

**1. Product and company identification**

**Product identifier**

Trade name: 636W26 - Promoter for 636W25

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

General use: Cross linking agent 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

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

Additional information:

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: amber

Odor: like Ethyl acetate

Classification: Flammable Liquid - Category 2; Eye Irritation - Category 2A; Respiratory Sensitizer - Category 1; Specific Target Organ Toxicity (Single Exposure) - Category 3;

Hazard symbols:



Signal word:

**Danger**

Hazard statements:

Highly flammable liquid and vapor.  
 Causes serious eye irritation.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause drowsiness or dizziness.

**636W26 - Promoter for 636W25**

Material number 636W26

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Avoid breathing vapors.  
 Use only outdoors or in a well-ventilated area.  
 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 container tightly closed.

**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: Polyisocyanate in ethyl acetate

Relevant ingredients:

| CAS No.       | Designation                             | Content   | Classification   |
|---------------|---|-----------|--|
| CAS 141-78-6  | Ethyl acetate                           | 70 - 75 % | Flammable Liquid - Category 2. Eye Irritation - Category 2A.<br>Specific Target Organ Toxicity (Single Exposure) - Category 3.                           |
| CAS 4151-51-3 | tris-(p-Isocyanatophenyl) thiophosphate | 25 %      | Respiratory Sensitizer - Category 1.   |
| CAS 108-90-7  | Chlorobenzene                           | 2 %       | Flammable Liquid - Category 3.<br>Acute Toxicity - inhalative - Category 4.<br>Skin Irritation - Category 2.<br>Aquatic toxicity - chronic - Category 2. |

**4. First aid measures**

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. Do not allow victim to become chilled. Keep victim warm. Position and transport victim on their side. In case of respiratory distress, bring into semi-upright, seated position. If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. Seek medical attention.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. Immediately remove all contaminated clothing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult physician.

After swallowing: Have victim drink large quantities of water, with active charcoal if possible. Immediately get medical attention.

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

In case of inhalation: Vapors may cause drowsiness and dizziness. Vapors irritate mucous membranes and respiratory system. The following symptoms may occur: Sore throat, loss of appetite, headache, fatigue, drowsiness. Higher doses may have a narcotic effect. Nausea, vomiting, breathing paralysis. May cause sensitization by inhalation.

In case of ingestion: Aspiration of this product into the lungs during vomiting, may cause serious injury or death.

After contact with skin: Irritates skin and mucous membranes. Repeated skin contact leads to dryness and a heightened tendency toward infection. Expect absorption through the skin.

After eye contact: irritant

**Information to physician**

After ingestion: Attention in case of vomiting and stomach pumping: danger of aspiration. Accelerate intestinal transit. Have victim repeatedly drink large amounts of water with activated charcoal. Finally with sodium sulfate additive. In case of vomiting, lay at least head on side. Move victim to fresh air, put at rest and loosen restrictive clothing. Do not allow victim to become chilled. Keep victim warm. Keep airway open. Castor oil and milk are contraindicated.

In case of inhalation: Move victim to fresh air, provide oxygen as needed. On irritation of the respiratory system use an aerosol dispenser and treat with 5 doses of dexamethasone aerosol (e.g. Auxilison, Thomae) every 10 minutes until symptoms cease. Take measures to prevent pneumonia, infections and other symptoms, in particular acidity-alkalinity. Treat symptomatically.

**5. Fire fighting measures**

Flash point/flash point range:

26.6 °F

Auto-ignition temperature: not self-igniting

Suitable extinguishing media:

Water spray jet, alcohol resistant 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**

Highly flammable. Liquid evaporates very quickly. Potentially explosive vapor/air mixtures may form. In case of fire: Nitrogen oxides, HCl- and HCN-compounds may be released.

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus.

Additional information:

Cool endangered containers with water spray and, if possible, remove from danger zone. Do not allow fire water to penetrate into surface or ground water.

**636W26 - Promoter for 636W25**

Material number 636W26

Page: 4 of 12

**6. Accidental release measures**

- Personal precautions:** Wear appropriate protective equipment. Keep unprotected people away. Protect personnel by spraying water when engaged in activities such as repairing a leak. Keep away from sources of ignition - No smoking.
- Environmental precautions:** Do not allow to enter drains, basements or pits. If necessary notify appropriate authorities.
- Methods for clean-up:** Seal off. Remove all sources of ignition. Plug leak if safely possible. In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Absorb leftover product with non-flammable liquid-binding material (e.g. earth, sand, vermiculite or ground sand stone) and place in closed containers for disposal. Seal all low level rooms.
- Additional information:** Provide adequate ventilation.  
Remove persons not involved upwind.

