

## Safety Data Sheet

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Mouse GLP-2 EIA  
Product number: YK142  
Manufacturer: YANAIHARA INSTITUTE, INC.  
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### 2. HAZARDS IDENTIFICATION

GHS classification  
Classification of the substance or mixture 5), 7), 8)  
Acute toxicity - Inhalation (Dusts/Mists) Category 4  
Skin corrosion/irritation Category 1, 2  
Skin sensitization Category 1  
Serious eye damage/eye irritation Category 1  
Specific target organ toxicity (single exposure) Category 1, 2, 3  
Category 1 Respiratory system, blood system  
Category 2 Central nervous system  
Category 3 Respiratory irritation, narcotic effects  
Specific target organ toxicity (repeated exposure) Category 1, 2  
Category 1 respiratory system  
Category 2 nasal cavity, kidneys, bladder, blood system  
Germ cell mutagenicity Category 2  
Carcinogenicity Category 1B  
Aquatic environmental toxicity/Chronical phase Category 2

#### Pictograms



Signal word Danger

#### Hazard statements

H314 - Causes severe skin burns and eye damage  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation

- H336 - May cause drowsiness or dizziness
- H340 - May cause genetic defects
- H341 - Suspected of causing genetic defects
- H350 - May cause cancer
- H351 - Suspected of causing cancer
- H360 - May damage fertility or the unborn child
- H370 - Causes damage to the following organs: respiratory system, blood system
- H371 - May cause damage to the following organs: central nervous system
- H373 - May cause damage to the following organs through prolonged or repeated exposure:  
nasal cavity, kidneys, bladder, blood system
- H372 - Causes damage to the following organs through prolonged or repeated exposure:  
respiratory system
- H411 - Toxic to aquatic life with long lasting effects

**Precautionary statements-(Prevention)**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust/fumes/gas/mist/vapors/spray.
- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use personal protective equipment as required.

**Precautionary statements-(Response)**

- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- IF ON SKIN: Wash with plenty of soap and water.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- IF exposed: Call a POISON CENTER or doctor/physician.
- IF exposed or concerned: Get medical advice/attention.
- Immediately call a POISON CENTER or doctor/physician.
- Call a POISON CENTER or doctor/physician if you feel unwell.
- If skin irritation occurs: Get medical advice/attention.
- If skin irritation or a rash occurs: Get medical advice/attention.
- If eye irritation persists get medical advice/attention.
- Take off contaminated clothing and wash before reuse.
- Wash contaminated clothing before reuse.
- Collect spillage.

**Precautionary statements-(Storage)**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed.

**Precautionary statements-(Disposal)**

Dispose of contents/container to an approved waste disposal plant.

**Others**

Other hazards Not available

Other reagents may be harmful if inhaled and ingested. May cause eye and skin irritation.

**3. COMPOSITION, INFORMATION ON INGREDIENTS**

Product Name  
 Mouse GLP-2 EIA

CAS Number  
 None

**Kit components:**

Component	Quantity	Chemical name	Wt%	CAS No.	Chemical Formula
1) Antibody coated plate	1 plate	Plate coated with goat anti rabbit IgG antibody ①			
2) Mouse GLP-2 Standard	50 ng	Synthetic mouse GLP-2 (Lyophilized) ②			
3) Labeled antigen	1 vial	Biotinylated rat GLP-2 (Lyophilized) ③			
4) GLP-2 antibody	6 mL	Rabbit anti rat GLP-2 antibody ④			
5) SA-HRP solution	12 mL	HRP labeled Streptavidin⑤			
		Phenol⑥	0.096%	108-95-2	C6H5OH
		Chloramphenicol⑦	0.02%	56-75-7	C11H12CL2N5
6) Substrate buffer	26 mL	Hydrogen peroxide ⑧	0.015%	7722-84-1	H2O2
		Citric acid, monohydrate ⑨	0.7%	5949-29-1	C6H8O7·H2O
		Disodium hydrogenphosphate 12-water ⑩	2.39%	10039-32-4	Na2HPO4·12H2O
7) OPD tablet	2 tablets	o-Phenylenediamine dihydrochloride⑪	13mg	615-28-1	C6H4(NH2)2 2HCL
8) Stopping solution	12 mL	Sulfuric acid (1M) ⑫	9.69%	7664-93-9	H2SO4
9) Buffer solution	25 mL	Tris buffer ⑬			
10) Washing solution (concentrated)	50 mL	Sodium chloride ⑭	18%	7647-14-5	NaCl
		Polyoxyethylene sorbitan monolaurate (Tween20) ⑮	1%	9005-64-5	C58H114O26
11) Adhesive foil	3 sheets				

**4. FIRST AID MEASURES**

**Inhalation:** Immediately remove victim to fresh air. Consult a physician if necessary.

**Eye contact:** Immediately flush eyes with flooding amounts of running water for at least 15 minutes. Consult a physician if necessary.

