

SAFETY DATA SHEET

SDS No.5010-21360

Date

April 8, 2022

1/1 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : MPEX PTS Reagents for MS 40 tests
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 5010-21360
SDS No. : 5010-21360
Research use only.

This product is a "Kit", and this includes the following products.

Please refer to the SDS of each product for the hazard information of contents.

- 1) SDS No. 5010-0020 MPEX PTS reagents for MS reagent A
- 2) SDS No. 5010-0021 MPEX PTS reagents for MS reagent B
- 3) SDS No. 5010-0022 MPEX PTS reagents for MS reagent C
- 4) SDS No. 5010-0023 MPEX PTS reagents for MS reagent D

SAFETY DATA SHEET

SDS No.5010-0020

Date

April 8, 2022

1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : MPEX PTS Reagents for MS reagent A
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 5010-21360, 5010-21361, 5010-
SDS No. : 5010-0020
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Classification not possible
HAZARDS SYMBOL : ---
SIGNAL WORD : ---
HAZARD STATEMENTS : ---
PRECAUTIONARY STATEMENTS : ---
OTHER INFORMATION : May possible skin irritation by long-term or prolonged contact with this product.
Dispose of contents/container in accordance with all applicable regulations.
MOST IMPORTANT HAZARDS : Eye irritation, skin irritation, digestive tract irritation, respiratory tract irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE : Mixture
COMMON CHEMICAL NAME : MPEX PTS Reagents for MS reagent A
SYNONYMS : ---

CHEMICAL IDENTITY	CONTENT	CHEMICAL FORMULA	CAS RN	TSCA INVENTORY	EINECS No.
Water	--	H ₂ O	7332-18-5	Not Listed	--
Ammonium Hydrogencarbonate	--	NH ₄ HCO ₃	1066-33-7	Listed	(1)-141

4. FIRST AID MEASURES

GENERAL ADVICE : Consult a physician. Show this safety data sheet to the doctor in attendance.
INHALATION : Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT : Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. Consult a physician immediately.
EYE CONTACT : Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If possible, remove any contact lenses. Consult a physician immediately.
INGESTION : Rinse mouth, give plenty of water to dilute the substance. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.
GENERAL ADVICE : Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Carbon dioxide, dry chemical powder, foam, water spray
FIRE & EXPLOSION HAZARDS : Toxic, irritating, dust/fume/smoke may be emitted. Carbon monoxide may be foamed.
SPECIAL PROTECTIVE EQUIPMENT
FOR FIRE FIGHTERS : Firemen should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS : Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
- ENVIRONMENTAL PRECAUTIONS : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- METHODS FOR CLEAN UP : Do not touch spilled material without suitable protection. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

- HANDLING : Keep away from ignition sources and ventilate the area —No smoking. In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapour or mist. Avoid prolonged or repeated exposure. Handle this product with suitable protection.
- STORAGE : Store away from sunlight, heat and all ignition sources in well-ventilated dry place. Keep container tightly closed. Store in the refrigerator.
- INCOMPATIBLE PRODUCTS : Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits. Use adequate ventilation.
- VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Recommended
- CONTROL PARAMETERS
- ACGIH : No data available
- OSHA PEL : No data available
- NIOSH REL : No data available
- PERSONAL PROTECTION
- RESPIRATORY PROTECTION : Use respirators approved under appropriate government standards and follow all regulations.
- HAND PROTECTION : Chemical resistant gloves
- EYE PROTECTION : Safety glasses(goggles)
- SKIN PROTECTION : Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

