

OptiSource™

The Optical Supply Resource

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1. PRODUCT AND COMPANY IDENTIFICATION

Product identifiers

Product name : Substitone

Product Number : 99-SUB, 99-SUBQ

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Substitute for Acetone

Restrictions for use: Do not use in a manner other than the identified use

Details of the supplier of the safety data sheet

Company : OptiSource

40 Sawgrass Dr

Telephone :+1-631-924-8360

Emergency telephone number

Emergency Phone # : +1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Flammable liquids (Category 2)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Reproductive toxicity (Category 1B)

Specific target organ toxicity - single exposure (Category 3), Respiratory system

GHS Label elements, including precautionary statements



Pictogram

Signal word Danger

Hazard statements

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

May damage fertility or the unborn child.

Precautionary statements

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.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

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.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

100% of mixture is withheld as a proprietary trade secret

4. FIRST AID MEASURES

Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Wash off with soap and plenty of water. Consult a physician.

In case of eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local, state and federal regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Use explosion-proof equipment. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. Moisture sensitive.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

PEL's not known for mixture. Shown by component below.

Component 1:

TWA 10.000000 ppm USA. Workplace Environmental Exposure Levels (WEEL) Remarks Skin

Biological occupational exposure limits Component CAS-No. Parameters Value Biological specimen Basis

100.0000 mg/l Urine ACGIH - Biological

Exposure Indices (BEI) Remarks End of shift (As soon as possible after exposure ceases)

Component 2:

TWA 1,000ppm ACGIH TLV, OSHA table Z-1, NIOSH recommended exposure limit.

Derived No Effect Level (DNEL) Application Area Exposure

Health effect Value

Workers Skin contact Acute systemic effects 208mg/kg BW/d Workers Inhalation Acute systemic effects

80 mg/m³ Workers Skin contact Long-term systemic effects 19.8mg/kg BW/d Workers Inhalation Long-

term systemic effects 40 mg/m³

Predicted No Effect Concentration (PNEC) Compartment Value

Water 5 mg/l Soil 0.138 mg/kg Marine water 0.025 mg/kg Fresh water 0.25 mg/l Fresh water sediment

0.805 mg/kg Onsite sewage treatment plant 10 mg/l

Exposure controls

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min

Material tested: Butoject

Splash contact Material: Nature latex/chloroprene Minimum layer thickness: 0.6 mm Break through time: 35 min

Body Protection impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied

air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- a) Appearance Form: liquid
- Colour: colourless
- b) Odour No data available fox mixture
- c) Odour Threshold No data available
- d) pH No data available fox mixture
- e) Melting point/freezing point No data available fox mixture
- f) Initial boiling point and boiling range No data available fox mixture
- g) Flash point No data available fox mixture
- h) Evaporation rate No data available
- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits
No data available fox mixture
- k) Vapour pressure No data available fox mixture
- l) Vapour density No data available fox mixture)
- m) Relative density No data available fox mixture
- n) Water solubility No data available
- o) Partition coefficient No data available fox mixture
- p) Auto-ignition temperature No data available
- q) Decomposition temperature No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong acids, Strong oxidizing agents, Strong reducing agents

Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Component 1:

Acute toxicity LD50 Oral - Rat - 3,914 mg/kg

LDLO Inhalation - Rat - 4 h - > 5100 ppm

LD50 Dermal - Rabbit - 8,000 mg/kg

No data available

Skin corrosion/irritation Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Serious eye damage/eye irritation Eyes - Rabbit Result: Eye irritation

Respiratory or skin sensitisation No data available

Germ cell mutagenicity No data available

Component 2:

Acute toxicity

LD50 Oral - rat - 7,060 mg/kg Remarks: Lungs, Thorax, or Respiration: Other changes.

LC50 Inhalation - rat - 10 h - 20000 ppm

Dermal: no data available no data available

Skin corrosion/irritation Skin - rabbit Result: No skin irritation - 24 h (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes - rabbit Result:

Mild eye irritation - 24 h (OECD Test Guideline 405)

Respiratory or skin sensitisation no data available Germ cell mutagenicity no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity Damage to fetus possible

No data available

Specific target organ toxicity - single exposure Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

Additional information RTECS: UY5790000

prolonged or repeated exposure can cause:, Vomiting, Diarrhoea, Abdominal pain, Rats exposed to Bone marrow - Irregularities - Based on Human Evidence Bone marrow - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - other fish - 4,000 mg/l - 96 h

LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 24 h

Toxicity to bacteria LC50 - Bacteria - > 9,000 mg/l

Persistence and degradability

Biodegradability Result: 90 % - Readily biodegradable

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging Dispose of as unused product. Ensure all disposal is in accordance with all local, state and federal regulations.

TRANSPORT INFORMATION

DOT (US) NA-Number: 1993 Class: None Packing group: III Proper shipping name: Combustible liquid, n.o.s.

Poison Inhalation Hazard: No
IMDG Not dangerous goods
IATA Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components The following components are subject to reporting levels established by SARA Title III, Section 313:

SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazard

California Prop. 65 Components WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

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***** Prepared

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