**Skin contact:** Immediately remove contaminated clothes and shoes, flush skin with plenty of water or shower. Wash contaminated clothing and shoes. Consult a physician if necessary.

**Ingestion:** Immediately seek medical attention.

**5. FIRE FIGHTING MEASURES**

**Flammable properties:** Nonflammable

**Extinguishing media:** Foam, Carbon dioxide, dry chemical powder, soil, water

**Fire fighting instructions:** May emit toxic fumes under fire conditions. Wear full fire fighting protective equipment including self-contained breathing apparatus. Do not contact to the components when extinguish fire.

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## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Remove all ignition sources and ventilate. Wear suitable protective equipment. Avoid contact with skin and eyes. Keep off except persons concerned.
- Environmental precautions:** Prevent spills from entering sewers, watercourses or low area, and prevent from affecting environment.
- Methods for Clean up:** In case of spill of liquid material, take up or cover spilled material with ashes or other incombustible absorbents, and put in a container to be sealed. After completely picked up, dispose. In case of spill of solid or powder material, prevent causing dust, sweep and collect, and put in a container to be sealed. Wash the spill site with water.

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## 7. HANDLING AND STORAGE

- Handling:** Obtain a package insert before use.  
Read all the cautions for safety in the package insert before use.  
Avoid strong light.  
Avoid contact, inhalation and swallow.  
Use only in open air or ventilated area.  
Prevent from entering eyes.  
Ventilate the area to keep concentration in air below exposure limits.  
Avoid inhalation of mist, vapor and spray of material.  
Avoid contact with eyes, skin and clothing.  
Do not smoke and eat while using this kit.  
Wash hands thoroughly after handling.  
Prevent from entering environment.  
Handle materials with suitable protection.  
Use suitable equipments.  
Do not pipette by mouth.  
Do not leak, overflow and scatter.  
Do not fall down and damage.
- Storage:** Store away from sunlight in a cool and dark place at 36-47°F (2-8°C).

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## 8. EXPOSURE CONTOROLS, PERSONAL PROTECTION

- Engineering measures:** General ventilation and/or local exhaust ventilation as well as process isolation is necessary to minimize employee exposure and maintain exposure limits below exposure limits. Equip eye flushing facilities and shower rooms near operating place where this kit is handled or stored.

- Control parameter:**
- |                 |                                   |
|-----------------|-----------------------------------|
| ⑥ JSOH (Japan); | TWA= 5 ppm OEL                    |
|                 | TWA= 19mg/m <sup>3</sup> OEL skin |
| ACGIH TLV(s);   | TWA= 5 ppm skin                   |
| ⑧ ACGIH TLV(s); | TWA= 1 ppm                        |
| ⑪ ACGIH;        | TWA=0.1mg/m <sup>3</sup>          |
| ⑫ JSOH (Japan); | OEL= 1 mg/m <sup>3</sup>          |
| ACGIH TLV(s);   | TWA= 0.2 mg/m <sup>3</sup>        |

**Personal protection:**

**Respiratory protection:** NIOSH and MSHA approved respirator.  
**Hand protection:** Suitable impervious gloves.  
**Eye protection:** Suitable safety glasses (goggles).  
**Skin protection:** Suitable protective clothing.

**Others:** Wash hands thoroughly after handling materials.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Component	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)
Appearance	Colorless plate	White color, lyophilized powder	White color, lyophilized powder	Light green blue color, Liquid	Orange color, Liquid	Colorless transparent, Liquid	White tablet	Colorless transparent, Liquid	Green blue color, Liquid	Colorless transparent, Liquid	Colorless transparent Polymer sheet
pH	N/A	N/A	N/A	8.5	6.8	5	N/A	<1.0	7.5	D/N/A	N/A
Melting point	N/A	D/N/A	D/N/A	D/N/A	N/A	N/A	D/N/A	N/A	N/A	N/A	N/A
Boiling point	N/A	N/A	N/A	D/N/A	D/N/A	D/N/A	N/A	D/N/A	D/N/A	D/N/A	N/A
Flash point	N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	N/A
Explosive limits	N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	N/A
Vapor pressure	N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	N/A
Vapor density (air=1)	N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	N/A
Specific gravity	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A
Solubility in water	Insoluble	Soluble	Soluble	Mixable	Mixable	Mixable	Soluble	Mixable	Mixable	Mixable	Insoluble
Decomposition temperature	N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	D/N/A	N/A

N/A: Not applicable  
 D/N/A: data not available

**10. STABILITY AND REACTIVITY**

**Chemical stability:** Product is stable under normal handling.  
**Shelf life:** Stable up to 19 months after manufacturing.  
**Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** Extremes of temperature and direct sunlight, heat, flames and sparks, static electricity, spark  
**Incompatibility with other materials:** Alkaline substances, metals, strong oxidizing agents  
**Hazardous decomposition products:** Sulfur oxides(SOx), Carbon monoxide(CO), carbon dioxide(CO2), Nitrogen oxides(NOx), Hydrogen chloride(HCl) gas

**11. TOXICOLOGICAL INFORMATION**

Information as the mixture is not available.

**Acute toxicity:** 5) Phenol (oral, rat); LD50=340 - 530mg/kg Category 4  
 (dermal, rabbit); LD50=630mg/kg  
 (dermal, rat); LD50=669.4mg/kg Category 3  
 (inhalation, rat); 8h LC50 >900mg/m3 Classification not possible

- ⑥Content=0.096% Classification not possible  
Chloramphenicol (oral, rat); LD50=2500mg/kg Not classified
- 6) Hydrogen peroxide; (Oral) Category 4
  - ⑧Content=0.015% No information available
- 7) o-Phenylenediamine dihydrochloride; Classification not possible
- 8) Sulfuric acid (inhalation, rat); 4h LC50=347ppm  
(Oral, rat) LD50=2140mg/kg  
Acute toxicity (Oral) Category Not classified  
Acute toxicity (Inhalation: Dusts and mists) Category 2
  - ⑫Content=9.69% Acute toxicity (Inhalation: Dusts and mists) Category 4
- 10) Tween 20 (oral, rat); LD50=37000mg/kg  
Inhalation (rat); >5.1mg/L, 4h

**Skin corrosion/irritation:**

- 5) Phenol; Category 1
  - ⑥Content=0.096% Not classified  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide (skin); Category 1
  - ⑧Content=0.015% No information available
- 7) o-Phenylenediamine dihydrochloride; Category 2
- 8) Sulfuric acid; Category 1
  - ⑫Content=9.69% Category 1
- 10) Tween 20 ; No information available

**Serious eye damage/irritation:**

- 5) Phenol; Category 1
  - ⑥Content=0.096% Not classified  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; Category 1
  - ⑧Content=0.015% No information available
- 7) o-Phenylenediamine dihydrochloride; Category 1
- 8) Sulfuric acid; Category 1
  - ⑫Content=9.69% Category 1
- 10) Tween 20; No information available

**Respiratory or skin sensitization:**

**Respiratory sensitization**

- 5) Phenol; Classification not possible  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; Not classified
- 7) o-Phenylenediamine dihydrochloride; Classification not possible
- 8) Sulfuric acid; Classification not possible
- 10) Tween 20; No information available

**Skin sensitization**

- 5) Phenol; Not classified  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; Not classified
- 7) o-Phenylenediamine dihydrochloride; Category 1
- 8) Sulfuric acid; Not classified
- 10) Tween 20; No information available

**Germ cell mutagenicity:**

- 5) Phenol; Category 2  
⑥Content=0.096% No classification  
Chloramphenicol; Category 2  
⑦Content=0.02% No Data available
- 6) Hydrogen peroxide; Not classified
- 7) o-Phenylenediamine dihydrochloride; Category 2
- 8) Sulfuric acid; Classification not possible
- 10) Tween 20; No information available

**Carcinogenicity:**

- 5) Phenol; Not classified IARC group 3 (1999) (substances which cannot be classified to human carcinogens), ACGIH: A4 (2005), IRIS: D (2002)  
Chloramphenicol; Category 1B IARC group 2A (substances which may be carcinogenic to human)  
⑦Content=0.02% No information available
- 6) Hydrogen peroxide; Category 2  
⑧Content=0.015% No information available
- 7) o-phenylenediamine dihydrochloride; Category 1B
- 8) Sulfuric acid; Occupational exposure to Mist of inorganic strong acids including sulfuric acid is classified to group 1 in IARC (to have carcinogenicity for human ), group A2 in ACGIH (suspected human carcinogens) and group K in NTP (known to have carcinogenicity for human). With respect for the evaluation by IARC and current evaluation by NTP, it should be classified to category 1, however since sulfuric acid itself is classified to Category 4 in DFGOT and is not classified to carcinogen by any other organization,  
Classification not possible
- 10) Tween 20; No information available

