SAFETY DATA SHEET FOR CHEMICAL PRODUCTS
L-Lactide

Compiled according to GB/T 16483, GB/T 17519
Version: 4.1
Revision date: 2022/10/11
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SECTION 1 Chemical product and company identification

Chemical name (Chinese Name)	:	L-丙交酯
Chemical name (English name)	:	L-Lactide
Name	:	L-Lactide
Trade name	:	Lumilact® L Polymer Grade PURALACT® B3
Chemical name	:	(3S-cis)-3,6-dimethyl-1,4-dioxane-2,5-dione
Name of company	:	TotalEnergies Corbion BV
Title	:	Supplier
Address	:	The Netherlands Gorinchem Stadhuisplein 70
Zip code	:	4203 NS
Fax	:	+31 183 695 600
Tel.	:	+31 183 695 695
E-mail	:	pla@totalenergies-corbion.com
Emergency number	:	+44 1865 407333 (CareChem24) Operating hours 24 hours, 7 days a week
Recommended use	:	Polymers

SECTION 2 Hazards identification

Emergency overview

White. Powder. Flakes. Odourless. Causes serious eye irritation. Treat symptomatically. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Dust explosion hazard in air. When mixed with air and exposed to an ignition source, dust may burn in the open air or explode if confined. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection"

GHS classification

Health hazards	:	Acute toxicity (Oral) Not classified
	:	Serious eye damage/eye irritation, Category 2
Environmental hazards	:	Hazardous to the aquatic environment – Acute hazard Not classified
	:	Hazardous to the aquatic environment – Chronic hazard Not classified

Other hazards not mentioned above are Not applicable or No data is available.

Label elements

Hazard pictograms (GHS CN) :

Signal word (GHS CN)	:	Warning
Hazard statements (GHS CN)	:	H319 - Causes serious eye irritation.

Precautionary statements (GHS CN)

Prevention precautionary statements	:	P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response Precautionary Statements	:	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention.

Physical and chemical hazards

No additional information available

Health hazards

Causes serious eye irritation

Symptoms/effects after eye contact	:	Burning sensation,Itching,Redness,Tears
Symptoms/effects after inhalation	:	Dust from this product may cause irritation to the respiratory tract

Environmental hazards

No additional information available

Other hazards

Warning
Potential dust explosion hazard
Dust may form explosive mixture in air

SECTION 3 Composition/information on ingredients

Product form : Substance.

Name	CAS-No.	Concentration (Conc. (% w/w))
L-lactide	4511-42-6	> 98

SECTION 4 First aid measures

Emergency

First-aid measures general	:	Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	:	Wash skin with plenty of water
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	:	Call a poison center or a doctor if you feel unwell

Most Important Symptoms/Effects

Burning sensation
Itching
Redness
Tears
Dust from this product may cause irritation to the respiratory tract

Personal Protection in First Aid and Measures

No additional information available

Notes for the doctor

Other medical advice or treatment	:	Treat symptomatically

SECTION 5 Fire fighting measures

Extinguishing media

Suitable extinguishing media	:	Water spray Dry powder Foam
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire

Special hazard

Hazardous decomposition products in case of fire	:	Under fire conditions, hazardous fumes will be present: Carbon dioxide, Carbon monoxide
Explosion hazard	:	Dust can form an explosive mixture with air

Advice for firefighters and protective measures

Firefighting instructions	:	Evacuate personnel to a safe area Use water spray or fog for cooling exposed containers Move containers from fire area if it can be done without personal risk Prevent fire fighting water from entering the environment
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment Self-contained breathing apparatus Complete protective clothing

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures	:	No additional information available
Personal Precautions, Protective Equipment and Emergency Procedures	:	No additional information available

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment
Emergency procedures	:	Ventilate spillage area Avoid contact with skin and eyes Avoid dust formation Do not touch or walk on the spilled product Evacuate unnecessary personnel

Do not breathe dust

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment For further information refer to section 8: "Exposure controls/personal protection"
Environmental precautions	:	Avoid release to the environment

Methods and Equipment for Containment and Cleaning up

Methods for cleaning	:	Shovel or sweep up and put in a closed container for disposal Avoid dust formation Use non-sparking tools Flush contaminated areas with plenty of water Never return spills in original containers for possible later re-use
For containment	:	Stop leak without risks if possible Avoid creating or spreading dust

Prevention Measures for Secondary Accidents

Prevention Measures for Secondary Accidents	:	No additional information available
Other information	:	Dispose of materials or solid residues at an authorized site

SECTION 7 Handling and storage

Handling

Precautions for safe handling	:	Ensure good ventilation of the work station Avoid contact with skin and eyes Wear personal protective equipment Avoid dust formation Handle under inert gas. Protect from moisture.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation Wash contaminated clothing before reuse. Avoid contact with skin, eyes and clothing Do not breathe dust
Local and general ventilation	:	No additional information available
Additional hazards when processed	:	Dust may form flammable and explosive mixture with air

Storage

Storage conditions	:	Keep container tightly closed in a cool, well-ventilated place Protect from moisture
Material used in packaging/containers	:	No additional information available
Incompatible materials	:	Water, humidity.
Storage area	:	Store according to local legislation

SECTION 8 Exposure controls / Personal protection equipment

Occupational Exposure Limits

No additional information available

Biological limit values

No additional information available

Monitoring methods

No additional information available

Appropriate engineering controls : Ensure good ventilation of the work station
Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.

Personal protective equipment

Environmental exposure controls : Avoid release to the environment.

Other information : Handle in accordance with good industrial hygiene and safety procedures
Do not eat, drink or smoke when using this product.
Always wash hands after handling the product
Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation
Avoid contact with skin, eyes and clothing
Wash contaminated clothing before reuse
Do not breathe dust.

Hand protection : Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Protective gloves.	Butyl rubber.	6 (> 480 minutes).	0.5		EN 374.

Eye protection : Safety glasses with side shields

Type	Field of application	Characteristics	Standard
Safety glasses with side shields.	Dust.		EN 166.

Skin and body protection : Wear suitable protective clothing

Type	Standard
Long sleeved protective clothing.	

Respiratory protection : No respiratory protection needed under normal use conditions
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Device	Filter type	Condition	Standard
Dust mask.	(FFP2).	Dust protection.	EN 149.
Half-face mask (DIN EN 140).	Type A/P2.	Vapour protection.	EN 140.

Personal protective equipment symbol(s)

SECTION 9 Physical and chemical properties

Physical state	:	Solid
Appearance	:	Flakes
Colour	:	White
Odour	:	Odourless
pH	:	No data available
Melting point	:	97 °C
Freezing point	:	Not applicable
Boiling point	:	266 °C
Flash point	:	150 °C
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability	:	Non flammable.
Vapour pressure	:	0.28 Pa (25°C)
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.33 Solid
Density	:	0.8 g/cm³ Flakes
Solubility	:	No data available
Solubility in water	:	16.7 g/l at 20 °C
Solubility in organic solvents	:	16.7 g/100ml Toluene
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	Not applicable
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Radioactive	:	No
Explosive properties	:	Dust explosion hazard in air
Dust deflagration index	:	188 bar·m/s
Dust explosion category	:	St 1 - Weak explosion

SECTION 10 Stability and reactivity

Reactivity	:	The product is non-reactive under normal conditions of use, storage and transport
Chemical stability	:	Stable under normal conditions
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use When mixed with air and exposed to an ignition source, dust may burn in the open air or explode if confined
Conditions to avoid	:	Protect from moisture. Avoid raising powdered materials into airborne dust, creating an explosion hazard
Incompatible materials	:	Water, humidity
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced
Other properties	:	No additional information available

SECTION 11 Toxicological information

Acute toxicity

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

L-lactide	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423 method)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402 method)
LC50 Inhalation - Rat	> 7.94 mg/l air (OECD 403 method)

Skin corrosion/irritation

Skin corrosion/irritation : Not classified

Serious eye damage/irritation

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity

Germ cell mutagenicity : Not classified

Carcinogenicity

Carcinogenicity : Not classified

Reproductive toxicity

Reproductive toxicity : Not classified

STOT-single exposure

STOT-single exposure : Not classified

STOT-repeated exposure

STOT-repeated exposure : Not classified

Aspiration hazard

Aspiration hazard : Not classified

(3S-cis)-3,6-dimethyl-1,4-dioxane-2,5-dione	
Viscosity, kinematic	Not applicable
Density	0.8 g/cm³ Flakes

SECTION 12 Ecological information

Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

L-lactide	
LC50 - Fish [1]	130 (130 – 320) mg/l
EC50 - Crustacea [1]	130 (130 – 750) mg/l Daphnia magna
ErC50 algae	3500 mg/l
NOEC chronic algae	> 533 mg/l
Partition coefficient n-octanol/water (Log Kow)	0.4 (OECD 117 method)

Persistence and degradability

L-lactide	
Persistence and degradability	Readily biodegradable

Bioaccumulative potential

L-lactide	
Bioaccumulative potential	There is no bioaccumulation
Partition coefficient n-octanol/water (Log Kow)	See section 12.1 on ecotoxicology

Mobility in soil

L-lactide	
Ecology - soil	There is no bioaccumulation
Partition coefficient n-octanol/water (Log Kow)	See section 12.1 on ecotoxicology

Other adverse effects

Classification procedure (Ozone) : No data available

Results of PBT and vPvB assessment

PBT : This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

vPvB : This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 13 Disposal considerations

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Contaminated container and packaging : No additional information available

Additional information : No additional information available

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations

Do not re-use empty containers without proper cleaning or reconditioning

Regional legislation (waste) : Dispose in a safe manner in accordance with local/national regulations

SECTION 14 Transport information

Overland transport (JT/T 617)	Transport by sea	Air transport
UN number		
Not regulated	Not regulated	Not regulated
Proper shipping name		
Not regulated	Not regulated	Not regulated
Transport document description		
Not regulated	Not regulated	Not regulated
Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
Packing group		
Not regulated	Not regulated	Not regulated
Environmental hazards		
Not regulated	Not regulated	Not regulated

Special transport precautions

Overland transport (JT/T 617)

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15 Regulatory information

Regulations on the Safe Management of Hazardous Chemicals (Decree 591 of the State Council)

Catalogue of Hazardous Chemicals (2015) : Contains Hazardous Chemical(s)
L-lactide
Considered as Hazardous Chemical(s)

SECTION 16 Other information

Abbreviations and acronyms

ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
COD	Chemical oxygen demand (COD)

DMEL	Derived Minimal Effect level
DOT	Department of Transportation (DOT)
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
EPA	EPA (Environmental Protection Agency)
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
N.O.S.	Not Otherwise Specified

Training advice : Training staff on good practice

Indication of changes

Address

Logo

TotalEnergies Corbion SDS CN (GB/T 17519-2013)