

Safety Data Sheet
Conforms to OSHA Hazard Communication Standard (HCS) 29CFR
1910.1200

Printing date 03/19/2019

Version number 4

Reviewed on 03/19/2019

1 Identification**· Product identifier****· Product name:** TYZOR® LA**· Relevant identified uses of the substance or mixture and uses advised against**

Catalysts/Cross-linking agent.

Not for consumer use.

· Details of the supplier of the safety data sheet**· Manufacturer/Supplier:**

Dorf Ketal Specialty Catalysts LLC

11200 Westheimer Road

Suite 400

Houston, Texas 77042

Phone= +1 713 343 2377

Fax= +1 832 649 7615

Email: ehss@dorketal.com

· Emergency telephone number:

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) call CHEMTREC at +1(703) 527-3887 or CHEMTREC India at 000-800-100-7141. For ALL other emergencies call DORF KETAL Emergency Control Room +91 022-27402879 & +91 022-33286102

2 Hazard(s) identification**· Classification of the substance or mixture**

Eye Irrit. 2A H319 Causes serious eye irritation.

· OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

· Label elements**· Hazard pictograms**

GHS07

· Signal word Warning**· Hazard-determining components of labeling:**

diammonium dihydroxybis[lactato(2-)-O1,O2]titanate(2-)

· Hazard statements

Causes serious eye irritation.

· Precautionary statements

P264 Wash thoroughly after handling.

P280 Wear eye protection / face protection.

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.

· Classification system:**· NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 1

Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = 2
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **Other hazards** No information available.
- **% of unknown toxicity:** No further information available.

3 Composition/information on ingredients

· Chemical characterization: Mixture

Mixture of substances listed below with nonhazardous additions/ unknown toxicity.

· Dangerous components:

65104-06-5	diammonium dihydroxybis[lactato(2-)-O1,O2]titanate(2-)	Eye Irrit. 2A, H319	30-60%
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4 First-aid measures

· Description of first aid measures**· General information:**

Take affected persons out into the fresh air.
Do not leave affected persons unattended.

· Inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

· Skin Contact:

Immediately rinse with water.
If skin irritation continues, consult a doctor.

· Eye Contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.

· Ingestion:

Rinse out mouth and then drink plenty of water.
Do not induce vomiting.
Consult a physician if necessary.

· Most important symptoms and effects, both acute and delayed Causes serious eye irritation**· Indication of any immediate medical attention and special treatment needed**

Show this safety data sheet to the doctor in attendance. Treat symptomatically.

5 Fire-fighting measures

· Extinguishing media In case of fire use the following suitable extinguishing agent.**· Suitable extinguishing agents:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**· For safety reasons unsuitable extinguishing agents:** None known.**· Special hazards arising from the substance or mixture**

In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
In case of fire, the following can be released:
Carbon monoxide (CO)

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Carbon dioxide

Metal oxides

· Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

· Protective equipment:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 Accidental release measures**· Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective clothing.

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

Ensure adequate ventilation

· Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

· Methods and material for containment and cleaning up:

Stop leak if without risk.

Move containers from spill area.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

7 Handling and storage**· Handling:****· Precautions for safe handling**

Put on appropriate personal protective equipment .

Do not ingest.

Avoid contact with eyes, skin and clothing.

Avoid breathing vapour or mist.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.**· Conditions for safe storage, including any incompatibilities** Shelf life two years from the date of manufacturing.**· Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat, ignition sources or open flame.

· Information about storage in one common storage facility: Store away from oxidizing agents.**· Further information about storage conditions:**

All organometallic compounds exhibit discoloration when exposed to sunlight. We recommend that the product shipped in non-steel packaging be stored in enclosed buildings and out of direct sunlight or intense UV light.

Moisture-sensitive material. Once opened, container should be kept under nitrogen blanketing to prevent decomposition.

Keep receptacle tightly sealed.

· Specific end use(s) No further relevant information available.

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8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** No exposure limit value known.
- **Exposure controls**
- **Appropriate engineering controls:**
 - Use local exhaust ventilation or other engineering control to maintain airborne levels below exposure limit requirement or guidelines.
 - If there are no applicable exposure limit requirement or guidelines, general ventilation should be sufficient for most operations.
 - Local exhaust ventilation may be necessary for some operations.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:**
 - Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
 - Where there is potential for airborne exposures, wear NIOSH approved respiratory protection.
- **Protection of hands:**
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
 -  Tightly sealed goggles
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment** No further information available.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Yellowish./Amber

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· Odor:	Ammoniacal.
· pH-value:	8 - 9
· Melting Point/Freezing Point :	- 10 °C (14 °F)
· Flash point:	> 100 °C (>212 °F) ((Closed cup))
· Flammability (Liquid):	Not applicable.
· Relative density at 25 °C (77 °F)	1.21 g/cm ³ (10.09745 lbs/gal)
· Solubility(water):	Partially soluble in cold water and hot water.

10 Stability and reactivity

- **Reactivity** Under normal conditions of storage and use, hazardous reactions will not occur.
- **Chemical stability** The product is stable under storage at normal ambient temperature.
- **Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions are not known.
- **Conditions to avoid**
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- **Incompatible materials:**
Reactive or incompatible with the following materials:
Oxidizing materials
Reducing agents
- **Hazardous decomposition products:**
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** No relevant information available.
- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** Irritating effect.
- **Respiratory/ Skin sensitization:** No sensitizing effects known.
- **Germ cell mutagenicity:** No known significant effects or critical hazards.
- **Carcinogenicity:** No known significant effects or critical hazards.
- **Reproductive toxicity:** No known significant effects or critical hazards.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

- **NTP (National Toxicology Program)**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

- **Single dose toxicity:** No known significant effects or critical hazards.
- **Repeated Dose toxicity** No known significant effects or critical hazards.

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· **Aspiration hazard** Product is not classified for aspiration hazard.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment** No data available
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- **Recommendation:**
Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · UN proper shipping name | |
| · DOT, IMDG, IATA | Not Regulated |
| · ADR | Not Regulated |
| · Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Not Regulated |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

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· Transport/Additional information:**· DOT**

Non-bulk: Not Regulated

Non-bulk: A maximum capacity of 450 L (119 gallons)

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15 Regulatory information**· Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act): All ingredients are listed.**· Proposition 65****· Chemicals known to cause cancer:**

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· Carcinogenic categories**· EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16 Other information

File name: TYZOR LA_SDS_US_en_MAR-19-2019

Superseded SDS date: JUL-16-2018

Change history: chnage in the section 7

· Note Conforms to UNGHS Rev.3(2009)**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
APF = Assigned protection factor
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
IOELV: Indicative Occupational Exposure Limit Values
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Disclaimer:

The data and recommendations presented in this data sheet concerning the use of our product and the materials contain there in are believed to be accurate and are based on information which is considered reliable as of the date hereof. However, the customer should determine the suitability of much material for his purpose before adopting them on a commercial scale. Since the use our product by others is beyond our control, no guarantee, express or implied, is made and no responsibility assumed for the use of this material or the results to be obtained there from. Information on this document is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this Safety Data Sheet are not to be constructed as a license to operate under, or a recommendation to infringe, any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.