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

**Advices on safe handling:** Make sure there is sufficient air exchange and / or that working rooms are air suctioned. Avoid contact with skin and eyes. Do not breathe vapors. Ground all containers and instruments. Use only explosion-protected equipment/instruments. Do not use air pressure to deliver. Keep away from sources of ignition - No smoking. Do not allow containers to stand open. Store product in a quantity adequate for 1 work-shift only.

**Precautions against fire and explosion:**  
liquid: Highly flammable.  
Vapors: Very highly flammable.  
Liquid evaporates very quickly. Vapor and air form potentially explosive mixture that is hazardous to health. Mixture is heavier than air and will travel great distances at floor level and lead to backflash when exposed to an ignition source. Ignition by hot surfaces, sparks and open flames.

**Storage**

**Requirements for storerooms and containers:** Store in tightly closed containers in a well-ventilated and dry area at temperatures between 41 °F and 77 °F. Take precautionary measures against static discharges. Steel and stainless steel are stable container materials.

**Hints on joint storage:** Do not store together with combustible materials or highly flammable solids.

**Further details:** Use caution when opening containers under pressure.

## 8. Exposure controls / personal protection

### Exposure guidelines

Occupational exposure limit values:

| CAS No.  | Designation   | Type            | Limit value                      |
|----------|---------------|-----------------|----------------------------------|
| 141-78-6 | Ethyl acetate | USA: ACGIH: TWA | 1440 mg/m <sup>3</sup> ; 400 ppm |
|          |               | USA: NIOSH: TWA | 1400 mg/m <sup>3</sup> ; 400 ppm |
|          |               | USA: OSHA: TWA  | 1400 mg/m <sup>3</sup> ; 400 ppm |
| 108-90-7 | Chlorobenzene | USA: ACGIH: TWA | 46 mg/m <sup>3</sup> ; 10 ppm    |
|          |               | USA: OSHA: TWA  | 350 mg/m <sup>3</sup> ; 75 ppm   |

Biological limit values:

| CAS No.  | Designation   | Type                  | Limit value         | Parameter                 | Sampling                        |
|----------|---------------|-----------------------|---------------------|---------------------------|---------------------------------|
| 108-90-7 | Chlorobenzene | USA: ACGIH-BEI, urine | 100 mg/g creatinine | 4-Chlorocatechol in urine | end of shift at end of workweek |
|          |               | USA: ACGIH-BEI, urine | 20 mg/g creatinine  | p-Chlorophenol in urine   | end of shift at end of workweek |

### Engineering controls

Use only closed, grounded equipment with this product. Extract vapors by suction at point of emission. Process exhaust through separator/filter as needed.  
 Product is an excellent solvent for a variety of natural and synthetic resins as well as for oils, fats, and softeners.  
 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:         Wear suitable protective clothing and shoes.  
                                   Protective gloves according to OSHA Standard - 29 CFR: 1910.138.  
                                   Glove material: butyl caoutchouc (butyl rubber)-Layer thickness: >=0,5 mm.  
                                   Breakthrough time >480 min.  
                                   Unsuitable materials: natural rubber, nitrile rubber, fluoro rubber.  
                                   Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- Respiratory protection:   Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.  
                                   Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2. In case of prolonged or repeated exposures: use self-contained breathing apparatus.
- General hygiene considerations:  
                                   Wash hands before breaks and after work.  
                                   Take off immediately all contaminated clothing.  
                                   Do not breathe vapors. Avoid contact with skin and eyes.  
                                   Keep away from food and drinks.  
                                   Have eye wash bottle or eye rinse ready at work place.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|  |   |
|--|---|
| Appearance:                              | Form: liquid<br>Color: amber  |
| Odor:                                    | like Ethyl acetate  |
| Odor threshold:                          | No data available   |
| pH value:                                | No data available   |
| Melting point/freezing point:            | n.a.  |
| Initial boiling point and boiling range: | 170.6 °F  |
| Flash point/flash point range:           | 26.6 °F   |
| Evaporation rate:                        | No data available   |
| Flammability:                            | No data available   |
| Explosion limits:                        | LEL (Lower Explosion Limit): 2.10 Vol-%<br>UEL (Upper Explosive Limit): 11.50 Vol-% |
| Vapor pressure:                          | at 68 °F: 103 hPa<br>at 122 °F: (ethyl acetate) 360 hPa                             |
| Vapor density:                           | No data available   |
| Density:                                 | at 68 °F: 1 g/mL  |
| Solubility:                              | soluble in acetone  |
| Water solubility:                        | at 32 °F: partially soluble   |
| Partition coefficient: n-octanol/water:  | No data available   |
| Auto-ignition temperature:               | not self-igniting   |
| Thermal decomposition:                   | approx. 77°C  |
| Viscosity, dynamic:                      | at 73.4 °F: (dynamic) 3 mPa*s   |
| Explosive properties:                    | Product is not explosive.   |
| Ignition temperature:                    | 806 °F  |
| Solvent content:                         | 73 %  |
| Additional information:                  | Contents of water: 0%   |

## 10. Stability and reactivity

|                                    |  |
|------------------------------------|--|
| Reactivity:                        | Highly flammable liquid and vapor.   |
| Chemical stability:                | Product is stable under normal storage conditions.   |
| Possibility of hazardous reactions | Vapors may form explosive mixtures with air.   |
| Conditions to avoid:               | Reactions with alcohols, amines, liquid acids and bases.<br>Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.                                   |
| Incompatible materials:            | Various plastics are incompatible work materials. When mixed with water, forms byproducts that are hazardous to health. Especially in closed containers potentially explosive mixtures may form above water surface. |
| Hazardous decomposition products:  | In case of fire may be liberated: Nitrogen oxides, HCl- and HCN-combinations.  |
| Thermal decomposition:             | approx. 77°C   |

## 11. Toxicological information

### Toxicological tests

Acute toxicity: LD50 Rat, oral: (Chlorobenzene) 2910 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: Lack of data.  
 Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.  
 Sensitisation to the respiratory tract: Respiratory Sensitizer - Category 1 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 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

In case of inhalation: Vapors may cause drowsiness and dizziness.  
 Vapors irritate mucous membranes and respiratory system.  
 The following symptoms may occur: Sore throat, loss of appetite, headache, fatigue, drowsiness.  
 Higher doses may have a narcotic effect. Nausea, vomiting, breathing paralysis.  
 May cause sensitization by inhalation.  
 In case of ingestion:  
 Aspiration of this product into the lungs during vomiting, may cause serious injury or death.  
 After contact with skin:  
 Irritates skin and mucous membranes. Repeated skin contact leads to dryness and a heightened tendency toward infection. Expect absorption through the skin.  
 After eye contact: irritant

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity: Forms carbon dioxide and turns into a hard and insoluble by-product (poly urea) on the water's edge.

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

**Additional ecological information**

Volatile organic compounds (VOC):

73 % by weight = 730 g/L

General information:

Do not allow to enter into ground-water, surface water or drains.

**13. Disposal considerations**

**Product**

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

**Contaminated packaging**

Recommendation: Handle empty containers with care. Incineration may cause explosion. Dispose of waste according to applicable legislation.

**14. Transport information**

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

Identification number: UN1173  
 Proper shipping name: UN 1173, UN 1173, Ethyl acetate  
 Hazard class or Division: 3  
 Packing Group: II  
 Labels: 3  
 Special provisions: IB2, T4, TP1  
 Packaging – Exceptions: 150  
 Packaging – Non-bulk: 202  
 Packaging – Bulk: 242  
 Quantity limitations – Passenger aircraft / rail: 5 L  
 Quantity limitations – Cargo only: 60 L  
 Vessel stowage – Location: B





## 636W26 - Promoter for 636W25

Material number 636W26

Page: 9 of 12

### Sea transport (IMDG)

|  |  |
|--|--|
| UN number:                             | UN 1173  |
| Proper shipping name:                  | UN 1173, ETHYL ACETATE   |
| Class or division, Subsidiary risk:    | Class 3, Subrisk -   |
| Packing Group:                         | II   |
| EmS:                                   | F-E, S-D   |
| Special provisions:                    | -  |
| Limited quantities:                    | 1 L  |
| Excepted quantities:                   | E2   |
| Contaminated packaging - Instructions: | P001   |
| Contaminated packaging - Provisions:   | -  |
| IBC - Instructions:                    | IBC02  |
| IBC - Provisions:                      | -  |
| Tank instructions - IMO:               | -  |
| Tank instructions - UN:                | T4   |
| Tank instructions - Provisions:        | TP1  |
| Stowage and handling:                  | Category B.  |
| Properties and observations:           | Colourless liquid with a fragrant odour. Flashpoint: - 4°C c.c. Explosive limits: 2,18% to 11,5%. Immiscible with water. |
| Marine pollutant:                      | no   |
| Segregation group:                     | none   |

### Air transport (IATA)

|   |  |
|---|--|
| UN/ID number:                           | UN 1173                                  |
| Proper shipping name:                   | UN 1173, ETHYL ACETATE                   |
| 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 |
| Emergency Response Guide-Code (ERG):    | 3L                                       |

**636W26 - Promoter for 636W25**

Material number 636W26

Page: 10 of 12

**15. Regulatory information****National regulations - U.S. Federal Regulations**

|   |   |
|---|---|
| Ethyl acetate:                              | TSCA Inventory: listed; EPA flags T<br>TSCA HPVC: not listed<br>Other Environmental Laws:<br>CERCLA: RQ 5000 lbs.<br>RCRA Hazardous Wastes: Code U112<br>NIOSH Recommendations:<br>Occupational Health Guideline: 0260  |
| tris-(p-Isocyanatophenyl)<br>thiophosphate: | TSCA: listed  |
| Chlorobenzene:                              | TSCA Inventory: listed; EPA flags T<br>TSCA HPVC: not listed<br>Clean Air Act:<br>Hazardous Air Pollutants: Code XO<br>SOCMI Chemical: yes<br>Clean Water Act:<br>Hazardous Substances: RQ 100 lbs.<br>Priority Pollutant: yes<br>Other Environmental Laws:<br>CERCLA: RQ 100 lbs.<br>RCRA Hazardous Wastes: Code U037<br>RCRA Groundwater Monitoring: Methods 8010, 8020, 824 / PQL<br>2, 2, 5<br>SARA Title III Section 313, Toxic Release: Conc. 1.0% /<br>Threshold Standard<br>NIOSH Recommendations:<br>Occupational Health Guideline: 0121 |

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

Ethyl acetate: Delaware Air Quality Management List:  
 DRQ: 5000 - RQ State: Federal Regulations Apply  
 Idaho Air Pollutant List:  
 Title 585: AAC: 70 - EL: 93,3 - OEL: 1400 - Title 586: -  
 Main Hazardous Air Pollutants:  
 Me 2005: HAP - Hap Rpt: 20000  
 Massachusetts Haz. Substance codes: 2,4,5,6 F8  
 Minnesota Haz. Substance:  
 Codes: AO - Ratings: 6.83 - 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: 400 ppm - 1400 mg

Chlorobenzene: California Proposition 65 code: -  
 Delaware Air Quality Management List:  
 DRQ: 100 - RQ State: Federal Regulations Apply  
 Idaho Air Pollutant List:  
 Title 585: AAC: 17.5 - EL: 23.3 - OEL: 350 - Title 586: -  
 Maine Hazardous Air Pollutants:  
 Me 2005: HAP - Hap Rpt: 2000  
 Massachusetts Haz. Substance codes: 2,4,5,6 F7 F8 F9  
 Michigan Critical Material:  
 Note: - - CMR: 33 - Parameter: 00108-90-7 - Annual Usage Parameter: 100  
 Minnesota Haz. Substance:  
 Codes: AO - Ratings: 10.14 - Status: Air Pollutant Title III. TRI. Water Pollutant  
 New Jersey RTK Hazardous Substance:  
 DOT: 1134 - Sub No.: 0376 - TPQ: -  
 New York List of Hazardous Substances:  
 RQ-Air: 100 - RQ-Land: 1 - Note: No Note Associated with this chemical.  
 Pennsylvania Haz. Substance code: E  
 Washington Air Contaminant:  
 TWA: 75 ppm - 350 mg

**National regulations - Great Britain**

Hazchem-Code: •3YE

**16. Other information**

Text for labeling: Contains 70 - 75 % Ethyl acetate, 25 % tris-(p-Isocyanatophenyl) thiophosphate, 2 % Chlorobenzene. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:  
 Health: 2 (Moderate)  
 Fire: 3 (Serious)  
 Reactivity: 0 (Minimal)

HMIS Version III Rating:  
 Health: 2 (Moderate)  
 Flammability: 3 (Serious)  
 Physical Hazard: 0 (Minimal)  
 Personal Protection: X = Consult your supervisor

|                 |   |
|-----------------|---|
| HEALTH          | 2 |
| FLAMMABILITY    | 3 |
| PHYSICAL HAZARD | 0 |
|                 | X |



# SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

## 636W26 - Promoter for 636W25

Material number 636W26

Revision date: 3/22/2018

Version: 12

Language: en-US

Date of print: 5/24/2018

Page: 12 of 12

Reason of change: Changes in section 1.3: Corporate headquarters

Date of first version: 10/30/1994

### 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.