
Safety Data Sheet**1. Chemical product and company identification****Product name** : Imicyafos**SDS code** : P3-07**Company/undertaking identification** :

HAYASHI PURE CHEMICAL IND.,LTD.

Address : 3-2-12 Uchihiranomachi, Chuo-ku, Osaka, Osaka, Japan

Responsible department : Planning Group, Reagent & Chemical Product Department

Telephone : 06-6910-7305

E-mail : shiyaku_kikaku@hpc-j.co.jp

URL : <https://www.hpc-j.co.jp/>**Emergency number** : 06-6910-7305**2. Hazards identification****GHS classification**

Physical hazards	Desensitized explosives	classification not possible	
	Explosives	classification not possible	
	Flammable gases	No classification	
	Aerosol	classification not possible	
	Oxidizing gases	No classification	
	Gases under pressure	No classification	
	Flammable liquids	No classification	
	Flammable solids	No classification	
	Self-reactive substances and mixtures	classification not possible	
	Pyrophoric liquids	No classification	
	Pyrophoric solids	No classification	
	Self-heating substances and mixtures	No classification	
	Substances and mixtures which in contact with water emit flammable gases	classification not possible	
	Oxidizing liquids	classification not possible	
	Oxidizing solids	No classification	
	Organic peroxides	classification not possible	
	Corrosive to metals	classification not possible	
	Health hazards	Acute toxicity (oral)	Category 3
		Acute toxicity (dermal)	No classification
		Acute toxicity (inhalation:gas)	classification not possible
Acute toxicity (inhalation:vapors)		classification not possible	
Acute toxicity (inhalation:dust/mist)		Category 4	
Skin corrosion/irritation		No classification	
Serious eye damage/eye irritation		No classification	
Respiratory sensitization		classification not possible	
Skin sensitization		Category 1	
Germ cell mutagenicity		classification not possible	
Carcinogenicity		classification not possible	
Reproductive toxicity		classification not possible	
Specific target organ toxicity (single exposure)	Category 1 (systemic, nervous system)		
Specific target organ toxicity (repeated exposure)	Category 1 (nervous system)		
Aspiration hazard	classification not possible		

Environmental hazards	Hazardous to the aquatic environment, short-term (acute)	Category 1
	Hazardous to the aquatic environment, long-term (chronic)	Category 1
	Hazardous to the ozone layer	classification not possible

Hazard pictograms (GHS JP)



GHS06



GHS08



GHS09

Signal word (GHS JP)	: Danger
Hazard statements (GHS JP)	: Toxic if swallowed (H301) May cause an allergic skin reaction (H317) Harmful if inhaled (H332) Causes damage to organs (systemic, nervous system) (H370) Causes damage to organs (nervous system) through prolonged or repeated exposure (H372) Very toxic to aquatic life with long lasting effects (H410)
Precautionary statements (GHS JP)	
Prevention	: Do not breathe dust/fume/gas/mist/vapors/spray. (P260) Wash hands, forearms and face thoroughly after handling. (P264) Do not eat, drink or smoke when using this product. (P270) Use only outdoors or in a well-ventilated area. (P271) Contaminated work clothing should not be allowed out of the workplace. (P272) Avoid release to the environment. (P273) Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Response	: IF SWALLOWED: Immediately call a POISON CENTER or doctor. (P301+P310) IF ON SKIN: Wash with plenty of water. (P302+P352) IF INHALED: Remove person to fresh air and keep comfortable for breathing (P304+P340) IF exposed or concerned: Call a POISON CENTER or doctor. (P308+P311) Get medical advice/attention if you feel unwell. (P314) Rinse mouth. (P330) If skin irritation or rash occurs: Get medical advice/attention. (P333+P313) Take off contaminated clothing and wash it before reuse. (P362+P364) Collect spillage. (P391)
Storage	: Store locked up. (P405)
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Name	Concentration or Concentration range	Formula	Kanpo number		CAS RN
			CSCL no	ISHL no	
Imicyafos	≥95%、≤100%	C11H21N4O2PS	-	8-(2)-2173	140163-89-9

The above concentration or concentration range are not product specification.
All percentages listed in the above concentration or concentration range are mass%, unless otherwise specified.

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
Get immediate medical advice/attention.

- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing.
Gently wash with plenty of soap and water.
Get immediate medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical advice/attention.
- First-aid measures after ingestion : Rinse mouth.
Get immediate medical advice/attention.

