

**SECTION 1. Identification****1.1 Product identifier****Trade name:**

3-(1-Pyridinio)-1-Propanesulfonate

**Synonyms:**

1-(3-sulphonatopropyl) pyridinium

PPS

NDSB-201

**CAS Number:**

15471-17-7

**EC number:**

239-491-3

**Registration number :**

01-2119960204-44-XXXX

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Refer to Exposure Scenarios for covered SU, PROC, PC, AC and ERC.

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

TAIWAN HOPAX CHEMS. MFG. CO., LTD

No. 28 Huadong Rd., Dailao Dist., Kaohsiung City 831

TAIWAN-ROC

**Only Representative**

TÜV SÜD Iberia, S.A.U.

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reach.es@tuv-sud.es

samantha@hopax.com.tw

**1.4 Emergency telephone number:** Manufacturer: HOPAX: +886-788-7600 Ext314**SECTION 2. Hazards Identification****2.1 Classification of the substance or mixture**

According to the notifications provided by companies to ECHA in REACH registrations no hazards have been classified.

**2.2 Label elements**

According to the notifications provided by companies to ECHA in REACH registrations no hazards have been classified.

**Hazard pictograms**

No hazard pictograms

**Signal word**

No signal word

**Hazard statements**

(no hazard)

**Precautionary statements**

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P281: Use personal protective equipment as required.

P314: Get medical advice/attention if you feel unwell.  
 P401: Store... (according to local, regional, national, international regulations)  
 P402+P404: Store in a dry place. Store in a closed container.  
 P501: Dispose of contents/container to... (according to local, regional, national, international regulations)

**2.3 Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**SECTION 3. Composition / Information on ingredients**

**3.1 Chemical characterization: Substances**

**CAS No.**

15471-17-7

**Identification number(s)**

**EC number:** 239-491-3

**SECTION 4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General information:**

Personal protection for the First Aider.  
 Immediately remove any clothing soiled by the product.  
 Take affected persons out of danger area and lay down.  
 Position and transport stably in side position.  
 Artificial respiration with respiration bag or respirator.

**After inhalation:**

Take affected persons into fresh air and keep quiet.  
 Seek medical treatment in case of complaints..

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly  
 If skin irritation continues, consult a doctor..

**After eye contact:**

Rinse opened eye for several minutes under running water.  
 If symptoms persist, consult a doctor.

**After swallowing:**

Rinse out mouth and then drink plenty of water.  
 Vomiting, possible danger of aspiration, keep breathing passages free.  
 Induce vomiting only, if affected person is fully conscious.  
 Seek medical treatment.

**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5. FIRE FIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fire with alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture**

Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)  
Sulphur oxides (SO<sub>x</sub>)  
Carbon monoxide and carbon dioxide  
Danger of forming toxic pyrolysis products.

**5.3 Advice for firefighters**

**Protective equipment:**

Wear fully protective suit.  
Do not inhale explosion gases or combustion gases.  
Self-contained respiratory protective device.

**Additional information:**

Collect contaminated fire fighting water separately. It must not enter the sewage system

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.  
Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources.

**6.2 Environmental precautions:**

Damp down dust with water spray.  
Do not allow to enter sewers/ surface or ground water

**6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.  
Dispose contaminated material as waste according to information under "Disposal considerations".

**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 disposal information.

**SECTION 7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.  
Development and deposition of dust has to be avoided.

**Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Dust can combine with air to form an explosive mixture.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.  
Use polyolefine lining in receptacles.

**Information about storage in common storage facility:**

Avoid reaction with strong acid, alkali and oxidising agents

**Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.  
Store receptacle in a well ventilated area.

**7.3 Specific end use(s)**

No further relevant information available.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Additional information about design of technical facilities:**

No further data; see "Handling and storage".  
Take appropriate measures against dust.

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Do not inhale gases / fumes / aerosols / dust.  
Immediately remove all soiled and contaminated clothing.  
Avoid contact with the eyes and skin.  
Do not inhale dust / smoke / mist

**Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**Recommended filter device for short term use:** Filter FFP2

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves**

Nitrile rubber, NBR  
Recommended material strength:  $\geq 0.11$  mm

**Penetration time of glove material:**

Penetration time  $\geq 8$  h  
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Not suitable are gloves made of the following materials:**

Leather gloves  
Strong material gloves

**SECTION 9. PHYSICAL/CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:** Solid(at 20°C and 1013 hPa)**Colour:** White.**Odour:** odourless powder (at 20°C and 1013 hPa)**Odour threshold:** Not determined.**Change in condition****Melting point/freezing point:** 266 °C - 285° C**Initial boiling point and boiling range:** Not determined**Flash point:** Not applicable**Flammability (solid, gas):** Product is not flammable**Explosive properties:** Product does not present an explosion hazard**Explosion limits:****Lower:** Not determined**Upper:** Not determined**Vapour pressure:** 0.0000424 Pa (Modified Grain Method)**Density at 20 °C:** 1.532 g/mL**Solubility in / Miscibility with:****water at 25 °C:** 240 500 mg/L**Partition coefficient:** logPow < -2.78 (at 21.5°C)**9.2 Other information:** No further relevant information available.**SECTION 10. STABILITY AND REACTIVITY****10.1 Reactivity:**

No further relevant information available.

**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions:**

Reacts with strong acids, alkalines and oxidizing agents.

