



SAFETY DATA SHEET

1. Identification

Product identifier	Recombinant Human IL-18
Other means of identification	
Product code	B001-5
Recommended use	Research use only.
Recommended restrictions	None known.
Manufacturer / Importer / Supplier / Distributor information	
Manufacturer and Supplier (Asia)	Medical & Biological Laboratories (MBL) Co., Ltd. 4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
Telephone number	+81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST)
Fax	+81-52-238-1440
E-mail	sds-support@mbl.co.jp
URL	http://www.mbl.co.jp/e/index.html
Contact person	SDS Support
Supplier	MBL International Corporation 15A Constitution Way, Woburn, MA 01801, USA
Telephone number	+1-800-200-5459, option 3
Fax	+1-781-939-6963
E-mail	tech@mblintl.com
URL	http://www.mblintl.com/
Contact person	Technical Service

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
OSHA hazard(s)	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	None.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash thoroughly after handling.
Storage	None.
Disposal	None.
Hazard(s) not otherwise classified (HNOC)	None.

3. Composition/Information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation	Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.
Skin contact	Wash contact areas with soap and water. Get medical attention if irritation develops or persists.
Eye contact	Do not rub eye. Rinse the eye with water immediately. Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.

Most important symptoms/ effects, acute and delayed	Dry skin.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Get medical attention if any discomfort develops.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Fire-fighting equipment/ instructions	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid prolonged and repeated contact. Wear suitable protective clothing. For personal protection, see Section 8 of the SDS.
Methods and materials for containment and cleaning up	Sweep up or vacuum up spillage and collect in suitable container for disposal. After removal, flush contaminated area thoroughly with water. Never return spills to original containers for re-use.
Environmental precautions	Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling	Avoid prolonged and repeated contact. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep container closed.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Provide adequate ventilation. Minimize dust generation and accumulation. Provide easy access to water supply and eye wash facilities.
Individual protection measures, such as personal protective equipment	
Eye/face protection	If risk of splashing, wear safety goggles or face shield.
Skin protection	
Hand protection	Wear protective gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
Other	Wear protective gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	No protection is ordinarily required under normal conditions of use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Powder.

Color	White.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Soluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non reactive under normal conditions of use, storage and
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	None known.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	No hazard in normal industrial use.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Large quantities: May cause discomfort if swallowed.
Inhalation	Dust may irritate respiratory system.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity	Large quantities: May cause discomfort if swallowed.
Skin corrosion/irritation	Prolonged contact may cause dryness of the skin.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	No data available.
Skin sensitization	Not a skin sensitizer.
Germ cell mutagenicity	No data available.
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	No data available.

Specific target organ toxicity - repeated exposure No data available.
Aspiration hazard No data available.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills have a harmful or damaging effect on the environment.
Persistence and degradability No data available.
Bioaccumulative potential No data available.
Mobility in soil No data available.
Mobility in general The product is water soluble and may spread in water systems.
Other adverse effects No data available.

13. Disposal considerations

Disposal instructions Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.
Local disposal regulations Dispose of in accordance with local regulations.
Hazardous waste code Not regulated.
Waste from residues / unused products Dispose of in accordance with local regulations.
Contaminated packaging Dispose of in same manner as unused product.

14. Transport information

DOT Not regulated as dangerous goods.
IATA Not regulated as dangerous goods.
IMDG Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No
SARA 313 (TRI reporting)	Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.
Safe Drinking Water Act (SDWA)	Not regulated.
Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number	Not listed.
Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))	Not regulated.
DEA Exempt Chemical Mixtures Code Number	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.	
Massachusetts RTK - Substance List		Not regulated.
New Jersey Worker and Community Right-to-Know Act		Not regulated.
Pennsylvania RTK - Hazardous Substances		Not regulated.
Rhode Island RTK		Not regulated.
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)		Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	EC Inventory	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	04/06/2016
Revision date	09/30/2016
Version	10
Further information	Not available.
Disclaimer	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.