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SDS No. Exempt, SR&D

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)

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

Product Identifier

Product Description: n-Tridecane

Cat No. : 139510000; 139510250; 139511000; 139515000

CAS No 629-50-5 Molecular Formula C13 H28

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

Importer Supplier

Fisher Scientific Korea Acros Organics BVBA

D5,D6, Incheon Airport Logistics Complex Janssen Pharmaceuticalaan 3a

150, Gonghangdong-Ro 296 Beon-Gil 2440 Geel, Belgium

Jung-Gu, Incheon Tel: +82-1661-9555 Fax: +82-2-2023-0603

E-mail address Chem.KR@thermofisher.com

Emergency Telephone Number

Emergency telephone: Medical: +(82) 070-7686-0086 or + 1-703-741-5970

CHEMTREC: 080 822 1374 (Local), CHEMTREC: 1-800-424-9300 or + 1-703-527-3887

Korea: 00-308-13-2549 (24 hours a day, 7 days a week)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Physical hazards

Flammable liquids Category 4

Health hazards

Aspiration hazard Category 1

Environmental hazards

Based on available data, the classification criteria are not met

Label Elements

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Signal Word Danger

Hazard Statements

H304 - May be fatal if swallowed and enters airways

H227 - Combustible liquid

Precautionary Statements

Prevention

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Response

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting

Storage

P403 - Store in a well-ventilated place

P405 - Store locked up

Disposal

P501 - Dispose of contents/container to industrial incineration plant

Other Hazards

Repeated exposure may cause skin dryness or cracking

This product does not contain any known or suspected endocrine disruptors

NFPA

Health	Flammability	Instability	Physical hazards
3	2	0	N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	Common Name	CAS No	Index No	Weight %
Tridecane	No information	629-50-5	KE-34146	99 - 100
	available			

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. Do NOT induce vomiting. Call

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a physician or poison control center immediately. If vomiting occurs naturally, have victim

lean forward.

Inhalation Remove to fresh air. Risk of serious damage to the lungs (by aspiration). If not breathing,

give artificial respiration. Get medical attention if symptoms occur.

Self-Protection of the First Aider No special precautions required.

Most important symptoms and effects, both acute and delayed

None reasonably foreseeable. Symptoms of overexposure may be headache, dizziness,

tiredness, nausea and vomiting.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Carbon dioxide (CO₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Combustible material. Keep product and empty container away from heat and sources of ignition. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO2).

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

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental precautions

Should not be released into the environment.

Methods and Material for Containment and Cleaning Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

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SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition.

Conditions for Safe Storage, Including any Incompatibilities

Keep away from heat, sparks and flame. Keep containers tightly closed in a dry, cool and well-ventilated place.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	CAS No	Korea	ACGIH TLV	OSHA PEL
Tridecane	629-50-5	Not listed	Not listed	Not listed

ſ	Component	CAS No	European Union	The United Kingdom	Germany
Ī	Tridecane	629-50-5	Not listed	Not listed	Not listed

ACGIH - Biological Exposure Indices

Component	CAS No	ACGIH - Biological Exposure Indices
Tridecane	629-50-5	Not listed

Exposure Controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. 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

Eve Protection Wear safety glasses with side shields (or goggles)

Hand Protection Protective gloves

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

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 compatability, 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

Personal protective equipment Use only those certified by the Korea Occupational Safety and Health Administration. When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

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Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (Physical State, Color, Colorless Liquid

etc.)

Odor No information available **Odor Threshold** No data available рΗ No information available

-5 - -4 °C / 23 - 24.8 °F Melting Point/Range

Softening Point No data available

Boiling Point/Range 234 °C / 453.2 °F @ 760 mmHg

Flash Point 79 °C / 174.2 °F Method - CC (closed cup)

No data available **Evaporation Rate**

Flammability (solid,gas) Not applicable Liquid

Explosion Limits No data available

Vapor Pressure No data available

No data available **Vapor Density** (Air = 1.0)

0.750 Specific Gravity / Density

Bulk Density Not applicable Liquid

Water Solubility Insoluble in water Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

and the second s			
Component	CAS No	log Pow	
Tridecane	629-50-5	7.54	

No data available **Autoignition Temperature Decomposition Temperature** No data available **Viscosity**

No data available

Explosive Properties Oxidizing Properties

No information available

explosive air/vapour mixtures possible

C13 H28 **Molecular Formula** 184.36 **Molecular Weight**

SECTION 10: STABILITY AND REACTIVITY

Reactivity None known, based on information available

Chemical Stability Stable under normal conditions.

Possibility of Hazardous Reactions

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Hazardous Polymerization Haza

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

Conditions to Avoid

Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

Information on expected route of exposure

Inhalation Not an expected route of exposure.

Ingestion May be harmful if swallowed. Harmful if swallowed. Potential for aspiration if swallowed.

Eyes Avoid contact with eyes. Skin Avoid contact with skin.

Information on Health Hazards

(a) acute toxicity;

OralBased on available data, the classification criteria are not metDermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

Component	CAS No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tridecane	629-50-5	LD50 > 5000 mg/kg (LD50 > 3160 mg/kg	LC50 > 6100 mg/m ³
		Rat) (OECD TG 401)	(Rabbits) (OECD TG	(OECD TG 403)
			402)	LC50 > 41 ppm (Rat)
				8 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

Component	CAS No	Test method	Test species	Study result
Tridecane	629-50-5	No data available	No data available	No data available

(e) germ cell mutagenicity; No data available

Component	CAS No	Test method	Test species	Study result
Tridecane	629-50-5	No data available	No data available	No data available

(f) carcinogenicity; No data available

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Component	CAS No	Test method	Test species / Duration	Study result
Tridecane	629-50-5	No data available	No data available	No data available

There are no known carcinogenic chemicals in this product

Component	CAS No	IARC	NTP	ACGIH	OSHA	UK
Tridecane	629-50-5	Not listed				

(g) reproductive toxicity; No data available

Component	CAS No	Test method	Test species / Duration	Study result
Tridecane	629-50-5	No data available	No data available	No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs None known.

(j) aspiration hazard; Category 1

Other Adverse Effects

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Component	CAS No	EU - Endocrine Disrupters Candidate	EU - Endocrine Disruptors - Evaluated	Japan - Endocrine Disruptor Information
		List	Substances	
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable

SECTION 12: ECOLOGICAL INFORMATION

<u>Ecotoxicity effects</u> Do not empty into drains. .

Component	CAS No	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Tridecane	629-50-5	No data available	No data available	No data available	No data available

Persistence and degradability

Persistence

Expected to be biodegradable

Persistence is unlikely.

Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Tridecane	7.54	No data available

Mobility in soil

The product is insoluble and floats on water. Is not likely mobile in the environment due its

low water solubility. Spillage unlikely to penetrate soil.

Ozone Depletion Potential

Component	CAS No	Ozone Depletion Potential
Tridecane	629-50-5	Not listed

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

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Waste treatment methods

Waste from Residues/Unused

Products

Waste is classified as hazardous. Dispose in accordance with the Wastes Control Act

(폐기물관리법).

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 empty into drains.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport Not Regulated

<u>IATA</u> Not regulated

IMDG/IMO Not regulated

Marine Pollutant No hazards identified

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

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

Legend: X - Listed '-' - Not Listed

International Inventories

Component	CAS No	KECL	TSCA	EINECS	IECSC	DSL	NDSL	PICCS	ENCS	ISHL	AICS
Tridecane	629-50-5	KE-34146	Χ	211-093-4	Х	-	Х	Х	Х	Х	Х

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities	Seveso III Directive (2012/18/EC) - Qualifying Quantities	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
		for Major Accident	for Safety Report		
		Notification	Requirements		
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential
Tridecane	629-50-5	Listed	Not applicable	Not applicable

Korean National Regulations

Component		Act on Registration and Evaluation of Chemical Substances (K-REACH)		Existing Substances Subject to Registration
Tridecane	629-50-5	Annex 1 - KE-34146	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Toxic Chemicals	Chemical Control Act - Prohibited Chemicals	Chemical Control Act - Use Restricted Chemicals
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable

				,
Component	CAS No	Chemical Control Act -	Chemical Control Act -	Chemical Control Act -
·		Accident Precaution	Accident Precaution	Accident Precaution
		Chemicals (% in	Chemicals - Quantity	Chemicals - Quantity

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		mixtures)	limits Storage (% in mixtures)	limits Manufacture/Use (% in mixtures)
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable
Component	CAS No	Waste Control Law	Ministry of Environment	-Ministry of Environment -
			CMR risk	Critically Controlled
				Substance
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Harmful Agents Subject to Work Environment Monitoring	ISHA - Prohibited substances	ISHA - Substances requiring permission
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Substances subject to control	ISHA - Harmful Agents Requiring Health Examination	ISHA - Permissible Exposure Limits	
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable	

Component	CAS No	ISHA - Subject to Process Safety Reports (minimum quantity)	ISHA - Threshold Limit Values (TLVs) Chemicals	ISHA - Special management materials
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable

National Fire Association - Dangerous Substances Minimum quantity requiring a permit

Component	CAS No	Class 1 - Oxidising solids	Class 2 - Flammable solid	Class 3 - Spontaneously Combustible Substances and Dangerous Substances When Wet	liquids	Class 5 - Self-reactive substances	Class 6 - Oxidising liquids
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable	5. Group 3 Petroleum (Insoluble) 2000 L	Not applicable	Not applicable

Control Parameters

Component	CAS No	Korea	ACGIH - Biological Exposure Indices
Tridecane	629-50-5	Not listed	Not listed

US Management Information

OSHA - Occupational Safety and Health Administration

Not applicable

140t applicable			
Component	CAS No	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Tridecane	629-50-5	Not applicable	Not applicable

CERCLA Not applicable

Component	CAS No	CERCLA Extremely Hazardous Substances RQs	Hazardous Substances RQs	SARA 313 - Threshold Values %
Tridecane	629-50-5	Not applicable	Not applicable	Not applicable

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Danger.

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H304 - May be fatal if swallowed and enters airways. EUH066 - Repeated exposure may cause skin dryness or cracking. Combustible liquid.

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances

Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances **IECSC** - Chinese Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances

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

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

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Revision Number

Revision Summary SDS sections updated.

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical **Substances and Safety Data Sheets)**

Disclaimer

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End of Safety Data Sheet