



Tau Chemicals Inc



1 Identification of the mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: 2-Phosphonobutane-1,2,4,-Tricarboxylic acid/ TAUQUEST 7000
 Additional identification: PBTC
 Identification of the product: See section 3
 Index Number: Not available
 REACH registration No.: Not available

1.2 Relevant identified uses of the mixture and uses advised against:

1.2.1 Identified uses:

Used as LD-ZH-DY

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier: TAU CHEMICALS INC.
 Address: 25511 BUDDE RD. STE. 1503. THE WOODLANDS, TX. 77380
 Telephone: 281-825-5301
 Fax: 832-592-9546

1.4 Emergency telephone Number:

Chemtel 1800-255-3924 Contract # MIS305345

2 Hazards Identification

2.1 Classification of the mixture

2.1.1 Classification:

The mixture is classified as following according to 1999/45/EC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Met. Corr. 1	H290

For full text of H- phrases: see section 2.2.

1999/45/EC	
Hazards characteristics	R-Phrases
N/A	N/A

For full text of R- phrases: see section 16.

2.1.2 The most important adverse effects

2.1.2.1 The most important adverse physicochemical effects:

May be corrosive to metals.

2.1.2.2 The most important adverse human health effects:

Not applicable.



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2.1.2.3 The most important adverse environmental effects:

Not applicable.

2.2 label elements

Hazard Pictograms:



Signal Word(S):

Hazard Statement:

Precautionary Statement:

Warning

H290 May be corrosive to metals.

P234: Keep only in original container.

P390: Absorb spillage to prevent material damage.

P406: Store in corrosive resistant/ container with a resistant inner liner.

2.3 Other hazards

Not available

3 Composition/information on ingredients

Substance/Mixture: Mixture

Chemical Name	Registration No.	Index number.	CAS No.	EC No.	Concentration	Classification according to EU CLP 1272/2008
2-Phosphonobutane-1,2,4-tricarboxylic acid	N/A	N/A	37971-36-1	253-733-5	47.5-52.5%	Met. Corr. 1;H290
Phosphorous acid	N/A	N/A	10294-56-1	233-663-1	0.5% max	-
Phosphoric acid	N/A	N/A	7664-38-2	231-633-2	0.2% max	-
Water	N/A	N/A	7732-18-5	231-791-2	Balance	-

Chemical Name	Registration No.	Index number.	CAS No.	EC No.	Concentration	Classification according to 67/548/EEC
2-Phosphonobutane-1,2,4-tricarboxylic acid	N/A	N/A	37971-36-1	253-733-5	47.5-52.5%	-
Phosphorous acid	N/A	N/A	10294-56-1	233-663-1	0.5% max	-
Phosphoric acid	N/A	N/A	7664-38-2	231-633-2	0.2% max	-
Water	N/A	N/A	7732-18-5	231-791-2	Balance	-



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4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

4.1.2 In case of skin contact:

Remove contaminated clothing. Wash off affected area immediately with soap and plenty of water. Get medical attention.

4.1.3 In case of eyes contact:

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If only one eye is affected be sure to use care not to contaminate the other eye with the run-off. Get medical attention.

4.1.4 In case of ingestion:

Get medical attention. Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink...

4.2 Most important symptoms and effects, both acute and delayed

May be corrosive to human beings.

4.3 Indication of any immediate medical attention and special treatment needed

If eye irritation occurs, get medical advice/attention.

5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of phosphorus (POx) under fire conditions.

5.3 Advice for fire-fighters:

In case of fire, wear a full face positive-pressure self-contained breathing apparatus and protective suit.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so.

6.1.1 For non-emergency personnel:

Remove all sources of ignition. Ventilate area of leak or spill.

6.1.2 For emergency responders:

Wear appropriate personal protective equipment as specified in section 8.

6.2 Environmental Precautions:

Do not allow to enter drains, sewers or water systems. Inform neighbors...

6.3 Methods for Containment and Cleaning up:



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Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

6.4 Reference to other sections:

- See Section 7 for information on safe handling.
- See section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

6.5 Additional information:

Absorb on inert material. Small quantities are to be neutralized with lime and swept away with plenty of water.

7 Handling and storage

7.1 Precautions for safe handling:

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Ensure all containers are labelled. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

7.1.1 Protective measures:

Avoid contact with eyes and with skin. Wash hands immediately after handling. Do not breathe fumes or spray.

7.1.2 Advice on general occupational hygiene:

Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Wash hands during breaks and at end of the shift.

7.2 Conditions for safe storage, including any incompatibilities:

Store in suitable labeled containers. Keep containers dry and closed

7.3 Specific end use(s):

Not applicable.

8 Exposure control/personal protection

8.1 Control parameters:

- 8.1.1 Occupational exposure limits:** Not listed.
- 8.1.2 Additional exposure limits under the conditions of use:** Not available.
- 8.1.3 DNEL/DMEL and PNEC-Values:** Not available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

8.2.2 Individual protection measures, such as personal protective equipment :

- | | |
|------------------------|---|
| Eye/face protection | Wear chemical splash goggles. |
| Hand protection | Wear neoprene gloves, nitrile gloves, butyl gloves, PVC gloves. |
| Body protection | Wear standard protective clothing. |
| Respiratory protection | For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. |
| Thermal hazards | Wear suitable protective clothing to prevent heat. |

8.2.3 Environmental exposure controls:



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Avoid disposing into drainage/sewer system or directly into the aquatic environment. Handling according to local regulations, Federal and official regulations.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Color:	Colorless to light yellow
Odor:	Characteristic
Odor threshold:	Not available
pH-value: (10 g/l)	1.5 – 1.9
Freezing point:	-15°C
Boiling point/range (°C) :	Not available
Flash point (°C) :	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas);	Not flammable
Ignition temperature (°C) :	Not determined
Upper/lower flammability/explosive limits:	Not determined
Vapor pressure :	Same as water
Vapor density:	Not applicable
Relative Density (25°C):	Not applicable
Density at 20°C:	1.26 - 1.30 g/ml
Water solubility (g/l) at 20°C :	Not determined
n-Octanol/Water (log Po/w) :	Not determined
Ignition temp. (stable, gaseous):	> 500°C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa s) :	15 - 25 mPas at 20°C
Explosive properties:	Not determined
Oxidizing properties:	Not applicable

9.2. Other information:

Fat solubility(solvent-oil to be specified) etc.:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available

10 Stability and reactivity

10.1 Reactivity:

The substance is stable under normal storage and handling conditions.

10.2 Chemical stability:

Under normal conditions, the product is stable. No hazardous reaction when handled and stored according to provisions. Hazardous reactions are not known.



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10.3 Possibility of hazardous reactions:

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong alkalis (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Acid reactive salts (nitrites, sulfites) Gives off hydrogen by reaction with metals.

10.4 Conditions to avoid:

Freezing temperature.

10.5 Incompatible materials:

Strong oxidizers, strong alkalis, Metals.

10.6 Hazardous decomposition products:

Oxides of carbon, oxides of phosphorus

11 Toxicological information

11.1 Toxic kinetics, metabolism and distribution

Non-human toxicological data: Not available

Method: Not available

Doses: Not available

Routes of administration: Not available

Results: Not available

Absorption: Not available

Distribution: Not available

Metabolism: Not available

Excretion: Not available

11.2 Information on toxicological effects

Acute toxicity:

LD50(Oral, Rat): 6500 mg/kg

LD50(Skin, Rabbit): Not available

LD50(Inhalation, Rat): 3000 mg/kg

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: This product is not expected to be a sensitizer.

Germ cell mutagenicity: Not classified

Carcinogenicity: None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

reproductive toxicity: Not classified

STOT- single exposure: Not classified



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STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

12 Ecological information

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Rainbow Trout	(Nitrilotris(Methylenephosphonic Acid))	1300 mg/L	N/A
LC50	N/A	48h	Daphnia magna	Product	300 mg/l	N/A

Persistence and degradability:

Total Organic Carbon (TOC): Not applicable.
 Chemical Oxygen Demand (COD): Not applicable.
 Biological Oxygen Demand (BOD): Not applicable.
 Not available.

Bio accumulative potential:

Mobility in soil:

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM , provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages; <5% 30 - 50% 50 - 70% The portion in water is expected to float on the surface.

Results of PBT&vPvB assessment:

Not applicable.

Other adverse effects:

Not applicable.

13 Disposal considerations

13.1 Waste treatment methods

Avoid disposing directly to the environment. According to local regulations, Federal and official regulations.

13.2 Product / Packaging disposal:

If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations. .

14 Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	UN3265	UN3265	UN3265
UN Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Transport hazard Class:	8	8	8
Packaging group:	II	II	II
Environmental hazards:	Not regulated	Not regulated	Not regulated



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Special precautions for user:	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	IBC02	IBC02	IBC02

15 Regulation information

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

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable.

Chemical Safety Assessment has been carried out? YES NO

16 Other information

16.1 Indication of changes Version 1.1 Amended by EU No 453/2010

16.2 Relevant R- phrases (number and full text):

Not applicable.

16.3 Training instructions:

Not applicable.

16.4 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.5 Notice to reader:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we has been advised of the possibility of such damages.