

Safety Data Sheet

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

Printing date 07/14/2017

Version number 3

Reviewed on 07/14/2017

1 Identification

- **Product identifier**
- **Product name:** TYZOR® PITA
- **Relevant identified uses of the substance or mixture and uses advised against**
Adhesion promoter in Industrial use as formulation of adhesive, sealants.
- **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 +91-22-65271001.

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 3 H226 Flammable liquid and vapor.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
- **OSHA/HCS status**
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

- **Label elements**
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium
- **Hazard statements**
Flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

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If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 0

· **Other hazards**

The criteria for PBT and vPvB is not met and this product is not hazardous to the ozone layer.

· **% of unknown toxicity:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization:** Substance· **Dangerous components:**

27858-32-8	Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium	> 98%
	Eye Irrit. 2A, H319; STOT SE 3, H336	

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:**

Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

· **Skin Contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Remove contaminated clothing and shoes.

Wash clothing before reuse.

Clean shoes thoroughly before reuse.

· **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.

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- **Ingestion:**

Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel.
Never give anything by mouth to an unconscious person. Get medical attention immediately.

- **Most important symptoms and effects, both acute and delayed**

Causes serious eye irritation

May cause drowsiness or dizziness, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness

- **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:**

Foam , Fire-extinguishing powder, Alcohol resistant foam, Carbon dioxide ,Sand

- **For safety reasons unsuitable extinguishing agents:**

Water with full jet

Water spray

- **Special hazards arising from the substance or mixture**

Flammable liquid and vapour.

In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Runoff to sewer may create fire or explosion hazard.

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide

- **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.

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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.

Protect against electrostatic charges.

Prevent impact and friction.

Protect from heat.

- **Conditions for safe storage, including any incompatibilities**

- **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:**

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

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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

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:**

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.

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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.

- **Protection of hands:**



Protective gloves

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** Gloves: EN374. Gloves should be worn when there is potential for dermal exposure

- **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:**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.



Tightly sealed goggles

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:

Liquid

Color:

Clear Yellow to Amber Liquid

- **Odor:**

Alcohol-like

- **Odor threshold:**

No data available.

- **pH-value:**

No data available

- **Melting point/Freezing Point :**

17 °C (63 °F) (OECD 102)

- **Boiling point/Boiling range:**

Substance decomposes before boiling. 82,3 °C at 101,3 kPa (BP of main degradation product)

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· Flash point:	36 °C (97 °F) (ASTM-D93)
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	No data available.
· Explosion limits:	
Lower:	Not applicable (Substance non explosive)
Upper:	Not applicable (Substance non-explosive)
· Oxidizing properties	No
· Vapor pressure:	Substance decomposes during vapour pressure testing. 60.2 hPa at 25 °C (read across data of hydrolysing product)
· Relative density at 25 °C (77 °F)	1.094 g/cm ³ (9.129 lbs/gal) (ASTM D 891)
· Vapor density	No data available
· Evaporation rate	No data available
· Solubility(water):	Hydrolytically unstable. 1000000 mg/L at 25 °C (water solubility of degradation product)
· Partition coefficient (n-octanol/water):	Hydrolytically unstable, Log Kow (Pow): 0.05 at 25 °C
· Viscosity:	
Dynamic at 25 °C (77 °F):	31 mPas (DKTM112.1)
Kinematic:	No data available.

10 Stability and reactivity

· **Reactivity**

Under normal conditions of storage and use, hazardous reactions will not occur.

When comes in contact with water or moisture, complete hydrolysis will take place with no significant reaction products other than alcohol and hydrated titanium dioxide.

· **Chemical stability** The product is stable under storage at normal ambient temperature.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid**

Avoid all possible sources of ignition (spark or flame).

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

Hydrolyzes in water to form alcohol and titanium dioxide.

· **Hazardous decomposition products:**

Hydrolysis in water

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

27858-32-8 Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium

Oral	LD50	23020 mg/kg bw (Rat)
Dermal	LD50	12870 mg/kg bw (Rabbit)
Inhalative	LC50	24600 mg/L (Rat)

- **Primary irritant effect:**

- **on the skin:** No irritating effect.

- **on the eye:** Irritating effect.

- **Respiratory/ Skin sensitization:** No sensitizing effects known.

- **Germ cell mutagenicity:** Substance is not classified for germ cell mutagenicity.

- **Carcinogenicity:** Substance has not been classified for carcinogenicity

- **Reproductive toxicity:** Substance is not classified for reproductive toxicity.

- **Carcinogenic categories**

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

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

- **Single dose toxicity:** May cause drowsiness or dizziness.

- **Repeated Dose toxicity**

Substance has not been classified for specific target organ toxicity- repeated exposure.

- **Aspiration hazard** Substance is not classified for aspiration hazard.

- **Other relevant information:** No data available

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

Proprietary titanium chelate

LC50 (48h)	275 mg/L (Fish)
EC10 (72h)	100 mg/L (Algae)
EC50 (72h)	100 mg/L (Algae)
EC50 (48 h)	100 mg/L (Daphnia)

- **Persistence and degradability** Readily degradable. No persistence potential.

- **Bioaccumulative potential** No potential for bioaccumulation (OECD Guideline111)

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- **Mobility in soil** High mobility in soil.
- **Results of PBT and vPvB assessment** The substance is not a PBT or a vPvB
- **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.

- **Uncleaned packagings:**

- **Recommendation:**

Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1993

- **UN proper shipping name**

- **DOT**

Flammable liquids, n.o.s. (Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium)

- **ADR**

1993 Flammable liquids, n.o.s., (Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium)

- **IMDG**

FLAMMABLE LIQUID, N.O.S. (Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium)

- **IATA**

Flammable liquid, n.o.s. (Bis(ethylacetoacetato-O1', O3'') bis(propan-2-olato) titanium)

- **Transport hazard class(es)**

- **DOT**



- **Class**

3 Flammable liquids

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· Label	3
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30
· EMS Number:	F-E, <u>S-E</u>
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	Special provision 640E
· IMDG	
· Limited quantities (LQ)	5L

15 Regulatory information

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· **TSCA (Toxic Substances Control Act):** All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

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Chemicals known to cause developmental toxicity:
Substance is not listed.

Carcinogenic categories
EPA (Environmental Protection Agency)
Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)
Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.

Chemical safety assessment Chemical safety assessment has been carried out.
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16 Other information

File name : TYZOR PITA_SDS_US_en_JUL-14-2017

Superseded SDS date : APR-08-2014

Change History : Version updated

- **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)

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

Flam. Liq. 3: Flammable liquids – Category 3

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- **Disclaimer:**

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