



IHARANIKKEI CHEMICAL (THAILAND) CO., LTD.

บริษัท อีฮารานิกเคอิ เคมีคัลด์ (ประเทศไทย) จำกัด

Safety Data Sheet

1. Identification of the substance and of the supplier

Product Identifier :

Product name : Terephthaloyl Chloride

Other means of identification : TPC

Other indications : CAS No. : 100-20-9

Recommended use of the chemical and restrictions on use :

Important intermediates such as high performance polymers

Manufacture's details :

Company : Iharanikkei Chemical (Thailand) Co., Ltd.

Address : 8/8 Phangmuang Chapoh 3-1 Road,
Huaypong, Muang Rayong, Rayong 21150 Thailand

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2. Hazards Identification

GHS classification of the substance or mixture :

Health hazards

Corrosive to metals	Category 1
Acute toxicity (oral)	Category 5
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1

GHS label elements :



Signal word

Danger



Hazard statement

[Physical hazard statements]

May be corrosive to metals

[Health hazard statements]

May be harmful if swallowed

Causes severe skin burns and eye damage

Causes serious eye damage

[Environmental hazard statements]

None

Precautionary statement

[Prevention precautionary statements]

P223 Keep container tightly closed.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P234 Keep only in original container.

[Response precautionary statements]

Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN, IN EYES, SWALLOWED or INHALED, immediately call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material-damage.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



[Storage precautionary statements]

P403 Store in a well-ventilated and cool dark place.

P405 Store locked up.

P406 Store in a corrosion resistant container with a resistant inner liner.

[Disposal precautionary statements]

Dispose of contents/container in accordance with local/regional/national/international regulation.

Other hazards which do not result in classification: No data available

3. Composition/Information on Ingredients

Substances

Chemical identity of the substance : Terephthaloyl chloride

Synonyms : 1,4-Benzenedicarbonyl dichloride

Molecular formula : $C_8H_4Cl_2O_2$

Composition : > 99.5 %

Molecular weight : 203.02

CAS No.: 100-20-9

Structure :



Impurities and stabilizing None

additives which are themselves classified and which contribute to the classification of the substance.

EINECS No.: 202-829-5

TSCA : Listed



4. First Aid Measures

If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

If on skin : Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

Immediately call a POISON CENTER or doctor/physician.

If in eyes : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

If swallowed : Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.

Symptoms/effects, acute and delayed : Data not available

Expected symptoms/effects, acute and delayed : Inhalation: cough, sore throat, burning sensation, breathing, shortness of breath. Symptoms may appear late. Skin: redness, pain, skin burns. Eyes: redness, pain, blurred vision, severe burns. Oral ingestion: abdominal pain, nausea, vomiting, diarrhea, shock /collapse.

Personal precautions : Wear proper personal protective equipment

Special information for Doctor : Present this SDS to a doctor and give information on this chemical.

5. Fire Fighting Measures

Suitable extinguishing media : Foam fire-extinguisher, Carbon dioxide, Dry chemical powder

Inappropriate extinguishing media : Straight stream water, Water spray

Special hazards arising from the substance or mixture :

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Product combustible at elevated temperatures. Heating, spark and flame may cause a fire.

Special protective equipment and precautions for fire-fighters :

Responders should wear self-contained breathing apparatus in pressure-demand,

MSHA/NIOSH (approved or equivalent) and full protective clothing.

Special extinguishing procedures : Remove container from fire area if safe to do so.

Declare off-limits to non-participants around fire area.



6. Accidental Release Measure

Personal precautions, protective equipment and emergency procedures :

Immediately isolate the area at suitable distance in all directions.

Declare off-limits to non-participants around fire area.

Use proper personal protective equipment as indicated in Section 8 to prevent any contamination of skin, eyes and clothing.

Environmental precautions : Avoid release to the environment.

Method and materials for containment and cleaning up :

Sweep and collect the spilled solid in a container and storage until disposal.

Consult an expert on disposal regulations.

