# GHEMSERVICE ....

# SAFETY DATA SHEET

## 1. Identification

| Product identifier               | 2-(4-tert-Butylphenoxy)cycloh | exanol          |
|----------------------------------|-------------------------------|-----------------|
| Other means of identification    |                               |                 |
| Item                             | MET-12727A                    |                 |
| Recommended use                  | For Laboratory Use Only       |                 |
| Recommended restrictions         | None known.                   |                 |
| Manufacturer/Importer/Supplier/I | Distributor information       |                 |
| Manufacturer                     |                               |                 |
| Company name                     | Chem Service, Inc.            |                 |
| Address                          | 660 Tower Lane                |                 |
|                                  | West Chester, PA 19380        |                 |
|                                  | United States                 |                 |
| Telephone                        | Toll Free                     | 800-452-9994    |
|                                  | Direct                        | 610-692-3026    |
| Website                          | www.chemservice.com           |                 |
| E-mail                           | info@chemservice.com          |                 |
| Emergency phone number           | Chemtrec US                   | 800-424-9300    |
|                                  | Chemtrec outside US           | +1 703-527-3887 |
| 2. Hazard(s) identification      |                               |                 |
| Physical hazards                 | Not classified.               |                 |

| Not classified.            |                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------|
| Acute toxicity, oral       | Category 2                                                                                      |
| Acute toxicity, dermal     | Category 2                                                                                      |
| Acute toxicity, inhalation | Category 1                                                                                      |
| Not classified.            |                                                                                                 |
| Not classified.            |                                                                                                 |
|                            | Acute toxicity, oral<br>Acute toxicity, dermal<br>Acute toxicity, inhalation<br>Not classified. |

### Label elements



| Signal word                                  | Danger                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard statement                             | Fatal if swallowed. Fatal in contact with skin. Fatal if inhaled.                                                                                                                                                                                                                                       |
| Precautionary statement                      |                                                                                                                                                                                                                                                                                                         |
| Prevention                                   | Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.<br>Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.<br>Wear protective gloves/protective clothing. Wear respiratory protection.                    |
| Response                                     | If swallowed: Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Rinse mouth. Take off immediately all contaminated clothing and wash it before reuse. |
| Storage                                      | Store in a well-ventilated place. Keep container tightly closed. Store locked up.                                                                                                                                                                                                                       |
| Disposal                                     | Dispose of contents/container in accordance with local/regional/national/international regulations.                                                                                                                                                                                                     |
| Hazard(s) not otherwise<br>classified (HNOC) | None known.                                                                                                                                                                                                                                                                                             |
| Supplemental information                     | None.                                                                                                                                                                                                                                                                                                   |

## 3. Composition/information on ingredients

### Substances

| Chemical name               | Common name and synonyms                                                                                                                                                                                                  | CAS number                                              | %                                         |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------|
| 2-(4-tert-Butylphenoxy)     | cyclohexanol                                                                                                                                                                                                              | 1942-71-8                                               | 100                                       |
| *Designates that a specific | c chemical identity and/or percentage of composition has be                                                                                                                                                               | een withheld as a trade se                              | cret.                                     |
| 4. First-aid measure        | S                                                                                                                                                                                                                         |                                                         |                                           |
| Inhalation                  | Remove victim to fresh air and keep at rest in a p<br>artificial respiration if needed. Do not use mouth-<br>Induce artificial respiration with the aid of a pocket<br>proper respiratory medical device. Call a physicia | to-mouth method if victim<br>et mask equipped with a o  | inhaled the substan                       |
| Skin contact                | Take off immediately all contaminated clothing. V<br>poison control center immediately. Wash contam                                                                                                                       |                                                         | 1 2                                       |
| Eye contact                 | Do not rub eyes. Immediately flush eyes with ple contact lenses, if present and easy to do. Continu center immediately.                                                                                                   |                                                         |                                           |
| Ingestion                   | Call a physician or poison control center immedia<br>advice from poison control center. If vomiting occ<br>doesn't get into the lungs. Do not use mouth-to-n                                                              | curs, keep head low so than nouth method if victim ingo | at stomach content<br>ested the substance |

|                                                                              | Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.                                                                                                                                                        |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Most important<br>symptoms/effects, acute and<br>delayed                     | Direct contact with eyes may cause temporary irritation.                                                                                                                                                                                                                                     |
| Indication of immediate<br>medical attention and special<br>treatment needed | Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.                                                                                                                                                     |
| General information                                                          | Take off immediately all contaminated clothing. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Discard any shoes or clothing items that cannot be decontaminated. |

# 5. Fire-fighting measures

| Suitable extinguishing media                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).                                   |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Unsuitable extinguishing media                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| Specific hazards arising from the chemical                    | During fire, gases hazardous to health may be formed.                                         |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting<br>equipment/instructions                       | Use water spray to cool unopened containers.                                                  |
| Specific methods                                              | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| General fire hazards                                          | No unusual fire or explosion hazards noted.                                                   |

### 6. Accidental release measures

| Personal precautions,<br>protective equipment and<br>emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methods and materials for containment and cleaning up                     | Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.                                                                                                                                                                                   |
|                                                                           | Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.                                                                                                                                                                                                                                                                                     |
|                                                                           | Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.                                                                                                                                                                                                                                   |
| Environmental precautions                                                 | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.                                                                                                                                                                                                                                                                            |

# 7. Handling and storage

| 7. Handling and Storage                                      |                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling                                | Minimize dust generation and accumulation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).                                                                                                                                                                                                                                      |
| 8. Exposure controls/perse                                   | onal protection                                                                                                                                                                                                                                                                                                                                                                                         |
| Occupational exposure limits                                 | No exposure limits noted for ingredient(s).                                                                                                                                                                                                                                                                                                                                                             |
| Biological limit values                                      | No biological exposure limits noted for the ingredient(s).                                                                                                                                                                                                                                                                                                                                              |
| Appropriate engineering controls                             | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.           |
| Individual protection measures,                              | such as personal protective equipment                                                                                                                                                                                                                                                                                                                                                                   |
| Eye/face protection                                          | Wear safety glasses with side shields (or goggles).                                                                                                                                                                                                                                                                                                                                                     |
| Skin protection                                              |                                                                                                                                                                                                                                                                                                                                                                                                         |
| Hand protection                                              | Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.                                                                                                                                                                                                                                                                                                   |
| Other                                                        | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.                                                                                                                                                                                                                                                                                                                |
| Respiratory protection                                       | Wear positive pressure self-contained breathing apparatus (SCBA). Chemical respirator with organic vapor cartridge.                                                                                                                                                                                                                                                                                     |
| Thermal hazards                                              | Wear appropriate thermal protective clothing, when necessary.                                                                                                                                                                                                                                                                                                                                           |
| General hygiene<br>considerations                            | Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.                                                                                                                                                    |

# 9. Physical and chemical properties

| Appearance                              |                          |
|-----------------------------------------|--------------------------|
| Physical state                          | Solid.                   |
| Form                                    | Solid. Crystalline Solid |
| Color                                   | light to dark amber      |
| Odor                                    | Not available.           |
| Odor threshold                          | Not available.           |
| рН                                      | Not available.           |
| Melting point/freezing point            | Not available.           |
| Initial boiling point and boiling range | Not available.           |
| Flash point                             | Not available.           |
| Evaporation rate                        | Not available.           |
| Flammability (solid, gas)               | Not available.           |
| Upper/lower flammability or expl        | osive limits             |
| Flammability limit - lower<br>(%)       | Not available.           |
| Flammability limit - upper<br>(%)       | Not available.           |
| Explosive limit - lower (%)             | Not available.           |
| Explosive limit - upper (%)             | Not available.           |
| Vapor pressure                          | 0.0000002 kPa at 25 °C   |
| Vapor density                           | Not available.           |
| Relative density                        | Not available.           |
|                                         |                          |

| Solubility(ies)<br>Solubility (water)      | Not available. |
|--------------------------------------------|----------------|
| Partition coefficient<br>(n-octanol/water) | Not available. |
| Auto-ignition temperature                  | Not available. |
| Decomposition temperature                  | Not available. |
| Viscosity                                  | Not available. |
| Other information                          |                |
| Explosive properties                       | Not explosive. |
| Molecular formula                          | C16-H24-O2     |
| Molecular weight                           | 248.37 g/mol   |
| Oxidizing properties                       | Not oxidizing. |

# 10. Stability and reactivity

| Reactivity                            | The product is stable and non-reactive under normal conditions of use, storage and transport. |
|---------------------------------------|-----------------------------------------------------------------------------------------------|
| Chemical stability                    | Material is stable under normal conditions.                                                   |
| Possibility of hazardous<br>reactions | Hazardous polymerization does not occur.                                                      |
| Conditions to avoid                   | Contact with incompatible materials.                                                          |
| Incompatible materials                | Strong oxidizing agents.                                                                      |
| Hazardous decomposition<br>products   | No hazardous decomposition products are known.                                                |

# 11. Toxicological information

# Information on likely routes of exposure

| Inhalation                                                                         | Fatal if inhaled.                                                                                                |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Skin contact                                                                       | Fatal in contact with skin.                                                                                      |
| Eye contact                                                                        | Direct contact with eyes may cause temporary irritation.                                                         |
| Ingestion                                                                          | Fatal if swallowed.                                                                                              |
| Symptoms related to the<br>physical, chemical and<br>toxicological characteristics | Direct contact with eyes may cause temporary irritation.                                                         |
| Information on toxicological effe                                                  | cts                                                                                                              |
| Acute toxicity                                                                     | Fatal if inhaled. Fatal in contact with skin. Fatal if swallowed.                                                |
| Skin corrosion/irritation                                                          | Prolonged skin contact may cause temporary irritation.                                                           |
| Serious eye damage/eye irritation                                                  | Direct contact with eyes may cause temporary irritation.                                                         |
| Respiratory or skin sensitization                                                  |                                                                                                                  |
| <b>Respiratory sensitization</b>                                                   | Not a respiratory sensitizer.                                                                                    |
| Skin sensitization                                                                 | This product is not expected to cause skin sensitization.                                                        |
| Germ cell mutagenicity                                                             | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity                                                                    | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.                                  |
| US. OSHA Specifically Regul                                                        | ated Substances (29 CFR 1910.1001-1050)                                                                          |
| Not listed.                                                                        |                                                                                                                  |
| Reproductive toxicity                                                              | This product is not expected to cause reproductive or developmental effects.                                     |
| Specific target organ toxicity - single exposure                                   | Not classified.                                                                                                  |
| Specific target organ toxicity - repeated exposure                                 | Not classified.                                                                                                  |
| Aspiration hazard                                                                  | Not an aspiration hazard.                                                                                        |

