

SAFETY DATA SHEET

Issue Date 19-Nov-2025
Revision Number 2.08

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name 1.0 mol/L Diethylaluminium Chloride Hexane Solution

Other means of identification

Product Code(s) 048-25601

Recommended use of the chemical and restrictions on use

Recommended Use For research use only.

Uses advised against Seek expert judgment when using for purposes other than those recommended.

Details of the supplier of the safety data sheet**Manufacturer Address**

FUJIFILM Wako Pure Chemical Corporation

1-2, Doshomachi 3-Chome,

Chuo-ku Osaka 540-8605, Japan

Tel : +81-6-6203-3741

Fax: +81-6-6201-5964

Distributor

FUJIFILM Irvine Scientific

E. Warner Avenue, Santa Ana, CA 92705-5505, U.S.A.: +1 949 261 7800

Fax: +1 949 261 6522

2. HAZARDS IDENTIFICATION

GHS classification**Classification of the substance or mixture****Flammable liquids**

Category 2

Pyrophoric liquids

Category 1

Substances and mixtures which, in contact with water, emit flammable gases

Category 2

Aspiration hazard

Category 1

Aspiration hazard

-(H304)

Skin corrosion/irritation

Category 1

Reproductive Toxicity

Category 2

Specific target organ toxicity (single exposure)

Category 3

Category 3 Respiratory irritation, Narcotic effects

Specific target organ toxicity (repeated exposure)

Category 1

Category 1 nervous system

Acute aquatic toxicity

Category 2

Chronic aquatic toxicity

Category 2

Pictograms**Signal word**

Danger

Hazard statements

H225 - Highly flammable liquid and vapor

H250 - Catches fire spontaneously if exposed to air

H261 - In contact with water releases flammable gases

H314 - Causes severe skin burns and eye damage

H361 - Suspected of damaging fertility or the unborn child

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness
H304 - May be fatal if swallowed and enters airways
H401 - Toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects
H372 - Causes damage to the following organs through prolonged or repeated exposure: nervous system

Precautionary statements-(Prevention)

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required Do not breathe dust/fume/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 Avoid release to the environment Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Keep container tightly closed Ground/bond container and receiving equipment Use explosion-proof electrical/ ventilating / lighting / equipment Use only non-sparking tools Take precautionary measures against static discharge Do not allow contact with air Keep away from any possible contact with water, because of violent reaction and possible flash fire Handle under inert gas. Protect from moisture Keep cool

Precautionary statements-(Response)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician
Wash contaminated clothing before reuse IF ON SKIN: Immerse in cool water/wrap in wet bandages Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting Rinse mouth
In case of fire: Use suitable extinguishing media for extinction
Collect spillage

Precautionary statements-(Storage)

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

Precautionary statements-(Disposal)

Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Molecular weight	CAS RN	Weight-%
Hexane	86.18	110-54-3	87
Diethylaluminum chloride	120.55	96-10-6	13

Impurities and/or Additives: Not applicable

4. FIRST AID MEASURES**First aid measures**

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Inhalation Remove to fresh air.

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.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing media

Extinguishing powder. DRY sand.

Unsuitable Extinguishing media Do not use straight streams.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Vapors may form explosive mixtures with air.

Explosion data

Sensitivity to Mechanical none.

Impact

Sensitivity to Static Discharge none.

Protective equipment and precautions for firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods and material for containment and cleaning up Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use with local exhaust ventilation. Avoid contact with air.

Protective measures Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage conditions Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed. Packed with an inert gas.

Packaging materials Glass.

Incompatible materials Strong oxidizing agents. Water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

Chemical Name	ACGIH	OSHA PEL	NIOSH IDLH
Hexane 110-54-3	TWA: 50 ppm Skin	TWA: 500 ppm TWA: 1800 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 180 mg/m ³	IDLH: 1100 ppm TWA: 50 ppm TWA: 180 mg/m ³
Diethylaluminum chloride 96-10-6	TWA 2 mg(Al)/m ³	N/A	N/A

Personal protective equipment

Respiratory protection

gas mask for organic gas (JIS T 8152)

Hand protection

chemical protective gloves (JIS T 8116)

Eye protection

protective eyeglasses or chemical safety goggles (JIS T 8147)

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Color

colorless

Turbidity

clear ~ slightly muddy

Appearance

liquid

Odor

characteristic odor

pH

no data available

Melting point/freezing point

no data available

Boiling point, initial boiling point and boiling range

no data available

Flash point

-18 °C

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

0.711 (20/4°C)

Solubilities

hexane , benzene : Miscible at any arbitrary ratio . water ,
Ethanol : decomposes.

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

Particle characteristics

no data available

10. STABILITY AND REACTIVITY

Stability

Chemical stability

May be altered by light.
no data available

Reactivity**Hazardous reactions**

Form a flammable gas by contact with water and moisture.

Conditions to avoid

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

Incompatible materials

Strong oxidizing agents, Water

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Halides, Metal oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hexane	15840 mg/kg (Rat)	> 1350 mg/kg (Rabbit)	48000 ppm (Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Hexane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Hexane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Hexane	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Hexane	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Hexane	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Hexane	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Hexane	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Hexane	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Hexane	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Hexane	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Hexane	Based on the NITE GHS classification results.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hexane 110-54-3	N/A	LC50 : Pimephales promelas 2.5 mg/L 96 h	N/A	EC50 : Daphnia magna 3.9 mg/L 48 h

Persistence and degradability

Degree of decomposition: 100 % by BOD (METI Existing chemical safety inspections)

Bioaccumulative potential

No information available

Mobility

Chemical Name	Partition coefficient
Hexane 110-54-3	4

Mobility in soil

No information available

Other Data

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

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

Precautionary including method of disposing contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**DOT**

UN/ID No UN3394
 Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Diethylaluminum chloride Mixture)
 UN classification 4.2
 Subsidiary hazard class 4.3
 Packing group I
 Marine pollutant Yes

IATA

Forbidden
 UN/ID No UN3394
 Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Diethylaluminum chloride Mixture)
 UN classification 4.2
 Subsidiary hazard class 4.3
 Packing group I
 Environmentally Hazardous Substance Yes

IMDG

UN/ID No UN3394
 Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Diethylaluminum chloride

UN classification Mixture)
 Subsidiary hazard class 4.2
 Packing group 4.3
 Marine pollutant (Sea) I
 Yes

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS RN	Weight-%	SARA 313 - Threshold Values %
Hexane - 110-54-3	110-54-3	87	1.0
Diethylaluminum chloride - 96-10-6	96-10-6	13	N/A

SARA 311/312 Hazard Categories

Acute health hazard No
 Chronic Health Hazard No
 Fire hazard No
 Sudden release of pressure hazard No
 Reactive Hazard No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hexane 110-54-3	5000 lb	N/A	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Hexane - 110-54-3	Male Reproductive

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hexane 110-54-3	X	X	X
Diethylaluminum chloride 96-10-6	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

Issue Date 19-Nov-2025
 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, 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