Shut off the source if possible to do so without undue hazard.

Preventions of secondary disaster:

Promptly remove all ignition sources.

Ban smoking, sparking and flaming in the vicinity of the area.

7. Handling and Storage

Precautions for safe handling :

Technical measure

Refer to "8. Exposure controls / personal protection" and use proper personal protective equipment.

Local/general ventilation

Refer to "8. Exposure controls / personal protection" and use adequate local/general ventilation equipment.

Handling precautions

Watch out for fire.

Do not contact, inhale or swallow.

Avoid release to the environment.

Keep container tightly closed.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep only in original container.

Avoid contact

Refer to "10. Stability and reaction".



Conditions for safe storage, including any incompatibilities :

Technical measure	Store well-ventilated place.
Contact hazard substance	Refer to "10. Stability and reaction".
Appropriate safe storage conditions	Keep container tightly closed. Store in a cool, dark and well-ventilated place.
Safe container wrapping material	Use containers stipulated by United Nations Transport Regulations.

8. Exposure Controls/Personal Protection

Control parameters Exposure limits :

Control parameters	Not established
Exposure limits	In case of dust;
OSHA	Particulates (Not Otherwise Regulated) 15 mg/m ³ , 8 Hr. TWA, total dust 5 mg/m ³ , 8 Hr. TWA, respirable dust
ACGIH	Not established

Appropriate engineering controls :	Facilities storing or utilizing this material should be equipped with an eye wash facility and a safety shower. Use mechanical ventilation to keep airborne and to reduce dust concentration.
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Individual protection measures, such as Personal protective equipment (PPE) :

Respiratory protection :	Wear proper respiratory mask.
Hand protection :	Wear appropriate protective gloves (rubber gloves with gauntlets).
Eye protection :	Wear proper eye protection (chemical goggles as a minimum)
Protective clothing :	Wear acid-resistant slicker suit with rubber apron, rubber with pants outside and rubber gloves with gauntlets.
Sanitary measures :	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

**9. Physical and Chemical Properties**

Physical state (20 °C):	Solid
Color:	White
Odor:	Characteristic smell
Odor threshold:	0.8 - 3.2 mg/m ³ : IUCLID (2000)
pH:	Data not available
Melting point/freezing point:	81.3 °C : In-house data
Initial boiling point and boiling range:	263.0 °C : In-house data
Flash point:	180 °C (CC) : NFPA(14 th , 2020)
Evaporation rate:	Data not available
Flammability (solid, gas):	Data not available
Upper/lower flammability or explosive limits:	Data not available
Vapor pressure:	151.5 Pa (85 °C) : In-house data
Vapor density:	Data not available
Relative density:	1.38 g/cm ³ (20 °C) : In-house data
Solubility(ies); Water:	Not soluble, Hydrolysis: In-house data Easily soluble in benzene, soluble in ketones : Organic compound dictionary (1985)
Partition coefficient: n-octanol/water:	log P _{ow} = 0.880 : RTECS
Auto-ignition temperature:	Data not available
Decomposition temperature:	Data not available
Viscosity:	5 mPa · s (100 °C) : IUCLID(2000)

10. Stability and Reactivity

Stability :	Stable at normal temperatures and storage conditions described in this SDS.
Possibility of hazardous reactions :	Generate harmful gas such as carbon monoxide/carbondioxide/ hydrogen chloride by combustion. Reacts with water/alcohols/amines/strong bases/strong oxidants.
Conditions to avoid :	Contact with heating/ignition sources/water/alcohol/amines/strong bases/strong oxidants.
Incompatible materials :	Water/alcohol/amines/strong bases/strong oxidants



Hazardous decomposition products : Reacts with water/alcohol/amine/strong base/strong oxidizing agent and generate hydrogen chloride.
Harmful gases (carbon monoxide/carbon dioxide/hydrogen chloride, etc.) may be generated by combustion.

