

SAFETY DATA SHEET

1. Chemical product and company identification

Product name Panlite® LD-1000RM
SDS Number LD1000RM-JpE
Version number 03
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Company name TEIJIN Limited.
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Recommended use of the chemical and restrictions on use

Intended use Molding material for industry use

2. Hazards identification

GHS-classification

Physical hazards Not classified
Health hazards Carcinogenicity Category 2
Environmental hazards Not classified

*Hazards not stated here are "Not applicable" or "Classification not possible".

GHS label elements

Symbols



Signal words Warning
Hazard statement Suspected of causing cancer.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Response IF exposed or concerned: Get medical advice/attention.
Storage Store locked up.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

National/local information See section 15 for regulatory information.

3. Composition/information on ingredients

Substance or Mixture Mixture

Components	CAS #	Gazette notification		Concentration (%)
		ENCS no.	ISHL no.	
Polycarbonate resin	25971-63-5	(7)-738	(7)-738	80 – 90
Titanium dioxide	13463-67-7	(1)-558	(1)-558	1 – 10

Chemical formula: (C15H16O2.CCl2O)x (25971-63-5), O2-Ti (13463-67-7)

4. First aid measures

If inhaled In case of inhalation of dusts or fumes from heated product: Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.

If on skin Rinse with water. Get medical attention promptly if symptoms persist or occur after washing. If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of

burn.

If in eyes	Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
If swallowed	Rinse mouth thoroughly. Large quantities: Get medical attention if symptoms occur.
Expected acute and delayed Symptoms	None.
Protection of first-aid responders	First aid personnel must be aware of own risk during rescue.
Notes to physician	Treat symptomatically.

5. Fire-fighting measures

Extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Extinguishing media to avoid	None.
Specific hazards	During fire, gases hazardous to health may be formed.
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials.
Protection of fire-fighters	Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6. Accidental release measures

Personal precautions, protective equipment and emergency measures	Avoid inhalation of dust and contact with skin and eyes. See Section 8 of the SDS for Personal Protective Equipment.
Environmental precautions	Do not allow to enter drains, sewers or watercourses.
Clean-up methods and materials and containment measures	Collect and dispose of spillage as indicated in Section 13 of the SDS.

7. Handling and storage

Handling	
Technical measures	Use explosion-proof electrical equipment if airborne dust levels are high.
Local and general ventilation	Provide adequate ventilation.
Precautions	Use work methods which minimize dust production. Wear appropriate personal protective equipment.
Safe handling advice	Avoid inhalation of dust and contact with skin and eyes. Avoid vapors from heated materials to prevent exposure to potentially toxic/irritating fumes.
Storage	
Technical measures	Avoid dust formation.
Suitable storage conditions	Store in closed original container in a dry place.
Safe packaging materials	Keep in original container.

8. Exposure controls/personal protection

Occupational exposure limits

Japan. OELs - JSOH. (Japan Society of Occupational Health: Advisory Opinion on Permissible [Exposure] Limits)

Components	Type	Value	Form
Titanium dioxide (13463-67-7)	TWA	4 mg/m3	Total dust.
		1 mg/m3	Respirable dust.

US. ACGIH Threshold Limit Values

Components	Type	Value
Titanium dioxide (13463-67-7)	TWA	10 mg/m3

Engineering measures	Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust. Provide easy access to water supply and eye wash facilities.
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Personal protective equipment

Respiratory protection	Wear respirator if there is dust formation. When the product is heated, use suitable respiratory equipment with gas filter for organic gas.
Hand protection	Wear protective gloves. When material is heated, wear gloves to protect against thermal burns.
Eye protection	Use tight fitting goggles if dust is generated. If contact with hot material may occur, safety glasses and face shield are recommended.

Skin and body protection	Wear suitable protective clothing.
Hygiene measures	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	Pellets.
Color	Natural.
Odor	None.
pH	Not applicable.
Melting point/Freezing point	> 464 °F (> 240 °C)
Boiling point, initial boiling point, and boiling range	Not applicable.
Flash point	> 971.6 °F (> 522 °C)
Auto-ignition temperature	> 1022 °F (> 550 °C)
Combustion characteristics (solid, gas)	Not available.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Specific gravity	1.28
Solubility	Insoluble in water
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.

10. Stability and reactivity

Stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	None known.
Incompatible materials	No data available.
Hazardous decomposition products	During combustion: Carbon monoxide. Carbon Dioxide.

11. Toxicological information

Acute toxicity	May cause discomfort if swallowed.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust in the eyes will cause irritation. May cause redness and pain.
Respiratory sensitizer	None known.
Skin sensitizer	None known.
Germ cell mutagenicity	None known.
Carcinogenicity	Suspected of causing cancer. Inhalation of airborne titanium dioxide dust may cause cancer.

ACGIH Carcinogens

Titanium dioxide (CAS 13463-67-7) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium dioxide (CAS 13463-67-7) 2B Possible carcinogen.

Toxic to reproduction	None known.
Specific target organ toxicity - single exposure	None known.
Specific target organ toxicity - repeated exposure	None known.

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 can have a harmful or damaging effect on the environment.
Persistence/degradability	None known.
Bioaccumulation	None known.
Mobility in soil	The product is insoluble in water and will sediment in water systems.
Other hazardous effects	None known.

13. Disposal considerations

Residual waste	Dispose of waste at a facility with special permission to dispose industrial wastes. Waste should be accompanied by a manifest for the industrial waste. Dispose of in accordance with local regulations. Do not discharge into rivers, lakes, mountains, etc. because the product may affect the environment.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

International regulations	Not regulated as dangerous under UN transport regulation.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. Regulatory information

Industrial Safety and Health Act		
Specified substances regulation	Not regulated.	
Organic solvents regulation	Not regulated.	
Notifiable substances	Titanium dioxide (CAS 13463-67-7)	1 – 10%
Labeling substances	Not regulated.	
Poisonous and Deleterious Substances Control Act		
	Not regulated.	
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.		
Class I specified chemical substances	Not regulated.	
Class II specified chemical substances	Not regulated.	
Monitoring chemical substances	Not regulated.	
Law concerning Pollutant Release and Transfer Register		
Specified class 1 substances (substance name, ordinance number and content)		
	Not regulated.	
Class 1 substances (substance name, ordinance number and content)		
	Not regulated.	
Class 2 substances (substance name, ordinance number and content)		
	Not regulated.	
Fire Service Act	Not dangerous goods under Fire Service Law	
Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule		
	Not regulated.	
Air Law, Enforcement Rule	Not regulated.	
Explosives Control Act	Not regulated.	
High Pressure Gas Safety Act	Not regulated.	
Act on Prevention of Marine Pollution and Maritime Disaster		
	Not regulated.	

16. Other information

The information about colorant is not contained in this SDS.

This information is provided without warranty. The information is believed to be correct. The precautions in this SDS are intended for normal use. Please take safety measures appropriate to the use and the application when handling the product in a special way. This information should be used to make an independent determination of the methods to safeguard workers and the environment.