

**HEXASOL**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Company**

Transchem, Inc

2141 Palomar Airport Rd Ste 125,

Carlsbad CA 92011

**Customer Service Telephone Number:** 760-431-6310  
(Monday through Friday, 8:00 AM to 5:00 PM PST)

**Emergency Information**

**Transportation:** CHEMTEL: (800) 255-3924  
(24 hrs., 7 days a week)

**Medical:** Rocky Mountain Poison Center: (866) 767-5089  
(24 hrs., 7 days a week)

**Product Information**

**Product name:** HEXASOL  
**Synonyms:** 2,4-Pentanediol, 2-methyl-  
**Molecular formula:** C6H14O2  
**Chemical family:** Glycol  
**Product use:** Inks, Paints and varnishes, Solvent, Chemical intermediate

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

**Color:** colourless  
**Physical state:** liquid  
**Odor:** alcohol-like

**\*Classification of the substance or mixture:**

Eye irritation, Category 2A, H319

\*For the full text of the H-Statements mentioned in this Section, see Section 16.

**HEXASOL**

**GHS-Labeling**

Hazard pictograms:



Signal word:

**Warning**

**Hazard statements:**

H319 : Causes serious eye irritation.

**Precautionary statements:**

**Prevention:**

P264 : Wash skin thoroughly after handling.

P280 : Wear eye protection and face protection.

**Response:**

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.

**Supplemental information:**

**Potential Health Effects:**

If swallowed may cause irritation of the digestive tract.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
2,4-Pentanediol, 2-methyl-	107-41-5	>= 99.9 %	H319

HEXASOL

\*\*For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 4. FIRST AID MEASURES

##### 4.1. Description of necessary first-aid measures:

**Inhalation:**

If inhaled, remove victim to fresh air.

**Skin:**

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eyes:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:**

If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

##### 4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

##### 4.3. Indication of immediate medical attention and special treatment needed, if necessary:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

#### 5. FIREFIGHTING MEASURES

**Extinguishing media (suitable):**

Water spray, Dry chemical, Carbon dioxide (CO<sub>2</sub>), Special foam for polar solvents

**Extinguishing media (unsuitable):**

High volume water jet

**Protective equipment:**

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

**Further firefighting advice:**

Cool closed containers exposed to fire with water spray.  
Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, and other flames and ignition sources at locations distant from material handling point.  
Fire fighting equipment should be thoroughly decontaminated after use.

**Fire and explosion hazards:**

## HEXASOL

---

When burned, the following hazardous products of combustion can occur:

Carbon oxides

Hazardous organic compounds

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:**

Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Avoid generation of vapors. Contain and collect spillage with non-combustible absorbent material such as clean sand, earth, diatomaceous earth or non-acidic clay and place into suitable properly labeled containers for prompt disposal. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

**Protective equipment:**

Appropriate personal protective equipment is set forth in Section 8.

### 7. HANDLING AND STORAGE

**Handling**

**General information on handling:**

Avoid breathing vapor or mist.

Avoid contact with eyes.

Wash thoroughly after handling.

Emptied container retains vapor and product residue.

Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**Storage**

**General information on storage conditions:**

Store protected from moisture and heat.

Keep in a dry, cool place. Store in closed containers, in a secure area to prevent container damage and subsequent spillage.

**Storage incompatibility – General:**

Store separate from:

Strong acids

Strong bases

Reducing agents

Amines

Acid anhydrides

Strong oxidizing agents

HEXASOL

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Airborne Exposure Guidelines:**

**2,4-Pentanediol, 2-methyl- (107-41-5)**

US. ACGIH Threshold Limit Values

Form:	Aerosol, inhalable.
Short Term Exposure Limit (STEL):	10 mg/m <sup>3</sup>
Form:	Vapor fraction
Short Term Exposure Limit (STEL):	50 ppm
Form:	Vapor fraction
Time weighted average	25 ppm

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

**Engineering controls:**

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

**Respiratory protection:**

Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

**Skin protection:**

Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

**Eye protection:**

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Color:</b>	colourless
<b>Physical state:</b>	liquid

HEXASOL

<b>Odor:</b>	alcohol-like
<b>Odor threshold:</b>	50 ppm
<b>Flash point</b>	207 °F (97 °C) (closed cup)(Method: Standards ASTM D 3828 - IP 303 - ISO DIN 3679)
<b>Auto-ignition temperature:</b>	583 °F (306 °C)
<b>Lower flammable limit (LFL):</b>	1.27 %(V)
<b>Upper flammable limit (UFL):</b>	No data available.
<b>pH:</b>	Neutral (diluted solutions)
<b>Density:</b>	923 kg/m <sup>3</sup> (68 °F (20 °C))
<b>Specific Gravity (Relative density):</b>	0.923 (68 °F (20 °C))
<b>Vapor pressure:</b>	0.05 mmHg (68 °F (20 °C))
<b>Vapor density:</b>	5.17 kg/m <sup>3</sup> (68 °F (20 °C))
<b>Boiling point/boiling range:</b>	387.5 °F (197.5 °C) 760 mmHg
<b>Melting point/range:</b>	No data available.
<b>Freezing point:</b>	-58 °F (-50 °C)760 mmHg
<b>Evaporation rate:</b>	No data available.
<b>Solubility in water:</b>	>= 68 °F (20 °C) completely soluble
<b>Viscosity, dynamic:</b>	No data available
<b>Oil/water partition coefficient:</b>	log Pow: = -0.14(Method: calculated)
<b>Thermal decomposition:</b>	No data available.
<b>Flammability:</b>	See GHS Classification in Section 2

<b>10. STABILITY AND REACTIVITY</b>
-------------------------------------

**Stability:**

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

**Hazardous reactions:**

None known.