5. Fire fighting measures

- Suitable extinguishing media : Water spray, Foam, Dry powder, Carbon dioxide, Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.
- Explosion hazard : May induce explosion of containers by heating.
- Hazardous decomposition products in case of fire : In case of fire, product may produce irritative or toxic fumes/gases.
- Firefighting instructions : If ignited, for the initial fire-fighting, cut off combustion sources, extinguish fire at a stroke using appropriate fire-extinguishers.
In the case of peripheral fire, quickly remove movable containers to safe places.
If unable to be moved containers, sprinkle water to containers and surrounding equipment, etc. to cool.
Avoid (reject) fire-fighting water to enter environment.
Even after extinguishing fire, thoroughly cool containers by using plenty of water.
- Protection during firefighting : Wear appropriate fire-resistant clothing including self contained-compressed air breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

- General measures : Before entering, ventilate the area.
Do not let unauthorized persons come close to the area.
Immediately place the leakage area in isolation, with taking proper distances for all directions.
Wear appropriate personal protective devices to prevent inhalation and contact with eye, skin, and clothing, and never attempt to work on the lee.

Environmental precautions

- Environmental precautions : Avoid release to the environment.
Prevent entry to sewers and public waters.

Methods and Equipment for Containment and Cleaning up

- Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.
Collect leaking and spilled liquid in sealable containers as far as possible.
Wash out the spilled area with large amounts of water.

7. Handling and storage

Handling

- Technical measures : Work with appropriate personal protective equipment to prevent inhalation or contact to eyes, skin, and clothing.
Handle with care to prevent leakage, overflowing, or scattering, minimize generation of mist or vapor, and thoroughly ventilate.
- Precautions for safe handling : Do not eat, drink or smoke when using this product.
Thoroughly wash your hands and gargle after handling.
Ensure good ventilation of the work station.
Do not contact, breathe or swallow.
- Prevents handling of incompatible substances or mixtures : Avoid prolonged or repeated exposure.

Storage

Storage conditions	: Store locked up. Store in a well-ventilated place, away from direct sunlight. Keep container tightly closed and keep away from fire and heat sources.
Material used in packaging/containers	: Light shielding airtight container.
Technical measures	: Comply with applicable regulations.
Storage temperature	: Refrigerate: 2-10°C

8. Exposure controls / Personal protection equipment

Appropriate engineering controls	: Cover up tightly the generation source at the handling place or install local exhaust equipment or overall ventilation equipment. Install safety showers and eye-fountains near a handling place. Clearly indicate the location.
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Protective equipment

Respiratory protection	: Protective mask
Hand protection	: Impervious protective gloves
Eye protection	: Protective glasses (general glasses, glasses with side-shields, goggles)
Skin and body protection	: Impervious aprons, Impervious work clothing, Protective long boots

9. Physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid
Color	: colorless transparent
Odor	: Slightly characteristic odor
pH	: No data available
Melting point	: -53.3 – -50.5 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 184 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Density	: 1.20 g/cm ³ (20°C)
Relative gas density	: No data available
Solubility	: Soluble in many organic solvents. Water: 77.6 g/l (20°C)
Partition coefficient n-octanol/water (Log Pow)	: 1.64 (25°C)
Explosive limits (vol %)	: No data available
Viscosity, kinematic	: No data available
Particle characteristics	: No data available

10. Stability and reactivity

Reactivity	: No data available
Chemical stability	: Stable under normal handling conditions.
Possibility of hazardous reactions	: No data available
Conditions to avoid	: Sunlight, Heat
Incompatible materials	: No data available
Hazardous decomposition products	: Nitrogen oxides, Sulfur oxides, Cyanide

11. Toxicological information

Imicyafos	
Acute toxicity (oral)	Category 3
Acute toxicity (dermal)	No classification
Acute toxicity (gas)	classification not possible
Acute toxicity (vapour)	classification not possible
Acute toxicity (inhalation:dust/mist)	Category 4
Skin corrosion/irritation	No classification
Serious eye damage/irritation	No classification
Respiratory sensitization	classification not possible
Skin sensitization	Category 1
Germ cell mutagenicity	classification not possible
Carcinogenicity	classification not possible
Reproductive toxicity	classification not possible
STOT-single exposure	Category 1
STOT-repeated exposure	Category 1
Aspiration hazard	classification not possible

12. Ecological information

Imicyafos	
Hazardous to Aquatic Environment - Acute Hazard	Category 1
Hazardous to Aquatic Environment - Chronic Hazard	Category 1
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	classification not possible