11. Toxicological Information

Acute toxicity;

Oral

Rat LD₅₀ = 2,500 mg/kg : IUCLID (2000)

Since the toxicity of this substance is mainly due to the hydrolysis product (IUCLID (2000)), for health hazards, Terephthalic acid (CAS No. 100-21-0), which is regarded as decomposition product, and Hydrogen chloride (CAS No. 7647 - 01 - 0).

Dermal

Data not available

Inhalation (Gas)

Data not available

Inhalation (Vapor) :

Lack of data. There is a report that rat LC₅₀ = 0.7 mg/L/4 h (RTECS (2008): original document National Technical Information Service .. OTS 0533726), but the description of the substance state at the time of examination (usually considered as dust) It can not be classified because there is no detail and the details are unknown.

Inhalation (Dust) :

Lack of data. There is a report that rat LC₅₀ = 0.7 mg/L/4 h (RTECS (2008): original document National Technical Information Service .. OTS 0533726), but the description of the substance state at the time of examination (usually considered as dust) It can not be classified because there is no detail and the details are unknown.

Inhalation (Mist) :

Data not available

Skin corrosion/irritation :

According to the harmonised classification (ECHA), the related substance Benzoyl chloride (CAS No.:98-88-4) classified as Category 1B.

This product is classified as same category.



Serious eye damage/irritation :	Refer to GHS model SDS of the related substance Benzoyl chloride (CAS No.:98-88-4) (Japan Ministry of Health, Labour and Welfare), Category 1, the product is classified as same category.
Respiratory or skin sensitization :	Data not available
Skin sensitization :	Data not available
Germ cell mutagenicity :	Ames test : Negative : In-house data
Carcinogenicity :	Data not available
Reproductive toxicity :	Data not available
STOT-single exposure :	Data not available
STOT-repeated exposure :	Data not available
Aspiration hazard :	Data not available

12. Ecological Information

Ecotoxicity

Acute hazards to the aquatic environment : Crustacea (Daphnia magna) EC50(96h) >100 mg/L : IUCLID, 2000

Chronic hazards to the aquatic environment : This substance is rapidly degradable (Japan MITI public relations(1994)) and bioaccumulation is presumed to be low ($\log P_{ow} = 0.880$)
Therefore, this substance is classified as "Not classified".

Persistence and degradability : Readily degradable. : Japan MITI public relations(1994)

Bioaccumulative potential : Bioaccumulation is presumed to be low ($\log Pow = 0.880$).

Mobility in soil : Data not available

Hazardous to the ozone layer
It is not a regulated substance listed in the Annex to the Montreal Protocol. Also, the ingredients listed in the Annex shall not contain any ingredients at a concentration $\geq 0.1\%$.



13. Disposal Considerations

- Disposal methods :** Before disposal, treat harmless, stabilized and neutralized as much as possible to make the level of hazards low.
In disposal, comply with related laws and local government standards.
When delegating disposal, consign to the industrial waste disposal contractor after clarifying the content of waste.
- Contaminated packaging :** Dispose of contents/container in accordance with local/regional/national/international regulation. When dispose of a container, remove contents.

14. Transport Information

AIR (IATA)

- UN Number : 3261
Proper shipping name : Corrosive Solid, Acidic, Organic, N.O.S.
Transport hazard class (es) : 8
Hazard label : Corrosive
Packing group : II

SEA (IMO)

- UN Number : 3261
Proper shipping name : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Transport hazard class(es) : 8
Packing group : II
Marine pollutant : No

LAND (ADR/RID)

- UN Number : 3261
Proper shipping name : CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Transport hazard class(es) : 8
Packing group : II



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Specific safety measures and conditions of transport :

When transporting, be sure to avoid direct sunlight, to prevent container breakage, corrosion, leakage, loading and collapse prevention.

Do not transport with food and feed.

15. Regulatory Information

No Information

16. Other Information

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Reference : Safety Data Sheet of IHARANIKKEI CHEMICAL INDUSTRY CO., LTD. (Japan)