- PHYSICAL STATE : Liquid
- COLOUR : Clear
- ODOR : No data available
- MELTING POINT / FREEZING POINT : No data available
- BOILING POINT OR INITIAL BOILING POINT AND BOILING RANGE : No data available
- FLAMMABILITY : No data available
- LOWER AND UPPER EXPLOSION LIMIT / FLAMMABILITY LIMIT : No data available
- FLASH POINT : No data available
- AUTO-IGNITION TEMPERATURE : No data available
- DECOMPOSITION TEMPERATURE : No data available
- pH : No data available
- KINEMATIC VISCOSITY : Not applicable
- SOLUBILITY : Soluble in water.
- PARTITION COEFFICIENT
- n-octanol/water (log value) : No data available
- VAPOUR PRESSURE : No data available
- DENSITY AND/OR RELATIVE DENSITY : No data available

10. STABILITY AND REACTIVITY

REACTIVITY	: Stable under recommended storage conditions.
CHEMICAL STABILITY	: Reacts with strong oxidizers.
CONDITION TO AVOID	: Sunlight, heat, open flames, high temperature, sparks, static electrical charge, other ignition sources, moisture
INCOMPATIBLE MATERIALS	: Oxidizers and strong acids
HAZARDOUS DECOMPOSITION PRODUCTS	: CO, CO ₂ .NO _x

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	: No data available
SKIN CORROSION/IRRITATION	: No data available
EYE DAMAGE/EYE IRRITATION	: No data available
RESPIRATORY OR SKIN SENSITIZATION	: No data available
GERM CELL MUTAGENICITY	: No data available
CARCINOGENICITY	: No data available
REPRODUCTIVE TOXICITY	: No data available
SPECIFIC TARGET ORGAN TOXICITY	: No data available
ASPIRATION TOXICITY	: No data available

12. ECOLOGICAL INFORMATION

HAZARDOUS TO THE AQUATIC ENVIRONMENT	: No data available
BIODEGRADABILITY	: No data available
BIOACCUMULATION POTENTIAL	: No data available
MOBILITY IN SOIL	: No data available
HAZARDOUS TO THE OZONE LAYER	: The ingredients which are included in this product is not listed in Annex of the Montreal Protocol.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

International Regulations

Maritime regulations	: Conform to the provisions of IMO.
UN No.	: Not regulated
Proper Shipping Name	: -
Class	: -
Packing Group	: -
Marine Pollutant	: Not applicable
Aviation regulations	: Conform to the provisions of ICAO/IATA.
UN No.	: Not regulated
Proper Shipping Name	: -
Class	: -
Packing Group	: -

15. REGULATORY INFORMATION

For classification and labeling of chemicals in accordance with the applicable rules and regulations in the EU or each country, refer to GHS classification of this product (See Section 2).

US REGULATION	: OSHA HCS 2012/29 CFR 1910.1200
EU REGULATION	: CLP Regulation ((EC) No. 1272/2008)

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.

SAFETY DATA SHEET

SDS No.5010-0021

Date

April 8, 2022

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : MPEX PTS Reagents for MS reagent B
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 5010-21360, 5010-21361, 5010-
SDS No. : 5010-0021
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Classification not possible
HAZARDS SYMBOL : - - -
SIGNAL WORD : - - -
HAZARD STATEMENTS : - - -
PRECAUTIONARY STATEMENTS : - - -
OTHER INFORMATION : May possible skin irritation by long-term or prolonged contact with this product.
Dispose of contents/container in accordance with all applicable regulations.
MOST IMPORTANT HAZARDS : Eye irritation, skin irritation, digestive tract irritation, respiratory tract irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE : Mixture
COMMON CHEMICAL NAME : MPEX PTS Reagents for MS reagent B
SYNONYMS : - - -

CHEMICAL IDENTITY	CONTENT	CHEMICAL FORMULA	CAS RN	TSCA INVENTORY	EINECS No.
Sodium Deoxycholate [for Electrophoresis]	40~60%	C ₂₄ H ₃₉ O ₄ Na	302-95-4	Not Listed	--
N-Dodecanoylsarcosine Sodium Salt Hydrate	40~60%	C ₁₅ H ₂₅ NO ₃ Na	137-16-6	Listed	(2)-1226

