 72h-EC_{50}: 1.1^g/L; 96h-EC_{50}: 1.2^g/L, High toxicity.
Honeybee acute oral 24-LD_{50}: 59.4 ^g a.i. /bee; 96-LD_{50}: 46.4 ^g a.i. /bee, Low toxicity.
Honeybee acute contact 96-LD_{50}: 100 ^g a.i. /bee, Low toxicity.

Bombyx mori 96h-LC_{50}: > 1997 mg a.i. /L, Low toxicity.

Persistence and degradability

No data available **Bioaccumulative potential** No data available **Mobility in soil**

No data available

Results of PBT and vPvB assessment

No data available

Section 13 - Disposal Considerations Disposal methods

Flagchem International Co., Ltd
江苏富莱格国际贸易有限公司
FLAGCHEM INTERNATIONAL CO.,LTD.

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied

Section 14 - Transport Information

	DOT	IMO/IMDG	IATA/ICAO
Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.(Naphthalene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Oxyfluorfen, Naphthalene)	Environmentally hazardous substance, liquid, n.o.s.(Oxyfluorfen, Naphthalene)
Hazard Class:	9	9	9
UN Number:	UN 3082	UN 3082	UN 3082
Packing Group:	III	III	III
Environmental Hazards	\	\	\

Section 15 - Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available **Chemical**

safety assessment

No data available

Section 16 - Other Information

Information source and references

The information contained in the Safety Data Sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and

transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

HISTORY

Date of printing :06/15/2018

Date previous issue : 06/15/2018 Date of issue :

Flagchem International Co., Ltd
江苏富莱格国际贸易有限公司
FLAGCHEM INTERNATIONAL CO.,LTD.