

**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

Product name	Freund's Complete Adjuvant
Product code	014-09541
CAS No	N/A
Formula	N/A
Manufacturer	Wako Pure Chemical Industries, Ltd. 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81 (0)6-6203-3741 Fax: +81 (0)6-6201-5964
Supplier	Wako Pure Chemical Industries, Ltd. 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81 (0)6-6203-3741 Fax: +81 (0)6-6201-5964
Emergency telephone number	+81-6-6203-3741 / +81-3-3270-8571
Recommended uses and restrictions on use	For research purposes

Section 2: HAZARDS IDENTIFICATION**GHS classification****Classification of the substance or mixture**

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Pictograms**Signal word****Hazard statements**

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Precautionary statements-(Prevention)

- Not applicable

Precautionary statements-(Response)

- Not applicable

Precautionary statements-(Storage)

- Not applicable

Precautionary statements-(Disposal)

- Not applicable

Others**Other hazards** Not available**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****Single Substance or Mixture** Substance**Formula** N/A

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS No
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Liquid paraffin	8.5mL	N/A	9-1692	N/A	8012-95-1
M. Tuberculosis H37 Ra, desiccated	7.5mg	N/A	N/A	N/A	N/A
Sorbitan Monooleate	1.5mL	428.60	8-63	N/A	1338-43-8

Impurities and/or Additives : Not applicable

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air If symptoms persist, call a physician

Skin contact

Wash off immediately with soap and plenty of water If symptoms persist, call a physician

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediate medical attention is required

Ingestion

Rinse mouth Never give anything by mouth to an unconscious person Call a physician or poison control center immediately Do not induce vomiting without medical advice

Protection of first-aiders

Use personal protective equipment as required

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Water spray (fog), carbon dioxide (CO₂), Foam, Extinguishing powder,

Unsuitable extinguishing media

No information available

Special extinguishing method

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of fire-fighters

Use personal protective equipment as required Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated

Methods and materials for contaminant and methods and materials for cleaning up

Do not touch spilled material without suitable protection(See section 8). After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations

Section 7: HANDLING AND STORAGE

Handling**Technical measures**

Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors)

Storage**Safe storage conditions****Storage conditions**

Store away from sunlight in well-ventilated place at room temperature (preferably cool).
Keep container tightly closed.

Safe packaging material

Ampoule

Incompatible substances

Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Exposure limits

Chemical Name	Japan	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH
Liquid paraffin 8012-95-1	N/A	N/A	TWA , 5mg/m ³ STEL , 10mg/m ³

Personal protective equipment**Respiratory protection**

gas mask for organic gas

Hand protection

Impermeable protective gloves

Eye protection

Wear safety glasses with side shields (or goggles)

Skin and body protection

Protective gloves, protective boots

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	pale yellow brown ~ suspension liquid
Odor	No data available
pH	No data available
Melting point/freezing point	No data available
Boiling point, initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits	
Upper :	No data available
Lower :	No data available
Vapour pressure	No data available
Vapour density	No data available
Specific Gravity (relative density)	No data available
Solubilities	

n-Octanol/water partition coefficient: (log Pow)	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity (coefficient of viscosity)	No data available
Dynamic viscosity	No data available

Section 10: STABILITY AND REACTIVITY

Stability

Stability	Stable under recommended storage conditions.
Reactivity	No data available

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO₂), Nitrogen oxides (NO_x), Sulfur oxides (SO_x)

Section 11: TOXICOLOGICAL INFORMATION

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Liquid paraffin	22g/kg (Mouse)	N/A	N/A
Sorbitan Monooleate	TDL ₀ : 254 gm/kg/6W-C (Rat)	N/A	N/A

Skin irritation/corrosion	No data available
Serious eye damage/ irritation	No data available
Respiratory or skin sensitization	No data available
Reproductive cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
STOT-single exposure	No data available
STOT-repeated exposure	No data available
Aspiration hazard	No data available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Other data	No data available
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Persistence and degradability

Bioaccumulative potential	No information available
Mobility in soil	No information available
Hazard to the ozone layer	No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION
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ADR/RID	Not regulated
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UN number	-
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Proper shipping name:	
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UN classification	
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Subsidiary hazard class	
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Packing group	
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Marine pollutant	Not applicable
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IMDG	Not regulated
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UN number	-
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Proper shipping name:	
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UN classification	
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Subsidiary hazard class	
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Packing group	
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Marine pollutant (Sea)	Not applicable
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IATA	Not regulated
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UN number	-
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Proper shipping name:	
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UN classification	
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Subsidiary hazard class	
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Packing group	
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Environmentally Hazardous Substance	Not applicable
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Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	-
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TSCA	-
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Japanese regulations

Fire Service Act	Category IV, Class IVpetroleums, dangerous grade 3
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Poisonous and Deleterious Substances Control Law	Not applicable
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Industrial Safety and Health Act	Not applicable
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Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc	Not applicable
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Regulations for the carriage and storage of dangerous goods in ship	Not applicable
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Civil Aeronautics Law	Not applicable
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Marine Pollution Prevention Law	Not applicable
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Pollutant Release and Transfer Register Law	Not applicable
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Water Pollution Control Act	Not applicable
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Export Trade Control Order	Not applicable
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Section 16: OTHER INFORMATION

Literature and references

Revision Note

No information available

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, 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.

GHS Classification is according to JIS Z7252(2010). *JIS: Japanese Industrial Standards

End of Safety Data Sheet