**Reproductive toxicity:**

- 5) Phenol; Category 1B  
⑥Content=0.096% Not classified  
Chloramphenicol; Category 1B  
⑦Content=0.02% No data available
- 6) Hydrogen peroxide; Classification not possible
- 7) o-Phenylenediamine dihydrochloride; Classification not possible
- 8) Sulfuric acid; Not classified

10) Tween 20; No information available

Specific target organ systemic toxicity/Single exposure:

- 5) Phenol; Category 1 (nervous system, respiratory organs, cardiovascular system, kidney)
  - ⑥Content=0.096% Not classified
  - Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; Category 1
  - ⑧Content=0.015% No information available
- 7) o-Phenylenediamine dihydrochloride; Category 1, 2, 3
  - Category 1 (Blood system)
  - Category 2 (Central nervous system)
  - Category 3 (Respiratory irritation, narcotic effects)
- 8) Sulfuric acid; Category 1 (Respiratory system)
  - ⑫Content=9.69% Category 1
- 10) Tween 20; No information available

Specific target organ systemic toxicity/Repeated exposure:

- 5) Phenol; Category 1 (central nervous system, cardiovascular system, blood system, liver, kidney)
  - ⑥Content=0.096% Not classified
  - Chloramphenicol; Category 1 (Hematopoietic system, nervous system, circulatory system, digestive organ)
  - ⑦Content=0.02% No data available
- 6) Hydrogen peroxide; Category 1 (Respiratory organs)
  - ⑧Content=0.015% No information available
- 7) o-Phenylenediamine dihydrochloride; Category 2 (Nasal cavity, kidneys, bladder, blood system)
- 8) Sulfuric acid; Category 1 (Respiratory system)
  - ⑫Content=9.69% Category 1
- 10) Tween 20; No information available

Aspiration hazard:

- 5) Phenol; Classification not possible
  - Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; Classification not possible
- 7) o-Phenylenediamine dihydrochloride; Classification not possible
- 8) Sulfuric acid; Classification not possible
- 10) Tween 20; No information available

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## 12. ECOLOGICAL INFORMATION

Information as the mixture is not available.

Aquatic environmental toxicity/Acute phase:

- 5) Phenol; Ceriodaphnia: LC50=3.1mg/L/48h Category 2
  - ⑥Content=0.096% Not classified
  - Chloramphenicol; 72h EC50=0.78mg/L (Desmodesmus subspicatus)

Category 1

- ⑦Content=0.02% No information available
- 6) Hydrogen peroxide; Category 1  
Algae/aquatic plants ; 72h EC50= Nitzschia sp. 0.85mg/L  
Oncorhynchus mykiss; 96h LC50=10.0-32.0 mg/L  
Daphnia magna; 48h EC50=18-32 mg/L
- ⑧Content=0.015% No information available
- 7) o-Phenylenediamine dihydrochloride; Classification not possible
- 8) Sulfuric acid; 96-hour LC50 (pH 3.25-3.5) = 16-28 mg/L for fish (*Lepomis macrochirus*) (OECD SIDS: 2001). Category 3  
⑫Content=9.69% Not classified
- 10) Tween 20; No information available

Aquatic environmental toxicity/Chronical phase:

- 5) Phenol; Category 2  
⑥Content=0.096% Not classified  
Chloramphenicol; Category 1  
⑦Content=0.02% No information available
- 6) Hydrogen peroxide; Not classified
- 7) o-Phenylenediamine dihydrochloride; Classification not possible
- 8) Sulfuric acid; 45-day NOEC (growth) (pH6.0) = 0.025 mg/L for fish (*Jordanella floridae*) (OECD SIDS: 2001) Category 1  
⑫Content=9.69% Category 2
- 10) Tween 20; No information available

Persistence and degradability:

- 5) Phenol; Classification not possible  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; No information available
- 7) o-Phenylenediamine dihydrochloride; Degree of decomposition, 0% by BOD (METI Existing chemical safety inspections)
- 8) Sulfuric acid; No information available
- 10) Tween 20; No information available

Bioaccumulative potential:

- 5) Phenol; Classification not possible  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; No information available
- 7) o-Phenylenediamine dihydrochloride; No information available
- 8) Sulfuric acid; No information available
- 10) Tween 20; No data available

Mobility in soil:

- 5) Phenol; Classification not possible  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; No information available

- 7) o-Phenylenediamine dihydrochloride; No information available
- 8) Sulfuric acid; No information available
- 10) Tween 20; No information available

Hazard to the ozone layer:

- 5) Phenol; Classification not possible  
Chloramphenicol; Classification not possible
- 6) Hydrogen peroxide; No information available
- 7) o-Phenylenediamine dihydrochloride; No information available
- 8) Sulfuric acid; Classification not possible
- 10) Tween 20; No information available

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13. DISPOSAL CONSIDERATIONS

Dispose of all waste material including containers in accordance with all applicable laws and local environmental regulations.

14. TRANSPORT INFORMATION

IATA: As a mixture, the substance is subjected to no limitation.

ADR/RID

UN number	UN2796	UN3077
Proper shipping name:	Sulfuric acid	Environmentally hazardous substance, solid, n.o.s. (o-Phenylenediamine · 2HCl )
UN classification	8	9
Packing group	II	III
Marine pollutant	Not applicable	Yes

IMDG

UN number	UN2796	UN3077
Proper shipping name:	Sulfuric acid	Environmentally hazardous substance, solid, n.o.s. (o-Phenylenediamine · 2HCl )
UN classification	8	9
Packing group	II	III
Marine pollutant	Not applicable	Yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available	No information available

IATA

UN number	UN2796	UN3077
Proper shipping name:	Sulfuric acid	Environmentally hazardous substance, solid, n.o.s. (o-Phenylenediamine · 2HCl )
UN classification	8	9
Packing group	II	III
Environmentally Hazardous Substance	Not applicable	Yes

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## 15. REGULATORY INFORMATION

### International Inventories

EINECS/ELINCS

⑫Listed

TSCA

⑫Listed

### Japanese regulations

Fire Service Act;

Not applicable

Poisonous and Deleterious Substances Control Law;

Not applicable

Industrial Safety and Health Act;

⑪Substances with Health Hazards Prevention Guideline (Carcinogenicity Substance)

⑫Group 3 Specified Chemical Substance, (Ordinance on Prevention of Hazards Due to Specified Chemical Substances Art.2 Para.1, Item 6)

⑥⑫Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)

⑥⑫Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No. 9) No.474⑥, No.613⑫

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.;

⑥Priority Assessment Chemical Substances (Law Article 2, Para.5)

Regulations for the carriage and storage of dangerous goods in ship;

⑪Noxious Substances(Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)

⑫Corrosive Substances(Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)

Civil Aeronautics Law;

⑪Miscellaneous Dangerous Substances and Articles (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc. , Attached Table 1)

⑫Corrosive Substances(Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc. , Attached Table 1)

Air Pollution Control Law;

⑥Specified Substances, Hazardous Air Pollutants

⑫Specified substance

Marine Pollution Prevention Law;

⑫Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Pollutant Release and Transfer Register Law/ PRTR);

Not applicable

Water Pollution Control Act;

⑥⑫Specified substances(Law Art.2 Para.4, Enforcement Order Art.3-3)

Export Trade Control Order;

Not applicable

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## 16. OTHER INFORMATION

### Reference and abbreviation

- 1) Internal data of Yanaihara Institute, Inc.
- 2) OECD SIDS: Screening Information Data Set (OECD SIDS 2001)
- 3) RTECS : Registry of Toxic Effects of Chemical Substances.
- 4) NTP DB (Access on Dec., 2005), National Toxicology Program
- 5) SDS by FUJI FILM Wako Pure Chemical Corporation
- 6) ACGIH(2004); American Conference of Governmental Industrial Hygienists
- 7) JSOH : Japanese Society of Occupational Health  
Recommendation of Occupational Exposure Limits (2021-2022)
- 8) NIOSH: National Institute of Occupational Safety and Health
- 9) MSHA: Mine Safety and Health Administration
- 10) IARC(1992); International Agency for Research on Cancer
- 11) DFGOT; Occupational Toxicants: Critical Data Evaluation for MAK Value and Classification of Carcinogens, Vol. 15, 2001
- 12) SDS by Bio-Rad laboratories, Life Science Group

Key literature references and sources for data etc. ;

NITE: National Institute of Technology and Evaluation (JAPAN) <http://www.safe.nite.go.jp/japan/db.html>  
IATA dangerous Goods Regulations RTECS: Registry of Toxic Effects of Chemical Substances Japan  
Industrial Safety and Health Association GHS Model SDS Dictionary of Synthetic Organic Chemistry,  
SSOCJ, Koudansha Scientific Co.Ltd. Chemical Dictionary, Kyouritsu Publishing Co., Ltd. etc.

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