PK 900

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Manufacturer
Shandong Yanggu Huatai Chemical Co., LTD
No.217, Qinghexi Road
Yanggu County, Shandong, China 252300

Emergency Contact
Chemtrec: 1-800-424-9300 (USA)
(1)330-542-8400 (outside USA)

Trade Name(s): PK 900

Synonyms: 1,3-Bis(citraconimidomethyl)benzene

Chemical Name: 1,3-Bis(3-methyl-5-dioxo-1H-pyrrolinylmethyl)benzene

Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.

Application of the substance/the preparation: Anti-reversion agent.

Issued By: Sovereign Chemical Company

According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Date of Issue: November 27, 2018

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

GHS08 Health hazard
STOT RE 2
H373 May cause damage to organs through prolonged or repeated exposure.

GHS05 Corrosion
Eye Dam. 1
H318 Causes serious eye damage.

GHS09 Environment
Aquatic Acute 1
H400 Very toxic to aquatic life.
Aquatic Chronic 1
H410 Very toxic to aquatic life with long lasting effects.

GHS07
Skin Sens. 1
H317 May cause an allergic skin reaction.

STOT SE 3
H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant
R41: Risk of serious damage to eyes.

Xi; Sensitizing
R43: May cause sensitization by skin contact.

N; Dangerous for the environment,
R50/53: Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic...

Xi; Irritant
2.2 Label elements
Labeling according to Regulation (EC) No 1272/2008

**Hazard pictograms**
- GHS05
- GHS07
- GHS08
- GHS09

**Signal word:** Danger

**Hazard-determining components of labeling:** ziram (ISO)

**Hazard statements**
- H318: Causes serious eye damage.
- H317: May cause an allergic skin reaction.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statements**
- P260: Do not breathe dust/fume/gas/mist/vapors/spray.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.
- P264: Wash thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P314: Get medical advice/attention if you feel unwell.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P363: Wash contaminated clothing before reuse.
- P391: Collect spillage.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

**Dangerous components**

<table>
<thead>
<tr>
<th>CAS:</th>
<th>EC No:</th>
<th>Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>119462-56-5</td>
<td>412-570-1</td>
<td>1,3-Bis(3-methyl-5-dioxo-1H-pyrrollinylmethyl)benzene</td>
<td>≥85.0%</td>
</tr>
<tr>
<td>2170-03-8</td>
<td>218-518-2</td>
<td>2-Methylenesuccinianhydride</td>
<td>1.9-2.5%</td>
</tr>
<tr>
<td>498-23-7</td>
<td>207-858-7</td>
<td>Citraconic Acid</td>
<td>≤0.1%</td>
</tr>
<tr>
<td>1477-55-0</td>
<td>216-032-5</td>
<td>1,3-Benzenedimethanamine</td>
<td>≤0.1%</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

4.1 Description of first aid measures

General information
Immediately remove any clothing soiled by the product.

After inhalation
Remove from exposure and move to fresh air immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After skin contact
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

After eye contact
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Do not induce vomiting; call for medical help immediately.
Never give anything by mouth to an unconscious person.
Get medical aid immediately.

4.2 Most important symptoms and effects, both acute and delayed
May cause an allergic skin reaction.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed
If skin irritation or rash occurs, get medical advice/attention.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing agents
Use extinguishing agents appropriate for surrounding materials.
For safety reasons unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture: During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters
Protective equipment
Wear self-contained respiratory protective device.
Wear fully protective suit.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Avoid dust formation.
Avoid breathing vapors/mist/gas.
Ensure adequate ventilation
6.2 Environmental precautions
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.

6.3 Methods and material for containment and cleaning up
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. Handling and Storage

7.1 Precautions for safe handling
Do not ingest.
Do not breathe dust.
Wear suitable protective clothing.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of dust.
Do not eat, drink and smoke in work areas.
Wash hands after use.
Remove contaminated clothing and protective equipment before entering eating areas.
Information about fire and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles
Provide ventilation for receptacles.
Store in a cool location.
Information about storage in one common storage facility
Store away from foodstuffs.
Further information about storage conditions
Store in cool, dry conditions in well-sealed receptacles.
Store receptacle in a well-ventilated area.
Keep container tightly sealed

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

8. Exposure Controls - Personal Protection
Additional information about design of technical facilities: No further data; see section 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: Not required.
DNELs: No further relevant information available.
PNECs: No further relevant information available.
Additional information: The lists valid during the making were used as basis.
8.2 Exposure controls
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.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Respiratory protection

Dust protection mask if there is a risk of dust formation.