**Materials to avoid:**

Strong oxidizing agents

Reducing agents

Amines

Strong acids

Strong bases

Acid anhydrides

**Conditions / hazards to avoid:**

Keep away from heat and sources of ignition.

**Hazardous decomposition products:**

Thermal decomposition giving flammable and toxic products

Carbon oxides

Hazardous organic compounds

**11. TOXICOLOGICAL INFORMATION**

Data on this material and/or a similar material are summarized

below. **Data for HEXASOL**

**Acute toxicity****Oral:**

No deaths occurred. (rat) LD<sub>0</sub> > 2,000 mg/kg. signs: GI tract irritation, central nervous system depression

**Dermal:**

No deaths occurred. (rat) LD<sub>0</sub> > 2,000 mg/kg.

**Inhalation:**

No deaths occurred. (rat) 8 h LC<sub>0</sub> = 0.34 mg/l. (saturated vapor)

**Skin Irritation:**

Practically non-irritating. (rabbit) (4 h)

**Eye Irritation:**

Causes serious eye irritation. (rabbit)

**Skin Sensitization:**

Not a sensitizer. Guinea pig maximization test. No skin allergy was observed

**Repeated dose toxicity**

Subchronic oral administration to rat / affected organ(s): kidney, liver, Stomach / signs: Irritation of the

**HEXASOL**

gastric mucosa / No significant impairment of function.

Repeated inhalation administration to rat / affected organ(s): upper respiratory tract / Local irritation (Aerosol)

**Genotoxicity****Assessment in Vitro:**

No genetic changes were observed in laboratory tests using: bacteria, animal cells

**Developmental toxicity**

Exposure during pregnancy. Oral (rat) / No birth defects were observed. (delays in development, at doses that produce effects in mothers)

**Reproductive effects**

Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction. At high dose : Effects on offspring / (increased mortality in the offspring, decreased growth rate)

**Human experience****Inhalation:**

Discomfort. (severity of effects depends on extent of exposure) (studied using human volunteers)

**Skin contact:**

No skin allergy was observed. (studied using human volunteers)

Local irritation, redness, swelling. (subjects with dermatitis or eczema)

Central nervous system depression. (severity of effects depends on extent of exposure)

**Eye contact:**

Discomfort, slightly irritating. (liquid or aerosol) (studied using human volunteers) (severity of effects depends on extent of exposure)

**12. ECOLOGICAL INFORMATION****Chemical Fate and Pathway**

Data on this material and/or a similar material are summarized below.

**Data for HEXASOL****Biodegradation:**

Readily biodegradable. (28 d) biodegradation 81 % / OECD Test Guideline 301 F

**Octanol Water Partition Coefficient:**

log Pow: = -0.14(Method: calculated)

**Ecotoxicology**

Data on this material and/or a similar material are summarized below.

**Data for HEXASOL****Aquatic toxicity data:**

Practically nontoxic. *Gambusia affinis* (Mosquito fish) 96 h LC50 = 8,510 mg/l



**HEXASOL**

**Aquatic invertebrates:**

Practically nontoxic. Daphnia magna (Water flea) 48 h EC50 = 5,410 mg/l

**Algae:**

Practically nontoxic. Selenastrum capricornutum 72 h EC50 > 429 mg/l

**Microorganisms:**

Practically nontoxic. Bacteria 10 d NOEC > 1,000 mg/l

**Chronic toxicity to aquatic plants:**

Practically nontoxic. Pseudokirchneriella subcapitata (green algae) 72 d NOEC = 429 mg/l

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal:**

Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

**14. TRANSPORT INFORMATION**

**US Department of Transportation (DOT):** not regulated

**International Maritime Dangerous Goods Code (IMDG):** not regulated

**15. REGULATORY INFORMATION**

**Chemical Inventory Status**

US Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to

HEXASOL

Australia Inventory of Chemical Substances (AICS)    AICS    Conforms to

**United States – Federal Regulations**

**SARA Title III – Section 302 Extremely Hazardous Chemicals:**

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

**SARA Title III - Section 311/312 Hazard Categories:**

Acute Health Hazard

**SARA Title III – Section 313 Toxic Chemicals:**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):**

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

**United States – State Regulations**

**New Jersey Right to Know**

<u>Chemical name</u>	<u>CAS-No.</u>
2,4-Pentanediol, 2-methyl-	107-41-5

**Pennsylvania Right to Know**

<u>Chemical name</u>	<u>CAS-No.</u>
2,4-Pentanediol, 2-methyl-	107-41-5

2-Pentanone, 4-methyl-	108-10-1
------------------------	----------

**Pennsylvania Right to Know – Environmentally Hazardous Substance(s)**

<u>Chemical name</u>	<u>CAS-No.</u>
2-Pentanone, 4-methyl-	108-10-1

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

## HEXASOL

**California Prop. 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

Chemical name  
2-Pentanone, 4-methyl-CAS-No.  
108-10-1**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

H319 Causes serious eye irritation.

## Latest Revision(s):

Reference number:	200005506
Date of Revision:	11/15/2018
Date Printed:	11/16/2018

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations.

*Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.*

*It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.*