4. FIRST AID MEASURES

GENERAL ADVICE : Consult a physician. Show this safety data sheet to the doctor in attendance.
INHALATION : Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT : Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. Consult a physician immediately.
EYE CONTACT : Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If possible, remove any contact lenses. Consult a physician immediately.
INGESTION : Rinse mouth, give plenty of water to dilute the substance. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.
GENERAL ADVICE : Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Carbon dioxide, dry chemical powder, foam, water spray
FIRE & EXPLOSION HAZARDS : Toxic, irritating, dust/fume/smoke may be emitted. Carbon monoxide may be foamed.
SPECIAL PROTECTIVE EQUIPMENT
FOR FIRE FIGHTERS : Firemen should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS : Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
- ENVIRONMENTAL PRECAUTIONS : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- METHODS FOR CLEAN UP : Do not touch spilled material without suitable protection. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

- HANDLING : Keep away from ignition sources and ventilate the area —No smoking. In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapour or mist. Avoid prolonged or repeated exposure. Handle this product with suitable protection.
- STORAGE : Store away from sunlight, heat and all ignition sources in well-ventilated dry place. Keep container tightly closed. Store in the refrigerator.
- INCOMPATIBLE PRODUCTS : Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits.
Use adequate ventilation.
- VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Recommended
- CONTROL PARAMETERS
- ACGIH : No data available
- OSHA PEL : No data available
- NIOSH REL : No data available
- PERSONAL PROTECTION
- RESPIRATORY PROTECTION : Use respirators approved under appropriate government standards and follow all regulations.
- HAND PROTECTION : Chemical resistant gloves
- EYE PROTECTION : Safety glasses(goggles)
- SKIN PROTECTION : Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

- PHYSICAL STATE : Liquid
- COLOUR : Clear
- ODOR : No data available
- MELTING POINT / FREEZING POINT : No data available
- BOILING POINT OR INITIAL BOILING POINT AND BOILING RANGE : No data available
- FLAMMABILITY : No data available
- LOWER AND UPPER EXPLOSION LIMIT / FLAMMABILITY LIMIT : No data available
- FLASH POINT : No data available
- AUTO-IGNITION TEMPERATURE : No data available
- DECOMPOSITION TEMPERATURE : No data available
- pH : No data available
- KINEMATIC VISCOSITY : Not applicable
- SOLUBILITY : Soluble in water.
- PARTITION COEFFICIENT
- n-octanol/water (log value) : No data available
- VAPOUR PRESSURE : No data available
- DENSITY AND/OR RELATIVE DENSITY : No data available

10. STABILITY AND REACTIVITY

REACTIVITY	: Stable under recommended storage conditions.
CHEMICAL STABILITY	: Reacts with strong oxidizers.
CONDITION TO AVOID	: Sunlight, heat, open flames, high temperature, sparks, static electrical charge, other ignition sources, moisture
INCOMPATIBLE MATERIALS	: Oxidizers and strong acids
HAZARDOUS DECOMPOSITION PRODUCTS	: CO, CO ₂ .NO _x

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	: No data available
SKIN CORROSION/IRRITATION	: No data available
EYE DAMAGE/EYE IRRITATION	: No data available
RESPIRATORY OR SKIN SENSITIZATION	: No data available
GERM CELL MUTAGENICITY	: No data available
CARCINOGENICITY	: No data available
REPRODUCTIVE TOXICITY	: No data available
SPECIFIC TARGET ORGAN TOXICITY	: No data available
ASPIRATION TOXICITY	: No data available

12. ECOLOGICAL INFORMATION**HAZARDOUS TO THE AQUATIC ENVIRONMENT**

	: No data available
BIODEGRADABILITY	: No data available
BIOACCUMULATION POTENTIAL	: No data available
MOBILITY IN SOIL	: No data available

HAZARDOUS TO THE OZONE LAYER

: The ingredients which are included in this product is not listed in Annex of the Montreal Protocol.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION**International Regulations**

Maritime regulations	: Conform to the provisions of IMO.
UN No.	: Not regulated
Proper Shipping Name	: -
Class	: -
Packing Group	: -
Marine Pollutant	: Not applicable
Aviation regulations	: Conform to the provisions of ICAO/IATA.
UN No.	: Not regulated
Proper Shipping Name	: -
Class	: -
Packing Group	: -

15. REGULATORY INFORMATION

For classification and labeling of chemicals in accordance with the applicable rules and regulations in the EU or each country, refer to GHS classification of this product (See Section 2).