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
Nitrile rubber, NBR
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.
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 glasses

Body protection: Wear normal working clothing.
Limitation and supervision of exposure into the environment: No further relevant information available.
Risk management measures
See Section 7 for additional information.
No further relevant information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>General Information</th>
<th>Change in Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Melting Point/Melting Range: Undetermined.</td>
</tr>
<tr>
<td>Form: Powder.</td>
<td>Boiling Point/Boiling Range: &gt; 280°C</td>
</tr>
<tr>
<td>Color: Off-white.</td>
<td>Octanol/Water Partition Coefficient: log Pow = 2.22</td>
</tr>
<tr>
<td>Odor: Not available.</td>
<td>pH Value: Not applicable.</td>
</tr>
<tr>
<td>Odor threshold: Not determined.</td>
<td>Flash point: 257°C (closed cup)</td>
</tr>
<tr>
<td>Vapor pressure: 5 x 10^8 kPa at 25°C</td>
<td>Flammability (solid, gaseous): Non-flammable.</td>
</tr>
<tr>
<td>Density at 20°C: 1.66 g/cm³.</td>
<td>Ignition temperature: Not self-igniting prior to melting.</td>
</tr>
<tr>
<td>Relative density: 1.269.</td>
<td></td>
</tr>
</tbody>
</table>

4040 Embassy Parkway, Suite 190 Akron, OH 44333 Phone: 330.542.8400 Email
9.2 Other information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability
Thermal decomposition/conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
Incompatible materials.
Dust generation
Exposure to air
Excess to heat

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products
Carbon monoxide and carbon dioxide.
Nitrogen oxides

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity

LD/LC50 values relevant for classification

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>119462-56-5, 1,3-Bis(3-methyl-s,5-dioxo-1H-pyrrolinylmethyl)benzene</td>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;2000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>&gt;2000 mg/kg (rabbit)</td>
</tr>
<tr>
<td></td>
<td>Inhalative</td>
<td>LC50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Primary irritant effect
On the skin: Not classified.
On the eye: Causes serious eye damage.
Sensitization
May cause an allergic skin reaction.
Germ call mutagenicity: Not classified.
12. ECOLOGICAL INFORMATION

12.1 Toxicity
Aquatic toxicity: Toxic for aquatic organisms.

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Time</th>
<th>Species</th>
<th>Method</th>
<th>Evaluation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>0.17 mg.L(^{-1})</td>
<td>96h</td>
<td>Fish</td>
<td>OECD 203</td>
<td>N/A</td>
</tr>
<tr>
<td>EC50</td>
<td>2.06 mg.L(^{-1})</td>
<td>48h</td>
<td>Daphnia</td>
<td>OECD 202</td>
<td>N/A</td>
</tr>
<tr>
<td>EC50</td>
<td>N/A</td>
<td>72h</td>
<td>Algae</td>
<td>OECD 201</td>
<td>N/A</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability: No further relevant information available.

12.3 Bio-accumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

12.5 Results of PBT and vPvB assessment
   PBT: Not applicable.
   vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Recommendation
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Un-cleaned packaging
Recommendation: Disposal must be made according to official regulations.

14. TRANSPORTATION INFORMATION

14.1 UN-Number
DOT, ADR, IMDG, IATA
UN3077

14.2 UN proper shipping name
DOT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (1,3-bis(3-methyl-2,5-dioxo-1H-pyrrolinylmethyl)benzene)

ADR
3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-bis(3-methyl-2,5-dioxo-1H-pyrrolinylmethyl)benzene)

IMDG
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-bis(3-methyl-2,5-dioxo-1H-pyrrolinylmethyl)benzene), MARINE POLLUTANT
IATA

14.3 Transport hazard class(es)
DOT, IMDG, IATA

Class: 9 Miscellaneous dangerous substances and articles.
Label: 9

ADR

Class: 9 (M7) Miscellaneous dangerous substances and articles.
Label: 9

14.4 Packing group
DOT, ADR, IMDG, IATA
III

15. REGULATORY INFORMATION

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

| United States (USA) | \n|--------------------|
| SARA Section 313 (Specific toxic chemical listings) | acetamide
| TSCA (Toxic Substances Control Act) | Substance is listed.

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

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent