

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product Identifier**

Perihal Produk:

Xpect Flu A/B diluent

Product Description:

Xpect Flu A/B diluent

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

Recommended Use

Laboratory chemicals.

Uses advised against

No Information available

Details of the supplier of the safety data sheet**Company**Thermo Scientific Microbiology Sdn Bhd
No.6, Jalan TTC 6, Taman Teknologi Cheng,
Cheng, 75250 Melaka, Malaysia
+606 334 0975 .**Supplier**Remel
12076 Santa Fe Drive Lenexa,
KS 66215 United States
Telephone: 1-800-255-6730
Fax:1-800-621-8251**E-mail address**

mbd-sds@thermofisher.com

Emergency Telephone Number(603) 5122 8888
CHEMTREC Malaysia 1-800-815-308 (Malay)
CHEMTREC Malaysia (Kuala Lumpur) +(60)-327884561 (Malay)**SECTION 2: HAZARDS IDENTIFICATION****Classification of the substance or mixture**

| | |
|-----------------------------------|-------------------|
| Serious Eye Damage/Eye Irritation | Category 1 (H318) |
| Chronic aquatic toxicity | Category 3 |

Label Elements

Signal Word

Danger

Hazard Statements

H318 - Causes serious eye damage

H412 - Harmful to aquatic life with long lasting effects

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

Precautionary Statements

P280 - Wear eye protection/ face protection
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/physician

Other Hazards

Contains a known or suspected endocrine disruptor
Included in the list established in accordance with Article 59(1) for having endocrine disrupting properties

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight % |
|--|------------|----------|
| Water | 7732-18-5 | 89.1 |
| Sodium phosphate, monobasic | 7558-80-7 | 0.35 |
| Casein | 9000-71-9 | 0.1 |
| L-Cysteine, N-acetyl- | 616-91-1 | 0.1 |
| Hydrogen chloride | 7647-01-0 | <0.1% |
| Sodium phosphate dibasic | 7558-79-4 | 1.09 |
| Sodium chloride | 7647-14-5 | 3 |
| Sodium hydroxide | 1310-73-2 | <0.1% |
| Albumins, blood serum | 9048-46-8 | 3.08 |
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | 9002-93-1 | 3.08 |
| Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone | 55965-84-9 | Trace |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Self-Protection of the First Aider

Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

None reasonably foreseeable. Causes severe eye damage.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

May cause sensitization of susceptible persons. Use of epinephrine may be indicated. Treat symptomatically.

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. Contact with metals may evolve flammable gas.

Hazardous Combustion Products

None under normal use conditions.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as required. Ensure adequate ventilation.

Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

Methods and Material for Containment and Cleaning Up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Conditions for Safe Storage, Including any Incompatibilities

Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Specific End Uses

Use in laboratories.

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Component | Malaysia | ACGIH TLV | OSHA PEL |
|-------------------|----------|------------------------------|--|
| Hydrogen chloride | | Ceiling: 2 ppm | Ceiling: 5 ppm Ceiling: 7 mg/m ³ (Vacated) Ceiling: 5 ppm (Vacated) Ceiling: 7 mg/m ³ |
| Sodium hydroxide | | Ceiling: 2 mg/m ³ | (Vacated) Ceiling: 2 mg/m ³ TWA: 2 mg/m ³ |

| Component | European Union | The United Kingdom | Germany |
|-------------------|--|--|--|
| Hydrogen chloride | TWA: 5 ppm (8h) TWA: 8 mg/m ³ (8h) STEL: 10 ppm (15min) STEL: 15 mg/m ³ (15min) | STEL: 5 ppm 15 min STEL: 8 mg/m ³ 15 min TWA: 1 ppm 8 hr TWA: 2 mg/m ³ 8 hr | TWA: 2 ppm (8 Stunden). AGW - exposure factor 2 TWA: 3 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 2 ppm (8 Stunden). MAK TWA: 3.0 mg/m ³ (8 Stunden). MAK Höhepunkt: 4 ppm Höhepunkt: 6 mg/m ³ |
| Sodium hydroxide | | 2 mg/m ³ STEL | 2 mg/m ³ TWA (inhalable fraction) |

Exposure Controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Protective gloves

Skin and body protection

Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g.

sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

When RPE is used a face piece Fit Test should be conducted

Hygiene Measures

When using do not eat, drink or smoke Remove and wash contaminated clothing and gloves, including the inside, before re-use Provide regular cleaning of equipment, work area and clothing

Environmental exposure controls

Do not allow material to contaminate ground water system Prevent product from entering drains

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

| | |
|----------------|--------------------------|
| Physical State | Liquid |
| Odor | No information available |
| Odor Threshold | No data available |
| pH | No information available |

| | | |
|---------------------|--------------------------|-----------------------------------|
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | No information available | |
| Flash Point | No information available | Method - No information available |

| | | |
|--------------------------|-------------------|--------|
| Evaporation Rate | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |

| | | |
|------------------------------|--------------------------|-------------|
| Vapor Pressure | No data available | |
| Vapor Density | No data available | (Air = 1.0) |
| Specific Gravity / Density | No data available | |
| Bulk Density | Not applicable | Liquid |
| Water Solubility | No information available | |
| Solubility in other solvents | No information available | |

Partition Coefficient (n-octanol/water)

| Component | log Pow |
|--|-----------------|
| L-Cysteine, N-acetyl- | -0.6 |
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phe nyl]-.omega.-hydroxy- | 2.7 |
| Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone | >=-0.32 - <=0.7 |

| | |
|---------------------------|--------------------------|
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |
| Explosive Properties | No information available |
| Oxidizing Properties | No information available |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

None known, based on information available.

