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Safety Data Sheet (SDS) Report

SDS number: P2019091203S1

Applicant: Liaoning Honggang Chemical Co., Ltd
Wanhe Erlu, Nationla Aromatics Base, Hongwei District, Liaoyang City, Liaoning Prov, China

Issue Date: 2020-08-25

Sample Description:

The sample information was submitted and identified on client's behalf to be:

Product Name	:	3,4,9,10-PERYLENETETRACARBOXYLIC DIANHYDRIDE
Physical State	:	Powder
Data Received	:	Aug 24, 2020
Data Reviewed	:	Aug 25, 2020

Service Requested:

Based on the information provided by the applicant, the Safety Data Sheet (SDS) was generated according to requirements of Regulation (EC) No 1907/2006 (REACH) with its amendment Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008, for details please refer to attached pages.

Authorized By:

On Behalf Of Regulatory Affairs in Intertek Testing Services Ltd., Shanghai

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Safety Data Sheet

3,4,9,10-PERYLENETETRACARBOXYLIC DIANHYDRIDE
Liaoning Honggang Chemicals Co., Ltd

SDS Number: **P2019091203S1**

Version No:**1.0**
Issue Date:**25/08/2020**
According to Regulation (EC) No 1907/2006(REACH) with its amendment Commission Regulation (EU) 2015/830
REACH.GBR.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name	3,4,9,10-PERYLENETETRACARBOXYLIC DIANHYDRIDE
Other means of identification	Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	An important intermediated to synthesize perylene dyes and pigments.
Uses advised against	Not Applicable

1.3. Details of the supplier of the safety data sheet

Supplier Name	**Liaoning Honggang Chemical Co., Ltd**
Address	Wanhe Erlu, Nationla Aromatics Base, Hongwei District, Liaoyang City, Liaoning Prov, China
Telephone	0086-419-7675988
Emergency Telephone	0086-15141925666 Mr.Jerry Zhang
Fax	0086-419-7675289
Email	Sales@liangangchem.com
Importer Name	
Address	
Telephone	
Email	

1.4. Emergency telephone number

Association / Organisation	
Emergency telephone numbers	
Other emergency telephone numbers	

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Not considered a hazardous mixture according to Reg. (EC) No 1272/2008 and their amendments. Not classified as Dangerous Goods for transport purposes.

Classification according to regulation (EC) No 1272/2008 [CLP]	Not Classified

2.2. Label elements

Hazard pictogram(s)	Not Applicable
Signal word	**Not Applicable**

Hazard statement(s)

Not Applicable

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

Page 1 continued...

2.3. Other hazards

REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP]
1.128-69-8 2.204-905-3 3.Not Available 4.01-2119593363-33-0000	99	3,4,9,10-perylenetetracarboxylic dianhydride	Not Classified
1.7732-18-5 2.231-791-2 3.Not Available 4.Not Available	0.6	water	Not Classified
1.81-33-4 2.201-344-6 3.Not Available 4.Not Available	0.4	Perylene-3,4:9,10-tetracarboxydiimide	Not Classified

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3. Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves. ▸ Prevent, by any means available, spillage from entering drains or water courses. ▸ Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	▸ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to thecircumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions. ▸ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some otheroxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions). ▸ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular

Continued...

	hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion. Combustion products include: carbon monoxide (CO) carbon dioxide (CO2) other pyrolysis products typical of burning organic material. May emit corrosive fumes.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	Environmental hazard - contain spillage. ▸ Clean up all spills immediately. ▸ Avoid breathing dust and contact with skin and eyes. ▸ Wear protective clothing, gloves, safety glasses and dust respirator. ▸ Use dry clean up procedures and avoid generating dust.
Major Spills	Environmental hazard - contain spillage. Moderate hazard. ▸ CAUTION: Advise personnel in area. ▸ Alert Emergency Services and tell them location and nature of hazard. ▸ Control personal contact by wearing protective clothing.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps.
Fire and explosion protection	See section 5
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ Store in a cool, dry area protected from environmental extremes. ▸ Store away from incompatible materials and foodstuff containers.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	▸ Glass container is suitable for laboratory quantities. ▸ Polyethylene or polypropylene container ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Avoid reaction with strong acid, alkali and oxidizing agents.

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
3,4,9,10-PERYLENETETRACARBOXYLIC DIANHYDRIDE	Not Available	Not Available

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Continued...

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment.
8.2.2. Personal protection	
Eye and face protection	▸ Safety glasses with side shields ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present ▸ polychloroprene. ▸ nitrile rubber. ▸ butyl rubber.
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ P.V.C. apron. ▸ Barrier cream.

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Red powder

Physical state	Solid	**Relative density (Water = 1)**	1.488 g/cm³,25℃
Odour	Not Available	**Partition coefficient n-octanol / water**	logPOW ca. 1.3 - 2
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	> 400 °C
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	>300	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Flammable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Applicable
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	< 5 µg/L	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

Continued...

10.1.Reactivity	May react with strong acid, alkali, oxidizing agents and incompatible materials.
10.2. Chemical stability	Stable under normal temperatures and pressures.
10.3. Possibility of hazardous reactions	Hazardous reactions may occur if contact with incompatible material.
10.4. Conditions to avoid	High temperature, ignition sources (sparks, flames, static), incompatible materials.
10.5. Incompatible materials	Strong acid, alkali and oxidizing agents
10.6. Hazardous decomposition products	On combustion or thermal decomposition, may emit toxic fumes.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

3,4,9,10-PERYLENETETRACARBOXYLIC DIANHYDRIDE	3,4,9,10-perylenetetracarboxylic dianhydride Oral(rat)LD50>10000mg/kg[1] Inhalation(rat) LC50>5.4 mg/L[1] Dermal(rat) LD50> 2 500 mg/kg bw[1] Perylene-3,4:9,10-tetracarboxydiimide Oral (rat) LD50: >5000 mg/kg[1]
Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductivity	Based on available data, the classification criteria are not met.
STOT - Single Exposure	Based on available data, the classification criteria are not met.
STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
Aspiration Hazard	Based on available data, the classification criteria are not met.
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

SECTION 12 Ecological information

12.1. Toxicity

3,4,9,10-PERYLENETETRACARBOXYLIC DIANHYDRIDE	Based on available data, the classification criteria are not met.

3,4,9,10-perylenetetracarboxylic dianhydride

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	>5000mg/L	2
EC50	48	Daphnia	>0.006mg/L	2
NOEC	48	Daphnia	>0.006mg/L	2
NOEC	72	Algae	>=100 mg/L	2
EC50	72	Algae	>100 mg/L	2

Perylene-3,4:9,10-tetracarboxydiimide

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	>1-350mg/L	2
EC50	72	Algae or other aquatic plants	>100mg/L	2

Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
3,4,9,10-perylenetetracarboxylic dianhydride	HIGH	HIGH

Continued...

Ingredient	Persistence: Water/Soil	Persistence: Air
Perylene-3,4:9,10-tetracarboxydiimide	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
3,4,9,10-perylenetetracarboxylic dianhydride	HIGH (LogKOW = 6.2606)
Perylene-3,4:9,10-tetracarboxydiimide	LOW (LogKOW = 3.7562)

12.4. Mobility in soil

Ingredient	Mobility
3,4,9,10-perylenetetracarboxylic dianhydride	LOW (KOC = 902500)
Perylene-3,4:9,10-tetracarboxydiimide	LOW (KOC = 902500)

12.5.Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Applicable	Not Applicable	Not Applicable
PBT Criteria fulfilled?	Not Applicable	Not Applicable	Not Applicable

12.6. Other adverse effects

No data available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Management Authority for disposal.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	Class: Not Applicable Subrisk: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Hazard identification (Kemler): Not Applicable Classification code: Not Applicable Hazard Label: Not Applicable Special provisions: Not Applicable Limited quantity: Not Applicable Tunnel Restriction Code: Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable

Continued...

14.3. **Transport hazard class(es)**	ICAO/IATA Class	Not Applicable
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5. **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable	
14.2. **UN proper shipping name**	Not Applicable	
14.3. **Transport hazard class(es)**	IMDG Class	Not Applicable
	IMDG Subrisk	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5. **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable	
14.2. **UN proper shipping name**	Not Applicable	
14.3. **Transport hazard class(es)**	Not Applicable	Not Applicable
14.4. **Packing group**	Not Applicable	
14.5. **Environmental hazard**	Not Applicable	
14.6. **Special precautions for user**	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 Regulatory information

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

3,4,9,10-perylenetetracarboxylic dianhydride is found on the following regulatory lists

Europe EC Inventory	European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

water is found on the following regulatory lists

Europe EC Inventory	European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Perylene-3,4:9,10-tetracarboxydiimide is found on the following regulatory lists

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances	European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Europe EC Inventory

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2015/830; Regulation (EC) No 1272/2008 as updated through ATPs.

15.2. Chemical safety assessment

Continued...

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16 Other information

Full text Risk and Hazard codes

None

Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index