SAFETY DATA SHEET

THAI PEROXIDE CO., LTD

BIRLOX-1

1 % Peracetic Acid

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1. Identification of the substance/Preparation and of the company/Undertaking

Trade name : BIRLOX-1

Applications : Disinfectant for floor , wall, tools and equipments in food ,beer, dairy, beverage, juice and ice cream industry

Manufacturer : THAI PEROXIDE CO., LTD 70 Moo 4, Sudbuntad Road, Tarndiew, kaengkhoi, Saraburi 18110 Tel: 036 240210 Fax: 036 240211

Emergency call : 036 240344 (24 hour)

2. Hazard Identification : Oxidizing causes severe burn, May cause fire. Harmful by Inhalation, in contact with skin and if swallowed

3. Composition/Information on Ingredients

Peracetic acid CAS#79-21-0	Hydrogen Peroxide CAS#7722-84-1	Acetic acid CAS#64-19-7	Water CAS#7732-18-5
1.0 % min	10% min	10% min	79% min

Chemical name : Peracetic acid

Synonyms : Peroxyacetic acid, Acetyl Hydro peroxide

CAS Number : 79-21-0

Chemical Formula : $C_2H_4O_3$ / CH_3COOOH

Molecular weight : 76

4. First aid measures

Inhalation : Remove from exposure, lie down .Keep warm. Oxygen or artificial respiration if needed. Obtain medical attention

Skin contact : Wash off immediately with plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye contact : Rinse immediately with plenty of water for at least 15 minute and seek medical advice.

Ingestion : Rinse mouth with water .Drink plenty water .Do not induces vomiting .Call a physician immediately.

5. Fire fighting measure:

Suitable extinguishing media : Water, spray. Do not use dry chemical powder type.

Specific hazard : Contact with combustible material. May cause fire. Heating >110°C may cause an explosion.

Protective equipment for firefighters: Wear a safe contained breathing apparatus, suit protecting against chemicals.

6. Accidental Release Measures:

Personal precautions : Avoid contact with skin, eyes and clothing. Never return spills in original containers for reuse .Ensure adequate ventilation .Use personal protective equipment .Remove all sources of igniting. Keep people away from and upwind of spill/leak.

Environmental precautions: Prevent product from entering drains, into the environment.

Methods for cleaning up : Dam up. Flush very dilute solution into sewer with plenty of water .Contact the proper local authorities. Never return spills in original container of reuse.

7. Handling & Storage

Safe handling advice : Never return unused material to storage receptacle. Avoid exposure. Provide appropriate exhaust ventilation. Ware suitable protective clothes. Open drum/container carefully .Content may be under pressure.

Technical measure /Precautions : Keep away from sources of ignition .No smoking .Keep away from combustible material. Protect from Contamination .Do not heat over + 30°C

Storage : Keep in a cool, well-ventilated plate .keep away from heat, direct sunlight and sources of ignition .Store in original container equipped with a vent. Don't keep more than 6 months.

Incompatible products : Metal chloride, bases, reducing agents, organic materials, contamination.

8. Exposure controls/Personal protection

Engineering controls: Provide mechanical local exhaust ventilation to prevent release of mist into the work area. If release use respiratory protection.

Exposure limits :

Chemical Name	ACGIH (TLV)	OSHA (PELs)	Supplier
Hydrogen Peroxide	1 ppm (TWA) = 1.4 mg / m^3	1 ppm (TWA) = 1.4 mg / m^3	
Acetic Acid	10 ppm (TWA) = 25 mg / m^3 15 ppm (STEL) = 37 mg / m^3	10 ppm (TWA) = 25 mg / m^3	
Peracetic Acid	-	-	0.15 ppm (TWA) = 0.46 mg / m^3

ACGIH (TLV) = ACGIS & TLV are registered trademarks of The American Conference of Governmental Industrial Hygienists

OSHA (PELs) = Standard of The Occupational Safety and Health Administration

Personal Protective Equipment

Hygiene measures : Avoid exposure

Respiratory protection : In case of insufficient ventilation ware suitable respiratory equipment (filter type B/P3)

Hand protection : Butyl /viton groves. Do not wear leather gloves; do not ware cotton gloves (risk of fire)

Eye protection : Tightly fitting safety goggles and face-shield .Eye wash bottle with pure water.