US REGULATION	: OSHA HCS 2012/29 CFR 1910.1200
EU REGULATION	: CLP Regulation ((EC) No. 1272/2008)

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.

SAFETY DATA SHEET

SDS No.5010-0022

Date

April 8, 2022

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : MPEX PTS Reagents for MS reagent C
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 5010-21360, 5010-21361, 5010-
SDS No. : 5010-0022
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquid : Category 2
Acute toxicity - oral - : Category 4
Eye damage/irritation : Category 2B
Specific target organ toxicity (Single exposure)
: Category 3(respiratory irritation)
: Category 3(anesthesia)

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 Highly flammable liquid and vapour
H302 Harmful if swallowed
H320 Cause eye irritation
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness

PRECAUTIONARY STATEMENTS :

P210 Keep away from heat/sparks/open flames/hot surfaces. –No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapour/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P303+P361+ P353 IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378 In case of fire: Use appropriate media such as chemical powder or carbon dioxide to extinguish.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 Rinse mouth.
P305+ P351+ P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or doctor if you feel unwell.
P403+ P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE	: Substance
COMMON CHEMICAL NAME	: MPEX PTS Reagents for MS reagent C
SYNONYMS	: Acetic acid, ethyl ester; Acetic ether, Ethyl Acetate [for Spectrophotometry]
CHEMICAL FOMULA	: CH ₃ COOC ₂ H ₅
CONTENT	: --
CAS RN.	: 141-78-6
TSCA INVENTRY	: Listed
EINECS No.	: 205-500-4
EC INDEX No.	: 607-022-00-5

4. FIRST AID MEASURES

GENERAL ADVICE	: Consult a physician. Show this safety data sheet to the doctor in attendance.
INHALATION	: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT	: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. Consult a physician immediately.
EYE CONTACT	: Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If possible, remove any contact lenses. Consult a physician immediately.
INGESTION	: Rinse mouth, give plenty of water to dilute the substance. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.
GENERAL ADVICE	: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
FIRE & EXPLOSION HAZARDS	: Toxic, irritating, dust/fume/smoke may be emitted. Carbon monoxide may be foamed.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS	: Firemen should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	: Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
ENVIROMENTAL PRECATIONS	: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
METHODS FOR CLEAN UP	: Do not touch spilled material without suitable protection. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

HANDLING	: Keep away from ignition sources and ventilate the area –No smoking. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapour or mist. Avoid prolonged or repeated exposure. Handle this product with suitable protection.
STORAGE	: Store away from sunlight, heat and all ignition sources in well-ventilated dry place. Keep container tightly closed.
INCOMOPATIBLE PRODUCTS	: Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING MEASURES	: Use exhaust ventilation to keep airborne concentrations below exposure limits. Use adequate ventilation.
VENTILATION	: Local Exhaust ; Necessary, Mechanical(General) ; Necessary
PERSONAL PROTECTION	
Respiratory protection	: Use respirators approved under appropriate government standards and follow all regulations.
HAND PROTECTION	: Chemical resistant gloves
EYE PROTECTION	: Safety glasses(goggles)

SKIN PROTECTION	: Protective clothing
CONTROL PARAMETERS	
ACGIH	: TWA 400 ppm (1400mg/m ³)
OSHA PEL	: TWA 400 ppm (1400mg/m ³)
NIOSH REL	: TWA 400 ppm (1400mg/m ³)