13. Disposal considerations

- Ecology - waste materials : With the detail information of the waste, subcontract its disposal to a waste disposer authorized by a Prefectural Governor.
- Contaminated container and packaging : Empty the packaging completely prior to disposal.
Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

14. Transport information

International Regulations

Transport by sea(IMDG)

- UN-No. (IMDG) : 3278
- Proper Shipping Name (IMDG) : ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.
- Packing group (IMDG) : III
- Transport hazard class(es) (IMDG) : 6.1
- Hazard labels (IMDG) : 6.1
- Class (IMDG) : 6.1
- Division (IMDG) : 6.1
- Special provision (IMDG) : 43, 223, 274
- Limited quantities (IMDG) : 5 L
- Excepted quantities (IMDG) : E1
- Packing instructions (IMDG) : P001, LP01
- IBC packing instructions (IMDG) : IBC03
- Tank instructions (IMDG) : T7
- Tank special provisions (IMDG) : TP1, TP28
- Stowage category (IMDG) : A
- Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.
- MFAG-No : 151

Air transport(IATA)

UN-No. (IATA)	: 3278
Proper Shipping Name (IATA)	: Organophosphorus compound, liquid, toxic, n.o.s.
Packing group (IATA)	: III
Transport hazard class(es) (IATA)	: 6.1
Hazard labels (IATA)	: 6.1
Class (IATA)	: 6.1
Division (IATA)	: 6.1
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y642
PCA limited quantity max net quantity (IATA)	: 2L
PCA packing instructions (IATA)	: 655
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 663
CAO max net quantity (IATA)	: 220L
Special provision (IATA)	: A3, A4, A6, A137
ERG code (IATA)	: 6L

Marine pollutant : Applicable

Regulations in Japan

Regulatory information by sea	: Conform to the provisions of the Ship Safety Law.
Regulatory information by air	: Conform to the provisions of the Civil Aeronautics Law.
MFAG-No	: 151

Special transport precautions : When transporting, load containers so that they do not tip over, damage, drop or collapse. Make sure there is no leak in containers.

15. Regulatory information**National law**

Industrial Safety and Health Law	: Not applicable
Japanese Poisonous and Deleterious Substances Control Law	: Deleterious Substances (Designated Order Art.2) O-Ethyl S-propyl [(2E)-2-(cyanoimino)-3-ethylimidazolidin-1-yl]phosphonothioate(Imicyafos) and preparations containing it. (except for preparations which contain 1.5 % or less of O-ethyl S-propyl [(2E)-2-(cyanoimino)-3-ethylimidazolidin-1-yl]phosphonothioate.)
Fire Service Law	: Group 4, Flammable Liquids, Class 3 petroleum, Water-insoluble liquids (Act, Art.2, Para.7, Appended Table 1, Group 4)
Foreign Exchange and Foreign Trade Control Act	: Export Trade Control Ordinance appendix 1-16
Ship Safety Act	: Toxic and infectious substances/Toxic substances (Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations)
Civil Aeronautics Law	: Toxic and infectious substances/Toxic substances (Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)
Port Regulation Law	: Toxic and infectious substances/Toxic substances (Article 21, Paragraph 2 of Law, Article 12 rule, notice attached table that defines the type of dangerous goods)
Road Act	: Restriction for Vehicle Traffic (Enforcement Order Art.19-13, Publication of Japan Highway Public Corp.)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)	: Not applicable

16. Other information

Data sources	: Handbook of 17221 Chemical Products, The Chemical Daily Co, Ltd. International Chemical Safety Cards. National Institute of Technology and Evaluation (NITE). 2016 Emergency Response Guidebook (ERG 2016).
Other information	: The SDS is copyrighted material of Hayashi Pure Chemical Ind, Ltd. This Safety Data Sheet is intended to be provided for business operators who handle chemical substance products of the relevant product and is not intended to assure safety in any way. The Safety Data Sheet does not verify all the information on the applicable

chemical substance in the present time. With the recognition in that unknown danger constantly exists in the relevant chemical substance, the product shall be used in the principle of self-responsibility of the user with the highest priority to safety from transport and unpacking to disposal. When the relevant chemical substance is used, the user him/herself shall collect safety information and shall investigate laws and regulations at the place, organizations, countries, etc. where the substance is actually used and give the highest priority to them. The Company shall take no responsibility for investigating state and local regulations and the user shall handle this problem on his/her own responsibility. In the event that SDS in Japanese and SDS translated into other languages exist, the document described in Japanese is prior to all other documents whether or not there is any difference in contents, and documents in other languages shall be references.