Skin and body protection: Full protective chemical resistant clothing ,Do not wear leather shoes, Safety shower

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9. Physical& Chemical Properties

Form, Color, Odour	liquid, colorless, pungent
pH	< 1
Boiling point/range	109 °C
Melting point /range	-49 °C
Flash point	80 °C
Decomposition temperature	40 °C SADT (tank container or tank vehicle max 20 ton) >/= 65 °C SADT (IBC max 1.5 m^3) SADT = Self Accelerating Decomposition Temperature
Oxidizing properties	Strong oxidizing
Vapour pressure	22 mm Hg @ 25 °C
Vapour Density	no data available
Evaporation Rate	> 1
Specific gravity	1.13 @ 20 °C
Solubility	
- Water solubility	completely soluble (100% @ 25 ^{O}C)

- Fat solubility — not applicable

Partition coefficient (n-Octanol / water) — Acetic acid log P_{ow} = -0.17

Peracetic acid log P_{ow} = -0.924

10. Stability and Reactivity

Conditions to avoid : High temperatures. Protect from light .Keep away from heat, contamination.

Materials to avoid : Combustible material, flammable materials, reducing agents, organic material metal chlorides, bases, contamination, rust, dirt.

Hazardous decomposition products : Heating release irritative and acrid gases.

Further information : Stabilized

11. Toxicological information

Acute toxicity

Peracetic acid :

LD 50 / oral/ rat = >1,663 mg / kg

LD 50 / dermal/rabbit = >200 mg / kg

LC 50 / inhalation / 1 hour/ rat = 590 mg /m^3

Ingestion causes burns of the upper digestive tracts and gastrointestinal burns. Inhalation of aerosols may cause irritation to mucous membranes, inflammation, and edema of the lungs

Primary irritation : Causes sever burns. Sensitisation : no data available

Long term toxicity : no data available

12. Ecological Information

Persistence and degradability : Depending on circumstance, degradable

Bioaccumulation : Does not accumulation

Mobility : no data available

Ecotoxicity effects

Acetic acid :	LD 50 / 96hrs. / fathead minnows	=	88 mg/l
	LD 50 / 96 hrs./ Blugill sunfish	=	75 mg/l
	LD 50 / 24 hrs. / daphnia	=	47 mg/l
Peracetic acid :	LD 50 / 96 hrs. / rainbow trout	=	10-18 mg/l (12%)
	Very toxic to aquatic organism		
Hydrogen Peroxide :	LD 50 / 96 hrs./ Golden orfe	=	35 mg/l
	LD 50 / 168 hrs. / fathead minnows	=	22-33 mg/l
	LD 50 / 96 hrs./ rainbow trout	=	38.5 mg/l

EC 50 / daphnia	=	2.4-7.7 mg/l
LC 50 / algae	>	1.7 mg/l

13. Disposal considerations

Contaminated packaging : In accordance with local and national regulations. Rinse empty container with water before disposal .Do not reuse empty container for other purposes.

Waste from residue /unused product : In accordance with local and national regulations, see also accidental release measures. Wear personal protective equipment. Diluted aqueous solution can be disposed as waste water, when in compliance with local regulations. Do not dispose of undiluted solutions into sewer.

14. Transportation information

Precaution : Drum should be stacked properly in transit, make sure to keep drums in upright position.

UN number : UN 3149

Hazard class : 5.1 (organic peroxide) , 8 (corrosive)

Packing group : II

Type of packages : 30 and 240 kg. in Polyethylene drum with a venting hole.

15. Regulatory Information

Labeling according to directive EC. :The product is classified and labeled in accordance with EC directives

Symbols : O oxidizing ; C corrosive

Compound : Peracetic acid ; Acetic acid ; Hydrogen Peroxide

R-Phrases : R7 May causes fire : R34 causes severe burns

S-Phrases : S3 / 7 Keep container tightly close in cool place.

S14 Keep away from combustible materials.

S36 / 37 / 39 Wear suitable protective clothing ,gloves and eye /face protection.

S45 In cases accident or if you feel unwell, seek medical advice immediately (Show label where possible)

16.Other information

Further information : The information provided in this safety data sheet is correct to the best our knowledge at the data of its publication. The information given is designed only as guidance for safe handing use processing storage, transportation disposal and release and is not to be considered a warranty or quality specification, since the conditions of the operations mentions are beyond our control. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text .Thai Peroxide Co.,Ltd. Disclaims any liability for loss or damage resulting from the use these data ,information or suggestions.

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