Chemical Stability

Stable under normal conditions.

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

Possibility of Hazardous Reactions

Hazardous Polymerization Hazardous Reactions

No information available.
None under normal processing.

Conditions to Avoid

None known.

Incompatible Materials

None known.

Hazardous Decomposition Products

None under normal use conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|------------------------------|-------------------------------|------------------------------|
| Water | - | - | - |
| Sodium phosphate, monobasic | LD50 = 8290 mg/kg (Rat) | LD50 > 7940 mg/kg (Rabbit) | LC50 > 0.83 mg/L (Rat) 4 h |
| L-Cysteine, N-acetyl- | LD50 = 5050 mg/kg (Rat) | | |
| Hydrogen chloride | LD50 238 - 277 mg/kg (Rat) | LD50 > 5010 mg/kg (Rabbit) | LC50 = 1.68 mg/L (Rat) 1 h |
| Sodium phosphate dibasic | LD50 = 17 g/kg (Rat) | | |
| Sodium chloride | LD50 = 3 g/kg (Rat) | LD50 > 10000 mg/kg (Rabbit) | LC50 > 42 mg/L (Rat) 1 h |
| Sodium hydroxide | LD50 = 325 mg/kg (Rat) | LD50 = 1350 mg/kg (Rabbit) | |
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy- | 1800 mg/kg (Rat) | | |
| Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone | LD50 = 53 mg/kg (Rat) | LD50 = 87.12 mg/kg (Rabbit) | |

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Legend:

X - Listed 'X' - Not Listed XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

Sensitization

No information available

Mutagenic Effects

No information available

100000000111304

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

Reproductive Effects No information available
Developmental Effects No information available
Target Organs No information available.

Endocrine Disruptor Information

| Component | EU - Endocrine Disruptors Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|---|--|--|---|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | Group III Chemical | - | - |

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|---|--|---------------------|------------------|----------------------|
| Sodium chloride | Pimephals prome: LC50: 7650 mg/L/96h | EC50: 1000 mg/L/48h | | |
| Sodium hydroxide | LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss) | - | - | - |
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | LC50 = 8.9 mg/L 96H LC50 = 4.0 mg/l 96H (Pimephales promelus) | EC50 = 26 mg/L 48h | - | - |
| Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone | | | | EC50 = 5.7 mg/L 16 h |

Persistence and degradability No information available

| Component | Degradability |
|---|---------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-9002-93-1 (3.08) | 60% >28 days |

Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative potential No information available

| Component | log Pow | Bioconcentration factor (BCF) |
|---|-----------------|-------------------------------|
| L-Cysteine, N-acetyl- | -0.6 | No data available |
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | 2.7 | No data available |
| Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone | >=-0.32 - <=0.7 | 54 dimensionless |

Mobility in soil No information available. .

Other adverse effects No information available

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used Do not flush to sewer Do not empty into drains Do not let this chemical enter the environment

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

Not regulated

Road and Rail Transport

Not regulated

IATA

Not regulated

Special Precautions for User

No special precautions required

SECTION 15: REGULATORY INFORMATION

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

International Inventories

X = listed

| Component | EINECS | TSCA | DSL | PICCS | ENCS | ISHL | IECSC | AICS | KECL |
|---|-----------|------|-----|-------|------|------|-------|------|------------|
| Water | 231-791-2 | X | X | X | X | | X | X | KE-35400 |
| Sodium phosphate, monobasic | - | X | X | X | X | X | X | X | KE-31577 |
| Casein | - | X | X | X | - | | X | X | KE-04893 |
| L-Cysteine, N-acetyl- | - | X | X | X | X | X | X | - | KE-00114 |
| Hydrogen chloride | - | X | X | X | X | X | X | X | KE-20189 |
| Sodium phosphate dibasic | - | X | X | X | X | X | X | X | KE-12344 |
| Sodium chloride | - | X | X | X | X | X | X | X | KE-31387 |
| Sodium hydroxide | 215-185-5 | X | X | X | X | X | X | X | KE-31487 |
| Albumins, blood serum | - | X | X | X | - | | X | X | KE-05-0011 |
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | - | X | X | X | X | X | X | X | KE-33568 |
| Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone | - | - | X | X | X | X | X | - | KE-05738 |

| Component | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-------------------|---|--|----------------------------|------------------------------------|
| Hydrogen chloride | 25 tonne | 250 tonne | | Annex I - Y34 |
| Sodium hydroxide | | | | Annex I - Y35 |

National Regulations

100000000111304

SAFETY DATA SHEET

Xpect Flu A/B diluent

Revision Date 29-Mar-2023

Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Revision Date

29-Mar-2023

Revision Summary

Not applicable.

In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet