

## 1. Product and company identification

**Product identifier**

Trade name: Neopren Adhesives

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

General use: Adhesive for orthopedic procedures. Reserved for industrial and professional use.

**Details of the supplier of the safety data sheet**

Company name: Otto Bock Health Care  
 Street/POB-No.: 3820 W. Great Lakes Drive  
 Postal Code, city: Salt Lake City, UT 84120  
 USA

WWW: [www.ottobockus.com](http://www.ottobockus.com)

Telephone: +1 (801) 956-2400

Telefax: +1 (801) 956-2401

Dept. responsible for information:

Quality Department,  
 Telephone: +1 (801) 954-2304 (7 AM – 3 PM, Mountain Time),  
 Email: [USRegulatory@ottobock.com](mailto:USRegulatory@ottobock.com)

Additional information:

This safety data sheet pertains to the following products:  
 TRX=4 Neopren Adhesive  
 636W65 - Neopren Adhesive  
 Corporate headquarters:  
 Ottobock SE & Co. KGaA  
 Max-Näder-Straße 15  
 Duderstadt  
 Germany

**Emergency phone number**

**CHEMTREC, Telephone: +1 (800) 424-9300**

**Transport:**

**CONSULTANK Lutz Harder GmbH (Contract QUALI003)**

**Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)**

## 2. Hazards identification

**Emergency overview**

Appearance: Form: liquid  
 Color: yellowish

Odor: characteristic

Classification: Flammable Liquid - Category 2; Skin Irritation - Category 2; Eye Irritation - Category 2A; Specific Target Organ Toxicity (Single Exposure) - Category 3; Aquatic toxicity - acute - Category 1; Aquatic toxicity - chronic - Category 1;

Hazard symbols:



Signal word: **Danger**

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Hazard statements: Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Very toxic to aquatic life with long lasting effects.

Precautionary statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Avoid breathing vapors.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a POISON CENTER/doctor if you feel unwell.  
Store in a well-ventilated place. Keep cool.

**Regulatory status**

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

**Hazards not otherwise classified**

see section 11: Toxicological information

**3. Composition / Information on ingredients**

Chemical characterization: Adhesive on basis of Polychloroprene in organic solvents. Contains resins.

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Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 110-82-7	Cyclohexane	25 - 50 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 79-20-9	Methyl acetate	10 - 25 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 67-64-1	Acetone	10 - 25 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 107-83-5	Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3))	< 5 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 142-82-5	n-Heptane	< 5 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 110-54-3	n-Hexane	0.5 - 1 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Eye Irritation - Category 2A. Reproductive toxicant - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aspiration Toxicity - Category 1. Aquatic toxicity - acute - Category 2.

### 4. First aid measures

General information:	Take off immediately all contaminated clothing. Move victim to fresh air.
In case of inhalation:	Provide fresh air. Seek medical treatment in case of troubles. If victim is at risk of losing consciousness, position and transport on their side.
Following skin contact:	Immediately clean with water and soap followed by thorough rinsing. In case of skin irritation, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist.
After swallowing:	Do not induce vomiting. Immediately get medical attention.

**Most important symptoms/effects, acute and delayed**

skin: Irritates skin and mucous membranes.

eye: irritant

Sensitisation: Not known to cause sensitization.

composition: irritant, calculation method

**Information to physician**

Treat symptomatically.

**5. Fire fighting measures**

Flash point/flash point range:

-4 °F

Auto-ignition temperature: not self-igniting

Suitable extinguishing media:

water mist, Foam, dry chemical powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

**Specific hazards arising from the chemical**

On heating or in case of fire toxic gases may form.

Protective equipment and precautions for firefighters:

In case of fire and/or explosion do not breathe fumes.

When vapors form, use respiratory protection.

Additional information:

You have to dispose of contaminated extinguishing water according to the regulations of the authorities.

**6. Accidental release measures**

Personal precautions:

Wear appropriate protective equipment. Keep unprotected people away.

Wear respiratory protection when in the presence of vapor, dust, and aerosols.

Provide adequate ventilation.

Keep away from sources of ignition.

Environmental precautions:

Do not allow to enter drains, basements or pits.

Methods for clean-up:

Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder.

Store in special closed containers and dispose of according to ordinance.

Provide adequate ventilation.

Do not remove residual product with water and detergent.

Additional information:

Keep away from sources of ignition.

If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

**7. Handling and storage****Handling**

Advices on safe handling: Provide good ventilation and/or an exhaust system in the work area.

Avoid the formation of aerosol.

## Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.  
Take precautionary measures against static discharges.  
Keep away from heat.

## Specific use(s)

Adhesive for orthopedic procedures.

**Storage**

## Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Keep container dry.  
Protect from frost.

## Further details:

Vapors form potentially explosive mixtures with air, which are heavier than air. Air-Vapor mixture may travel great distances at floor level and lead to backflash when exposed to an ignition source.  
Do not allow to enter drains or the environment.

**8. Exposure controls / personal protection**

**Exposure guidelines**

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
110-82-7	Cyclohexane	USA: ACGIH: TWA USA: NIOSH: TWA USA: OSHA: TWA	344 mg/m <sup>3</sup> ; 100 ppm 1050 mg/m <sup>3</sup> ; 300 ppm 1050 mg/m <sup>3</sup> ; 300 ppm
79-20-9	Methyl acetate	USA: ACGIH: STEL USA: ACGIH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	757 mg/m <sup>3</sup> ; 250 ppm 606 mg/m <sup>3</sup> ; 200 ppm 760 mg/m <sup>3</sup> ; 250 ppm 610 mg/m <sup>3</sup> ; 200 ppm 610 mg/m <sup>3</sup> ; 200 ppm
67-64-1	Acetone	USA: ACGIH: STEL USA: ACGIH: TWA USA: NIOSH: TWA USA: OSHA: TWA	500 ppm 250 ppm 590 mg/m <sup>3</sup> ; 250 ppm 2400 mg/m <sup>3</sup> ; 1000 ppm
107-83-5	Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3))	NIOSH: Ceiling USA: ACGIH: STEL USA: ACGIH: TWA USA: NIOSH: TWA	1800 mg/m <sup>3</sup> ; 510 ppm 3500 mg/m <sup>3</sup> ; 1000 ppm 1760 mg/m <sup>3</sup> ; 500 ppm 350 mg/m <sup>3</sup> ; 100 ppm
142-82-5	n-Heptane	NIOSH: Ceiling USA: NIOSH: TWA USA: OSHA: TWA	1800 mg/m <sup>3</sup> ; 440 ppm 350 mg/m <sup>3</sup> ; 85 ppm 2000 mg/m <sup>3</sup> ; 500 ppm
110-54-3	n-Hexane	USA: ACGIH: TWA USA: NIOSH: TWA USA: OSHA: TWA	176 mg/m <sup>3</sup> ; 50 ppm 180 mg/m <sup>3</sup> ; 50 ppm 1800 mg/m <sup>3</sup> ; 500 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
67-64-1	Acetone	USA: ACGIH-BEI, urine	25 mg/L	acetone	end of exposure or end of shift
110-54-3	n-Hexane	USA: ACGIH-BEI, urine	0.4 mg/L	2,5-Hexanedion	end of shift at end of workweek

**Engineering controls**

Provide good ventilation and/or an exhaust system in the work area.  
Avoid the formation of aerosol.  
See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010
Skin protection	<p>Wear suitable protective clothing.</p> <p>Solvent resistant protective gloves according to EN 374.</p> <p>Glove material: Nitrile rubber, Butyl caoutchouc (butyl rubber)</p> <p>Breakthrough time: &gt;480 min.</p> <p>Observe glove manufacturer's instructions concerning penetrability and breakthrough time.</p>
Respiratory protection:	<p>When vapors form, use respiratory protection.</p> <p>In case of prolonged or repeated exposures: use self-contained breathing apparatus.</p> <p>Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.</p> <p>Respiratory protection is not necessary if room is well ventilated.</p>
General hygiene considerations:	<p>Keep away from food, drink and animal feedingstuffs.</p> <p>Take off immediately all contaminated clothing.</p> <p>Wash hands before breaks and after work.</p> <p>Do not breathe vapor or spray.</p> <p>Avoid contact with skin and eyes.</p>

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Appearance:	<p>Form: liquid</p> <p>Color: yellowish</p>
Odor:	characteristic
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	132.8 °F
Flash point/flash point range:	-4 °F
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	<p>LEL (Lower Explosion Limit): 1.20 Vol-%</p> <p>UEL (Upper Explosive Limit): 16.00 Vol-%</p>
Vapor pressure:	at 68 °F: 247 hPa
Vapor density:	No data available
Density:	at 68 °F: 0.86 g/mL
Water solubility:	at 68 °F: immiscible up to slightly miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	not self-igniting
Thermal decomposition:	No data available
Viscosity, dynamic:	at 68 °F: 1000 mPa*s
Explosive properties:	Product is not explosive. Vapors form explosive mixtures with air.
Ignition temperature:	500 °F
Solvent content:	80 %
Solid content:	20 %

## 10. Stability and reactivity

Reactivity:	Vapors form explosive mixtures with air.
Chemical stability:	Product is stable under normal storage conditions.
Possibility of hazardous reactions	No dangerous reactions are known.
Conditions to avoid:	No data available
Incompatible materials:	No data available
Hazardous decomposition products:	In case of fire may be liberated: carbon monoxide and carbon dioxide
Thermal decomposition:	No data available

## 11. Toxicological information

### Toxicological tests

Acute toxicity:	LD50 Rat, oral, Cyclohexane: 1297 mg/kg
Toxicological effects:	Acute toxicity (oral): Lack of data. Acute toxicity (dermal): Lack of data. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation. Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation. Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Lack of data. Germ cell mutagenicity/Genotoxicity: Lack of data. Carcinogenicity: Lack of data. Reproductive toxicity: Lack of data. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause drowsiness or dizziness. Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.

### Symptoms

skin: Irritates skin and mucous membranes.  
eye: irritant  
Sensitisation: Not known to cause sensitization.  
composition: irritant, calculation method

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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**Mobility in soil**

No data available

**Persistence and degradability**

Further details: No data available

**Additional ecological information**

Volatile organic compounds (VOC):

79.73 % by weight = 685.7 g/L

General information: Do not allow to penetrate into soil, waterbodies or drains.

**13. Disposal considerations**

**Product**

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

**Contaminated packaging**

Recommendation: Dispose of waste according to applicable legislation.

**Additional information**

Do not dispose of with household waste.

Do not empty into drains.

**14. Transport information**

**USA: Department of Transportation (DOT)**

Identification number: UN1133  
 Proper shipping name: UN 1133, UN 1133, adhesives  
 Hazard class or Division: 3  
 Packing Group: II  
 Labels: 3  
 Special provisions: 149, B52, IB2, T4, TP1, TP8  
 Packaging – Exceptions: 150  
 Packaging – Non-bulk: 173  
 Packaging – Bulk: 242  
 Quantity limitations – Passenger aircraft / rail: 5 L  
 Quantity limitations – Cargo only: 60 L  
 Vessel stowage – Location: B  
 Vessel stowage – Other:



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**Sea transport (IMDG)**

UN number: UN 1133  
Proper shipping name: UN 1133, Adhesives  
Class or division, Subsidiary risk: Class 3, Subrisk -  
Packing Group: II  
EmS: F-E, S-D  
Special provisions: -  
Limited quantities: 5 L  
Excepted quantities: E2  
Contaminated packaging - Instructions: P001  
Contaminated packaging - Provisions: PP1  
IBC - Instructions: IBC02  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T4  
Tank instructions - Provisions: TP1, TP8  
Stowage and handling: Category B.  
Properties and observations: Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.  
Marine pollutant: yes  
Segregation group: none

**Air transport (IATA)**

UN/ID number: UN 1133  
Proper shipping name: UN 1133, Adhesives  
Class or division, Subsidiary risk: Class 3  
Packing Group: II  
Hazard label: Flamm. liquid  
Excepted Quantity Code: E2  
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L  
Passenger and Cargo Aircraft: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L  
Cargo Aircraft only: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L  
Special provisions: A3  
Emergency Response Guide-Code (ERG): 3L

**15. Regulatory information**

**National regulations - U.S. Federal Regulations**

Cyclohexane:	<p>TSCA Inventory: listed  TSCA HPVC: not listed  Clean Air Act:  SOCMI Chemical: yes  Clean Water Act:  Hazardous Substances: RQ 1000 lbs.  Other Environmental Laws:  CERCLA: RQ 1000 lbs.  RCRA Hazardous Wastes: Code U056  SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard  NIOSH Recommendations:  Occupational Health Guideline: 0163</p>
Methyl acetate:	<p>TSCA Inventory: listed; EPA flags T  TSCA HPVC: not listed  TSCA: listed - Flags: T  Clean Air Act Data: SOCMI Chemical? Yes  Clean Air Act:  SOCMI Chemical: yes  NIOSH Recommendations:  Occupational Health Guideline: 0391*</p>
Acetone:	<p>TSCA Inventory: listed  TSCA HPVC: not listed  Clean Air Act:  SOCMI Chemical: yes  Other Environmental Laws:  CERCLA: RQ 5000 lbs.  RCRA Hazardous Wastes: Code U002  RCRA Groundwater Monitoring: Methods 8240 / PQL 100  NIOSH Recommendations:  Occupational Health Guideline: 0004*</p>
Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3)):	<p>TSCA Inventory: listed  TSCA HPVC: not listed</p>
n-Heptane:	<p>TSCA Inventory: listed; EPA flags T  TSCA HPVC: not listed  NIOSH Recommendations:  Occupational Health Guideline: 0312</p>
n-Hexane:	<p>TSCA Inventory: listed  TSCA HPVC: not listed  Clean Air Act:  Hazardous Air Pollutants: Code XOY  SOCMI Chemical: yes  Other Environmental Laws:  CERCLA: RQ 5000 lbs.  SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard  NIOSH Recommendations:  Occupational Health Guideline: 0322</p>

**National regulations - U.S. State Regulations**

- Cyclohexane: California Proposition 65 code: -  
Delaware Air Quality Management List:  
DRQ: 1000 - RQ State: Federal Regulations Apply  
Idaho Air Pollutant List:  
Title 585: AAC: 52,5 - EL: 70 - OEL: 1050 - Title 586: -  
Maine Hazardous Air Pollutants:  
Me 2005: HAP - Hap Rpt: 20000  
Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9  
Minnesota Haz. Substance:  
Codes: AO - Ratings: 7.94 - Status: Title III. TRI.  
New Jersey RTK Hazardous Substance:  
DOT: 1145 - Sub No.: 0565 - TPQ: -  
New York List of Hazardous Substances:  
RQ-Air: 1000 - RQ-Land: 1 - Note: No Note Associated with this chemical.  
Pennsylvania Haz. Substance code: E  
Washington Air Contaminant:  
TWA: 300 ppm - 1050 mg
- Methyl acetate: California Prop 65 List: None  
Idaho Air Pollutant List:  
Title 585: AAC: 30.5 - EL: 40.7 - OEL: 610  
Massachusetts Haz. Substance codes: 2,4,5,6  
Minnesota Haz. Substance:  
Codes: AO - Ratings: -  
Pennsylvania Haz. Substance code: -  
Washington Air Contaminant:  
TWA: 200 ppm - 610 mg - STEL: 250 ppm - 760 mg
- Acetone: California Prop 65 List: None  
Delaware Air Quality Management List:  
DRQ: 5000 - RQ State: Federal Regulations Apply  
Idaho Air Pollutant List:  
Title 585: AAC: 89 - EL: 119 - OEL: 1780  
Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9  
Minnesota Haz. Substance:  
Codes: AON - Ratings: 7.16 - Status: Title III  
New York List of Hazardous Substances:  
RQ-Air: 5000 - RQ-Land: 1 - Note: No Note Associated with this chemical.  
Pennsylvania Haz. Substance code: E  
Washington Air Contaminant:  
TWA: 750 ppm - 1800 mg - STEL: 1000 ppm - 2400 mg
- n-Heptane: California Proposition 65 code: not listed  
Idaho Air Pollutant List:  
Title 585: AAC: 82 - EL: 109 - OEL: 1640 - Title 586: -  
Massachusetts Haz. Substance codes: 2,4,5,6  
Minnesota Haz. Substance:  
Codes: ANO - Ratings: -  
Pennsylvania Haz. Substance code: -  
Washington Air Contaminant:  
TWA: 400 ppm - 1600 mg - STEL: 500 ppm - 2000 mg

n-Hexane: California Proposition 65 code: -  
 Delaware Air Quality Management List:  
     DRQ: 5000 - RQ State: Federal Regulations Apply  
 Idaho Air Pollutant List:  
     Title 585: AAC: 9 - EL: 12 - OEL: 180 - Title 586: -  
 Maine Hazardous Air Pollutants:  
     Me 2005: HAP - Hap Rpt: 2000  
 Massachusetts Haz. Substance codes: 2,4,5,6  
 Minnesota Haz. Substance:  
     Codes: ANO - Ratings: 9.57 - Status: Air Pollutant Title III. TRI.  
 New Jersey RTK Hazardous Substance:  
     DOT: 1208 - Sub No.: 1340 - TPQ: -  
 New York List of Hazardous Substances:  
     RQ-Air: 1 - RQ-Land: 1 - Note: No Note Associated with this chemical.  
 Pennsylvania Haz. Substance code: -  
 Washington Air Contaminant:  
     TWA: 50 ppm - 180 mg

**National regulations - Great Britain**

Hazchem-Code: •3YE

**16. Other information**

Text for labeling: Contains 25 - 50 % Cyclohexane, 10 - 25 % Methyl acetate, 10 - 25 % Acetone, < 5 % Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3)), < 5 % n-Heptane, 0.5 - 1 % n-Hexane. Safety data sheet available on request.

Hazard rating systems: NFPA Hazard Rating:  
 Health: 1 (Slight)  
 Fire: 3 (Serious)  
 Reactivity: 0 (Minimal)



HMIS Version III Rating:  
 Health: 1 (Slight)  
 Flammability: 3 (Serious)  
 Physical Hazard: 0 (Minimal)  
 Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZARD	0
	X

Reason of change: Changes in section 1.3: Corporate headquarters  
 Date of first version: 6/11/1999

**Department issuing data sheet**

Contact person: see section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.