

Safety Data Sheet

Conforms to OSHA Hazard Communication Standard (HCS)

29CFR 1910.1200

Printing date 10/10/2014

Version number 2

Reviewed on 10/10/2014

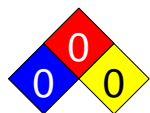
1 Identification of the Substances/Preparation and of the Company/Undertaking

- **Product identifier**
- **Product name:** TYZOR® 227
- **Relevant identified uses of the substance or mixture and uses advised against**
Catalysts / Cross-linking agent / Adhesion promoters
- **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 (spill, leak, fire, exposure or accident) call Chemtrec at +1 (703) 527 3887 or Chemtrec India at 000-800-100-7141. DORF KETAL Emergency Control Room +91 22-65271001.

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **OSHA/HCS status**
This material is considered non hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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- **Label elements**
 - **GHS label elements** Not Applicable
 - **Hazard pictograms** Not Applicable
 - **Signal word** Not Applicable
 - **Hazard statements** Not Applicable
 - **Precautionary statements** Not applicable
 - **Classification system:**
 - **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

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· **Other hazards** No information available.

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3 Composition/information on ingredients

· **Chemical characterization:** Mixture· **Description:**

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

· **Dangerous components:** Not Applicable

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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:** Remove source of irritation. If symptoms persist seek medical attention· **Skin Contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· **Eye Contact:**

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.

If symptoms occur seek medical attention.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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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.

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

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide

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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:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective clothing.

Keep away from ignition sources

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

Wear protective equipment. Keep unprotected persons away.

- **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:**

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

7 Handling and storage

- **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.

- **Information about protection against explosions and fires:** No special measures required.

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

- **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Keep under nitrogen blanket.

- **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:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **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:**

The usual precautionary measures for handling chemicals should be followed.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **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:** Goggles recommended during refilling.

- **Body protection:** Protective work clothing

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9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:

Liquid

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Color:	Colourless to light yellow
· Odor:	Characteristic
· Odour threshold:	No data available.
· pH-value:	6.5 - 7.5
· Melting point/Freezing Point :	0 °C (32 °F)
· Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	Not applicable
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	No data available.
· Auto ignition temperature	Product is not selfigniting.
· Explosion limits:	
Lower:	No data available.
Upper:	No data available
· Oxidizing properties	No data available.
· Vapor pressure:	No data available.
· Relative density at 20 °C (68 °F)	1.2 g/cm ³ (10.014 lbs/gal)
· Vapour density	No data available
· Evaporation rate	No data available
· Solubility(water):	Fully miscible.
· Partition coefficient (n-octanol/water):	No data available
· Viscosity:	
Dynamic:	No data available.
Kinematic:	No data available.

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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** No dangerous reactions known.
- **Conditions to avoid** Store away from oxidizing agents.
- **Incompatible materials:**
Reactive or incompatible with the following materials:
Oxidizing material
- **Hazardous decomposition products:** No dangerous decomposition products known.

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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:** No 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 hazard.
- **Repeated Dose toxicity:** No known significant effects or critical hazard.
- **Aspiration hazard:** Product is not classified for aspiration hazard.
- **Other relevant information:** No data available

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No known significant effects or critical hazards.
- **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:** Not available
- **Other adverse effects:** No further relevant information available.

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13 Disposal Information

- **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

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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.

· **Recommendation:** Smaller quantities can be disposed of with household waste.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**
· **DOT, ADR, ADN, IMDG, IATA** Not Regulated

· **UN proper shipping name**
· **DOT, ADR, ADN, IMDG, IATA** Not Regulated

· **Transport hazard class(es)**
· **DOT, ADR, ADN, IMDG, IATA**
· **Class** Not Regulated

· **Packing group**
· **DOT, ADR, IMDG, IATA** Not Regulated

· **Environmental hazards:**
· **Marine pollutant:** No

· **Special precautions for user** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **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.

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· 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.

16 Other information

File Name: TYZOR® 227 SDS US en OCT-10-2014

Superseded SDS:AUG-25-2011

Change History: Classification, component information & SDS format updated

· 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

· 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

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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.