**10.4 Conditions to avoid:**

No further relevant information available.

**10.5 Incompatible materials:**

No further relevant information available.

**10.6 Hazardous decomposition products:**Nitrogen oxides (NO<sub>x</sub>)

Hydrogen cyanide (prussic acid)

Sulphur oxides (SO<sub>x</sub>)

Carbon monoxide and carbon dioxide

Danger of forming toxic pyrolysis products

**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute toxicity:**

Based on available data, the classification criteria are not met.

**LD/LC50 values relevant for classification:**

Oral LD50 >5,000 mg/kg bw (rat) (OECD 401, GLP, 1983)

Dermal LD50 >2,000 mg/kg bw (rat) (OECD 402, GLP, (2001))

**Primary irritant effect:****Skin corrosion/irritation**

Not irritant, skin irritation in vivo rabbits (1982)

**Serious eye damage/irritation**

Not irritant, eye irritation in vivo rabbits (1982)

**Respiratory or skin sensitization**

No adverse effect observed (not sensitising)

Based on available data, the classification criteria are not met

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Reproductive toxicity**

1983, Ames test, TA98, TA100, TA1535, TA1537 and TA1538, not mutagenic 2. 2012, In vitro micronucleus test, not mutagenic 3. Prediction using TOXTREE (v.2.5.0), Chemservice S.A., 2011

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met

**SECTION 12. ECOLOGICAL INFORMATION****12.1 Toxicity****Aquatic toxicity:****Short - term toxicity to aquatic species**

NOEC/96h >1,000 mg/L (fish) (OECD Guideline 203,)

EC50 (48h) (static) > 100 mg/L (daphnia) (OECD Guideline 202, Wetton and Mullee, 2001)

EC50(96h) (static) = 26.70 g/L (daphnia) (OECD Guideline 202, Wetton and Mullee, 2001)

EC50(96h) value of 26.70 g/L (Algae) (Chemservice S.A., 2011)

**Long - term toxicity to aquatic species**

ChV = 45.8 g/L (fish) (Chemservice S.A., 2011)

ChV = 14.4 g/L (daphnids) (Chemservice S.A., 2011)

ChV = 6.3 g/L (algae) (Chemservice S.A., 2011)

**12.2 Persistence and degradability :**

Degree of elimination: 86 % (28 days) (OECD Guideline 301E, Kuhlmann, 1990)

**12.3 Bioaccumulative potential BCF:** No experimental data is available**12.4 Mobility in soil:** No further relevant information available.**12.5 Results of PBT and vPvB assessment**

**PBT:** The substance does not fulfill the PBT criteria (not PBT)

**vPvB:** The substance does not fulfill the vPvB criteria (not vPvB)

**12.6 Other adverse effects:** No further relevant information available.

## SECTION 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Recommendation

Observe federal, state and local environmental regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

### 13.2 Uncleaned packaging

#### Recommendation:

Disposal must be made according to official regulations.

Contaminated packaging: contaminated, empty containers must be disposed of as chemical waste

**13.3 Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14. TRANSPORT INFORMATION

### 14.1 UN-Number

**ADR, ADN, IMDG, IATA:** Not Applicable

### 14.2 UN proper shipping name

**ADR:** No Applicable

### 14.3 Transport hazard class(es)

**ADR, ADN, IMDG, IATA**

**Class:** Not Applicable

### 14.4 Packing group

**ADR, IMDG, IATA:** Not Applicable

### 14.5 Environmental hazards:

**Marine pollutant:** No

**14.6 Special precautions for user:** Not applicable.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not applicable.

**UN "Model Regulation":** No Applicable

## SECTION 15. REGULATORY INFORMATION

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

**Inventory - United States - Toxic Substances Control Act (TSCA):** Substance is listed.

**OECD - List of High Production Volume Chemicals:** Substance is not listed.

**Inventory - Canada - Domestic Substances List (DSL):** Substance is listed

**Australian Inventory of Chemical Substances:** Substance is listed.

**New Zealand Inventory of Chemicals:** Substance is listed.

#### Hazard pictograms

No hazard pictograms

#### Signal word

No signal word

#### Hazard statements

(no hazard)

#### Precautionary statements

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P281: Use personal protective equipment as required.  
 P314: Get medical advice/attention if you feel unwell.  
 P401: Store... (according to local, regional, national, international regulations)  
 P402+P404: Store in a dry place. Store in a closed container.  
 P501: Dispose of contents/container to... (according to local, regional, national, international regulations)

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

## SECTION 16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Abbreviations and acronyms:

**LOAEL:** Lowest Observed Adverse Effect Level

**ADR:** Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

**IMDG:** International Maritime Code for Dangerous Goods

**IATA:** International Air Transport Association

**GHS:** Globally Harmonised System of Classification and Labelling of Chemicals

**EINECS:** European Inventory of Existing Commercial Chemical Substances

**CAS:** Chemical Abstracts Service (division of the American Chemical Society)

**DNEL:** Derived No-Effect Level (REACH)

**PNEC:** Predicted No-Effect Concentration (REACH)

**LC50:** Lethal concentration, 50 percent

**LD50:** Lethal dose, 50 percent

**PBT:** Persistent, Bioaccumulative and Toxic

**vPvB:** very Persistent and very Bioaccumulative

**Skin Sens. 1:** Skin sensitisation – Category 1

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