SAFETY DATA SHEET



1. Identification

Product identifier Butyl Cyclohexyl Phthalate Solution

Other means of identification

Item S-11364J1

Recommended use For Laboratory Use Only

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company nameChem Service, Inc.Address660 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 hazardsFlammable liquidsCategory 2Health hazardsSkin corrosion/irritationCategory 2Serious eye damage/eye irritationCategory 2A

Reproductive toxicity Category 2

Specific target organ toxicity, repeated

Specific target organ toxicity, single exposure

exposure

Aspiration hazard Category 1

Environmental hazards Hazardous to the aquatic environment, acute Category 2

hazard

Hazardous to the aquatic environment,

long-term hazard

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin

irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated

Category 3 narcotic effects

Category 1

Category 2

exposure. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face

protection.

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Response

Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical

advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use

appropriate media to extinguish. Collect spillage.

Storage Keep cool. 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 classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

Supplemental information

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
n-Hexane		110-54-3	99.99
Butyl cyclohexyl		84-64-0	0.01
phthalate(Technical)			

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON

CENTER or doctor/physician if you feel unwell.

exposure may cause chronic effects.

Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation Skin contact

occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness.

Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing,

redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If Ingestion

vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and

delayed

Indication of immediate

medical attention and special treatment needed

General information

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). 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. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may

be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

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Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. 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 equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods
General fire hazards

Use standard firefighting procedures and consider the hazards of other involved materials.

Highly flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. 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

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later 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 release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3	
		500 ppm	
US. ACGIH Threshold Limit Value	es		
Components	Type	Value	
n-Hexane (CAS 110-54-3)	TWA	50 ppm	
US. NIOSH: Pocket Guide to Cher	nical Hazards		
Components	Type	Value	
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3	
		50 ppm	

Biological limit values

ACGIH Biological Exposure Indices				
Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*

^{* -} For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

Appropriate engineering

controls

Explosion-proof general and local exhaust ventilation. 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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. When using do not smoke. 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 Liquid. Form Liquid.

Color Not available.
Odor Not available.
Odor threshold Not available.
pH Not available.

Melting point/freezing point -137.74 °F (-94.3 °C) estimated Initial boiling point and boiling 155.66 °F (68.7 °C) estimated

range

Flash point -7.0 °F (-21.7 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower

1.1 % estimated

(%)

Flammability limit - upper

7.5 % estimated

(%)

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 201.3 hPa estimated

Vapor densityNot available.Relative densityNot available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature 437 °F (225 °C) estimated

Decomposition temperature Not available. **Viscosity** Not available.

Other information

Density 1.0759 g/cm3 estimated

Explosive properties Not explosive.

Flammability class Flammable IB estimated

Oxidizing properties Not oxidizing.

Specific gravity 1.08 estimated

10. Stability and reactivity

ReactivityThe 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 Hazardous polymerization does not occur.

reactions

Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause damage to organs through prolonged or repeated exposure by inhalation. May cause

drowsiness and dizziness. Headache. Nausea, vomiting.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Ingestion Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious

chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components Species Test Results

n-Hexane (CAS 110-54-3)

Acute Dermal

LD50 Rabbit > 2000 mg/kg, 4 Hours

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

Causes serious eye irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity -

single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity -

repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effectsCauses damage to organs through prolonged or repeated exposure. Prolonged inhalation may be

harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components Species Test Results

n-Hexane (CAS 110-54-3)

Aquatic

Fish LC50 Fathead minnow (Pimephales promelas) 2.101 - 2.981 mg/l, 96 hours

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

n-Hexane 3.9

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.

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^{*} Estimates for product may be based on additional component data not shown.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of 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

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 emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

DOT

UN1208 **UN** number

UN proper shipping name

Hexanes, solution (n-Hexane RQ = 5001 LBS), MARINE POLLUTANT

Transport hazard class(es) Class

3 Subsidiary risk 3 Label(s) **Packing group** Ш **Environmental hazards**

> Marine pollutant Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions IB2, T4, TP1

150 Packaging exceptions Packaging non bulk 202 Packaging bulk 242

IATA

UN1208 UN number

UN proper shipping name Hexanes solution (n-Hexane)

Transport hazard class(es)

Class 3 Subsidiary risk Ш Packing group **Environmental hazards** Yes **ERG Code** 3H

Other information

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only

Allowed with restrictions.

IMDG

UN number UN1208

UN proper shipping name Transport hazard class(es) HEXANES SOLUTION (n-Hexane), MARINE POLLUTANT

3 Class Subsidiary risk Ш Packing group **Environmental hazards**

> Yes Marine pollutant F-E. S-D

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

Not established.

the IBC Code

DOT



IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

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.

TSCA Chemical Action Plans, Chemicals of Concern

Butyl cyclohexyl phthalate(Technical) (CAS 84-64-0)

Phthalates Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)

Butyl cyclohexyl phthalate(Technical) (CAS 84-64-0) n-Hexane (CAS 110-54-3)

Listed. Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No

chemical

SARA 313 (TRI reporting)

Chemical name CAS number % by wt. n-Hexane 110-54-3 99.99

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

n-Hexane (CAS 110-54-3)

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 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.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3,

subd. (a))

n-Hexane (CAS 110-54-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical 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

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

Toxic Substances Control Act (TSCA) Inventory

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

07-13-2018 Issue date

Version # 01

United States & Puerto Rico

NFPA ratings Health: 2

Flammability: 3 Instability: 0

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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).

Disclaimer

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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