# 12. Ecological information

| Ecotoxicity                   | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |  |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Persistence and degradability | No data is available on the degradability of this product.                                                                                                                                         |  |
| Bioaccumulative potential     | No data available.                                                                                                                                                                                 |  |
| Mobility in soil              | No data available.                                                                                                                                                                                 |  |
| Other adverse effects         | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.            |  |

# 13. Disposal considerations

| Disposal instructions                    | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of<br>contents/container in accordance with local/regional/national/international regulations.                      |  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Local disposal regulations               | Dispose in accordance with all applicable regulations.                                                                                                                                                           |  |
| Hazardous waste code                     | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.                                                                                                   |  |
| Waste from residues / unused<br>products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |  |
| Contaminated packaging                   | Since emptied containers may retain product residue, follow label warnings even after container is<br>emptied. Empty containers should be taken to an approved waste handling site for recycling or<br>disposal. |  |

# 14. Transport information

| DOT                          |                                                                         |
|------------------------------|-------------------------------------------------------------------------|
| UN number                    | UN2810                                                                  |
| UN proper shipping name      | Toxic, liquids, organic, n.o.s.                                         |
| Transport hazard class(es)   |                                                                         |
| Class                        | 6.1(PGI, II)                                                            |
| Subsidiary risk              | -                                                                       |
| Label(s)                     | 6.1                                                                     |
| Packing group                | I                                                                       |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions           | T14, TP2, TP13, TP27                                                    |
| Packaging exceptions         | None                                                                    |
| Packaging non bulk           | 201                                                                     |
| Packaging bulk               | 243                                                                     |
| ΙΑΤΑ                         |                                                                         |
| UN number                    | UN2810                                                                  |
| UN proper shipping name      | Toxic liquid, organic, n.o.s.                                           |
| Transport hazard class(es)   |                                                                         |
| Class                        | 6.1(PGI, II)                                                            |
| Subsidiary risk              | -                                                                       |
| Packing group                | I                                                                       |
| Environmental hazards        | No.                                                                     |
| ERG Code                     | 6L                                                                      |
| · ·                          | Read safety instructions, SDS and emergency procedures before handling. |
| Other information            |                                                                         |
| Passenger and cargo          | Allowed.                                                                |
| aircraft                     |                                                                         |
| Cargo aircraft only          | Allowed.                                                                |
| IMDG                         |                                                                         |
| UN number                    | UN2810                                                                  |
| UN proper shipping name      | TOXIC LIQUID, ORGANIC, N.O.S.                                           |
| Transport hazard class(es)   |                                                                         |
| Class                        | 6.1(PGI, II)                                                            |
| Subsidiary risk              | -                                                                       |
| Packing group                |                                                                         |
| Environmental hazards        |                                                                         |
| Marine pollutant             | No.                                                                     |
|                              |                                                                         |

### EmS

### F-A, S-A

Special precautions for user Read safety instructions, SDS and emergency procedures before handling. Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78 and the IBC Code

# DOT IATA; IMDG

### 15. Regulatory information

**US** federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**Hazard categories** 

SARA 311/312 Hazardous Yes chemical

SARA 313 (TRI reporting) Not regulated.

### Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA)

### **US state regulations**

- US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100) Not listed.
- US. Massachusetts RTK Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

- US. Pennsylvania RTK Hazardous Substances
  - Not regulated.
- US. Pennsylvania Worker and Community Right-to-Know Law Not listed.
- US. Rhode Island RTK

Not regulated.

### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### International Inventories

| Country(s) or region        | Inventory name                                                            | On inventory (yes/no)* |
|-----------------------------|---------------------------------------------------------------------------|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                        | No                     |
| Canada                      | Domestic Substances List (DSL)                                            | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)                                       | Yes                    |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)                | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical<br>Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                    | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)                  | No                     |
| Korea                       | Existing Chemicals List (ECL)                                             | No                     |
| New Zealand                 | New Zealand Inventory                                                     | No                     |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)         | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                             | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

# 16. Other information, including date of preparation or last revision

0

| Issue date   | 08-05-2015                                   |
|--------------|----------------------------------------------|
| Version #    | 01                                           |
| NFPA ratings | Health: 4<br>Flammability:<br>Instability: 0 |

The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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