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	: Liquid
COLOUR	: Clear
ODOR	: ether-like, fruity odor
MELTING POINT / FREEZING POINT	: -84 °C
BOILING POINT OR INITIAL BOILING POINT AND BOILING RANGE	: approx.77 °C
FLAMMABILITY	: No data available
LOWER AND UPPER EXPLOSION LIMIT / FLAMMABILITY LIMIT	: 2.0% (lower), 11.5 vol% (upper)
FLASH POINT	: -4.0 °C (TCC)
AUTO-IGNITION TEMPERATURE	: 427 °C
DECOMPOSITION TEMPERATURE	: No data available
pH	: No data available
KINEMATIC VISCOSITY	: Not applicable
SOLUBILITY	: Miscible.
PARTITION COEFFICIENT	
n-octanol/water (log value)	: log Pow: 0.66
VAPOUR PRESSURE	: 3.04 (Air=1)
DENSITY AND/OR RELATIVE DENSITY	: No data available

10. STABILITY AND REACTIVITY

REACTIVITY	: Stable under recommended storage conditions.
CHEMICAL STABILITY	: Reacts with strong oxidizers.
CONDITION TO AVOID	: Sunlight, heat, open flames, high temperature, sparks, static electrical charge, other ignition sources, moisture
INCOMPATIBLE MATERIALS	: Oxidizers and strong acids
HAZARDOUS DECOMPOSITION PRODUCTS	: CO, CO ₂

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY -oral-	: rat; LC50=16,000 ppm (ACGIH,2001), 14,640 ppm (DFGOT vol.12,1999)
SKIN CORROSION/IRRITATION	: rabbit; 0.01mL no irritating (IUCLID,2001)
EYE DAMAGE/EYE IRRITATION	: rabbit; mild irritating (ECETOC TR48,1998)
RESPIRATORY OR SKIN SENSITIZATION	: No data available
GERM CELL MUTAGENICITY	: (1)In vivo, there have been negative reports of micronucleus tests using bone marrow cells of mice and hamsters by oral and intraperitoneal administration. (DFGOT vol.12(1999), IUCLID(2000))
CARCINOGENICITY	: No data available
REPRODUCTIVE TOXICITY	: No data available
SPECIFIC TARGET ORGAN TOXICITY - single exposure -	: Human; slight irritating to nasal cavity, pharynx and eyes (DFGOT vol.12 (1999), ACGIH(2001)).
SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -	: As a result of oral administration to rats for 90 days, weight gain was suppressed and food intake was decreased at 3,600 mg / kg / day. (SIDS (2008)
ASPIRATION TOXICITY	: No data available

12. ECOLOGICAL INFORMATION**HAZARDOUS TO THE AQUATIC ENVIRONMENT**

: Fish (fat head minnow); LC50=230mg/L, 96h(SIDS, 2008)
Daphnia magna: LC50=2,500mg/L, 24h (SIDS, 2008)

BIODEGRADABILITY : No data available

BIOACCUMULATIVE POTENTIAL : No data available

MOBILITY IN SOIL : No data available

HAZARDOUS TO THE OZONE LAYER

: The ingredients which are included in this product is not listed in Annex of the Montreal Protocol.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION**International Regulations**

Marine regulatory information : Comply the provisions of IMO.

UN Number : 1173

Proper Shipping Name : ETHYL ACETATE

Class : 3

Packing Group : II

Marine Pollutant : Not applicable

Aviation regulatory information : Comply the provisions of ICAO/IATA.

UN Number : 1173

Proper Shipping Name : Ethyl acetate

Class : 3

Packing Group : II

15. REGULATORY INFORMATION

For classification and labeling of chemicals in accordance with the applicable rules and regulations in the EU or each country, refer to GHS classification of this product (See Section 2).

US REGULATION : OSHA HCS 2012/29 CFR 1910.1200

EU REGULATION : CLP Regulation ((EC) No. 1272/2008)

16. OTHER INFORMATION**NOTICE:**

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.

SAFETY DATA SHEET

SDS No.5010-0023

Date

April 7, 2025

1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : MPEX PTS Reagents for MS reagent D
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 5010-21360, 5010-21361, 5010-
SDS No. : 5010-0023
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Corrosive to metals : Category 1
Acute toxicity - oral - : Category 3
Acute toxicity - inhalation - : Category 3
Skin corrosion/irritation : Category 1
Eye damage/irritation : Category 1

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H290 : May be corrosive to metals
H301 : Toxic if swallowed
H331 : Toxic if inhaled
H314 : Cause severe skin burns and eye damage
H318 : Cause serious eye damage

PRECAUTIONARY STATEMENTS :

P234 : Keep only in original packaging.
P260 : Do not breathing dust/fume/gas/mist/vapours/spray.
P264 : Wash hands thoroughly after handling.
P270 : Do not eat, drink or smoke when using this product.
P271 : Use only outdoors or in a well-ventilated area.
P280 : Wear protective gloves/protective clothing/eye protection/face protection.
P390 : Absorb spillage to prevent material-damage.
P301+P330+P331 : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 : Immediately call a POISON CENTER or doctor.
P303+P361+ P353 : IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 : Wash contaminated clothing before reuse.
P305+ P351+ P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 : Immediately call a POISON CENTER or doctor.
P403+P233 : Store in a well-ventilated place. Keep container tightly closed.
P405 : Store locked up.
P406 : Store in a corrosion resistant container with a resistant inner liner.
P501 : Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE	: Substance
COMMON CHEMICAL NAME	: MPEX PTS Reagents for MS reagent D
SYNONYMS	: Trifluoroacetic acid, Perfluoroacetic acid
CHEMICAL FORMULA	: C ₂ HF ₃ O ₂
CONTENT	: 99% Note: These values are not product specifications.
CAS RN.	: 76-05-1
TSCA INVENTORY	: Listed
EINECS No.	: 200-929-3
EC INDEX No.	: 607-091-00-1

4. FIRST AID MEASURES

GENERAL ADVICE	: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.
INHALATION	: Move victim to fresh air and gargle. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT	: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.
EYE CONTACT	: Remove any contact lenses at once. Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, consult a physician.
INGESTION	: Rinse mouth, give plenty of water to vomit. Never give anything by mouth to an unconscious person. Consult a physician.
MOST IMPORTANT SYMPTOMS/affects, acute and delayed	: Contact with eyes/skin causes symptoms such as pain, redness and burns. Prolonged contact may cause dryness or cracking of skin or dermatitis. Accidental ingestion and vomiting can cause the substance to enter the lungs, causing pneumonia and lung damage.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
FIRE & EXPLOSION HAZARDS	: Toxic, irritating, dust/fume/smoke may be emitted. Carbon monoxide may be formed.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS	: Firemen should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	: Avoid raising dust and avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment.
ENVIRONMENTAL PRECAUTIONS	: Prevent spills from entering sewers, watercourses or low areas. Comply with local disposal regulations.
METHODS FOR CLEANING UP	: Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Pull all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.

7. HANDLING AND STORAGE

HANDLING	: Keep away from ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapour or mist. Avoid prolonged or repeated exposure. Handle this product with suitable protection.
STORAGE	: Store away from sunlight, heat and all ignition sources in well-ventilated dry place. Keep container tightly closed.
INCOMPATIBLE PRODUCTS	: Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING MEASURES	: Use exhaust ventilation to keep airborne concentrations below exposure limits. Use adequate ventilation.
VENTILATION	: Local Exhaust ; Necessary, Mechanical(General) ; Necessary

CONTROL PARAMETERS

ACGIH : Not established
 OSHA PEL : Not established
 NIOSH REL : Not established

PERSONAL PROTECTION

Respiratory protection : Use respirators approved under appropriate government standards and follow all regulations.
 HAND PROTECTION : Chemical resistant gloves
 EYE PROTECTION : Safety glasses(goggles)
 SKIN PROTECTION : Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Liquid
 PHYSICAL STATE : Clear to slightly brown
 ODOR : strong odor
 MELTING POINT : -15.3 to -15 °C
 BOILING POINT : approx.70 - 72 °C
 FLAMMABILITY : No data available
 EXPLOSIVE LIMITS : No data available
 FLASH POINT : No data available
 AUTOIGNITION TEMPERATURE : No data available
 DECOMPOSITION TEMPERATURE : No data available
 pH : Aqueous solution is strongly acidic.
 KINEMATIC VISCOSITY : No data available
 SOLUBILITY IN(Liquid paraffin)
 Water : Soluble
 Organic solvent : Soluble in ethanol and acetone
 PARTITION COEFFICIENT ;
 n-octanol/water : log Pow: -2.1
 VAPOR PRESSURE : 11 kPa (at 20°C)
 DENSITY/RELATIVE DENSITY : approx. 1.49 g/mL (at 20°C)
 RELATIVE VAPOUR DENSITY : 3.9 (Air=1)
 PARTICLE CHARACTERISTICS : No data available

10. STABILITY AND REACTIVITY

REACTIVITY : Stable under recommended storage conditions.
 CHEMICAL STABILITY : Stable under recommended storage conditions.
 POSSIBILITY OF HAZARDOUS REACTIONS : Reacts with strong oxidizers.
 CONDITION TO AVOID : Sunlight, heat, open flames, high temperature, sparks, static electrical charge, other ignition sources, moisture
 INCOMPATIBLE MATERIALS : Oxidizers and strong acids
 HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO2 may be formed, Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY -oral- : rat; LC50=200mg/kg (HSDB,2007)
 ACUTE TOXICITY -inhalation- : rat; LC50=10mg/kg,2h (7.07mg/L,4h=1516ppm)(HSDB,2007)
 SKIN CORROSION/IRRITATION : The pH of this material is 1 (10 g/L) (GESTIS Access on Nov. 2011)
 EYE DAMAGE/EYE IRRITATION : The pH of this material is 1 (10 g/L) (GESTIS Access on Nov. 2011)
 SENSITIZATION : No data available
 GERM CELL MUTAGENICITY : No data available
 CARCINOGENICITY : No data available
 REPRODUCTIVE TOXICITY : In a study of oral administration of 75 or 150 mg / kg to 10-20 day gestation rats, changes were observed in biochemical indicators of liver and kidney function by serum and urine examination of offspring. However, no statistically significant effects were observed on litter size, neonatal survival or postnatal growth (HSDB (2007)).

SPECIFIC TARGET ORGAN TOXICITY

: No data available

ASPIRATION HAZARD

: No data available

12. ECOLOGICAL INFORMATION

HAZARDOUS TO THE AQUATIC ENVIRONMENT

: Danio rerio; LC50>1200mg/L, 96h(PPDB)

BIODEGRADABILITY

: No data available

BIOACCUMULATIVE POTENTIAL

: No data available

MOBILITY IN SOIL

: No data available

HAZARDOUS TO THE OZONE LAYER

: The ingredients which are included in this product is not listed in Annex of the Montreal Protocol.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

International Regulations

Marine regulatory information : Comply the provisions of IMO.

UN Number : 2699

Proper Shipping Name : ETHYL ACETATE

Class : 8

Packing Group : I

Marine Pollutant : Not applicable

Aviation regulatory information : Comply the provisions of ICAO/IATA.

UN Number : 2699

Proper Shipping Name : Trifluoroacetic acid

Class : 8

Packing Group : I

15. REGULATORY INFORMATION

This SDS has been prepared in accordance with Japanese laws and regulations and has not been prepared based on research into the local laws and regulations of each country.

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.