

## 1. Identification

### Product identifier

Trade name: 636W22 - UHU Cement

### 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  
Zip code, city: Salt Lake City, UT 84120  
USA  
WWW: www.ottobockus.com  
Telephone: +1 (801) 956-2400  
Telefax: +1 (801) 956-2401  
Department 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 telephone 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. Hazard identification

### Classification of the substance or mixture

Flammable Liquid - Category 2 Highly flammable liquid and vapor.  
Eye Irritation - Category 2A Causes serious eye irritation.  
Specific Target Organ Toxicity (Single Exposure) - Category 3 May cause drowsiness or dizziness.

### Label elements

Symbols:



Signal word: **Danger**

Hazard statements: Highly flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.

### Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Avoid breathing vapors.

Wear protective gloves/protective clothing/eye protection.

Call a POISON CENTER/doctor if you feel unwell.

Store in a well-ventilated place. Keep cool.

### Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided.

Inhaling can lead to irritations of the respiratory tract and mucous membrane.

Higher doses may lead to a narcotic effect.

Special danger of slipping by leaking/spilling product.

## 3. Composition/information on ingredients

### Mixtures

Chemical characterization: Solvent-containing adhesive on the basis of cellulose nitrate

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 79-20-9	Methyl acetate	50 - 100 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 9004-70-0	Nitrocellulose solutions, with not more than 12,6% nitrogen, by dry mass, and not more than 55% nitrocellulose	25 - 50 %	Flammable Solid - Category 1.
CAS 123-86-4	n-Butyl acetate	2.5 - 10 %	Flammable Liquid - Category 3. Specific Target Organ Toxicity (Single Exposure) - Category 3.

The actual concentration or concentration range is withheld as a trade secret.

## 4. First aid measures

General information: If medical advice is needed, have product container or label at hand. Take off contaminated clothing and wash it before reuse.

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. Seek medical aid in case of troubles.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water. 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. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Immediately get medical attention.

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

Causes serious eye irritation. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking.

### Information to physician

Treat symptomatically.

## 5. Fire-fighting measures

### Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:

Water spray jet, dry chemical powder, alcohol resistant foam, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

### Specific hazards arising from the chemical

Highly flammable liquid and vapor. 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.

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), carbon monoxide and carbon dioxide

### Protective equipment and precautions for firefighters

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Heating will lead to pressure increase: danger of bursting and explosion. 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. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Eliminate all ignition sources if safe to do so.

Avoid breathing mist/vapors/spray. Avoid contact with the substance.

Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.

Environmental precautions:

Do not allow to enter into surface water or drains.

### Methods and material for containment and cleaning up

Methods for clean-up:

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance.

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.  
Special danger of slipping by leaking/spilling product.

## 7. Handling and storage

### Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.  
Avoid breathing mist/vapors/spray. Avoid contact with the substance. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.  
Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation. Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Precautions against fire and explosion: Highly flammable liquid and vapor. Ignition by hot surfaces, sparks and open flames.  
Take precautionary measures against static discharges.  
Keep away from heat. Keep away from sources of ignition.

### Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers: Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Keep only in the original container.  
Protect from heat and direct sunlight. Store containers in upright position.  
Hints on joint storage: Do not store together with combustible materials or highly flammable solids.  
Substances to avoid: Acids, alkalis.  
Keep away from food, drink and animal feedingstuffs.

## 8. Exposure controls/personal protection

### Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
79-20-9	Methyl acetate	USA: ACGIH: STEL	757 mg/m <sup>3</sup> ; 250 ppm
		USA: ACGIH: TWA	606 mg/m <sup>3</sup> ; 200 ppm
		USA: IDLH: TWA	3,100 ppm [10% LEL]
		USA: NIOSH: STEL	760 mg/m <sup>3</sup> ; 250 ppm
		USA: NIOSH: TWA	610 mg/m <sup>3</sup> ; 200 ppm
		USA: OSHA: TWA	610 mg/m <sup>3</sup> ; 200 ppm
123-86-4	n-Butyl acetate	USA: ACGIH: STEL	150 ppm
		USA: ACGIH: TWA	50 ppm
		USA: IDLH: TWA	1,700 ppm
		USA: NIOSH: STEL	950 mg/m <sup>3</sup> ; 200 ppm
		USA: NIOSH: TWA	710 mg/m <sup>3</sup> ; 150 ppm
		USA: OSHA: TWA	710 mg/m <sup>3</sup> ; 150 ppm

### Appropriate engineering controls

Make sure there is sufficient air exchange and / or that working rooms are air suctioned.

### Personal protection equipment (PPE)

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.
Hand protection:	In case of handling larger quantities: protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: butyl caoutchouc (butyl rubber) Layer thickness: 0.6 - 0.8 mm Breakthrough time: 60 - 120 min Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection:	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Body protection:	Wear suitable protective clothing.
General hygiene considerations:	Avoid breathing mist/vapors/spray. Avoid contact with the substance. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation. Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

### Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state at 68 °F and 101.3 kPa	liquid
Color:	colorless
Odor:	ester-like
Odor threshold:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	134.6 °F (DIN 53171)
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 3.10 Vol-% UEL (Upper Explosive Limit): 16.00 Vol-%
Flash point/flash point range:	14 °F
Evaporation rate:	No data available
Auto-ignition temperature:	not self-igniting
Decomposition temperature:	No data available
pH:	No data available
Dynamic viscosity:	at 68 °F: 9,000 mPa*s
Solubility:	at 68 °F: various organic solvents
Water solubility:	at 68 °F: immiscible
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	at 68 °F: 220 hPa
Density:	at 68 °F: 1.11495 g/mL

Vapor density: No data available

Particle characteristics: Not applicable

### Additional information

Explosive properties: Vapors may form explosive mixtures with air.

Ignition temperature: 356 °F

Solvent content: 68.7 %

Solid content: 31.3 %

## 10. Stability and reactivity

Reactivity: Highly flammable liquid and vapor. Vapors may form explosive mixtures with air.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:  
Heating will lead to pressure increase: danger of bursting and explosion.

Conditions to avoid: Take precautionary measures against static discharge.  
Keep away from heat. Keep away from sources of ignition.  
Information about Methyl acetate:  
Contact with water causes product to separate into acetic acid and methyl alcohol.

Incompatible materials: Acids, alkalis

Hazardous decomposition products:  
No hazardous decomposition products when regulations for storage and handling are observed.

## 11. Toxicological information

### Information on toxicological effects

**Toxicological effects:** The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

Skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

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): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

**Other information:**

Information about methyl acetate:

LD50 Rat, oral: 6,482 mg/kg (OECD 401)

LD50 Rat, dermal: > 2,000 mg/kg (OECD 402)

LC50 Rabbit, inhalative (vapor): 49,200 mg/m<sup>3</sup>

Information about n-Butyl acetate:

LD50 Rat, oral: 10,760 mg/kg (OECD 423)

LD50 Rabbit, dermal: 14,112 mg/kg (OECD 402)

### Symptoms

Methyl acetate has a narcotic and depressive effect on the central nervous system especially in vapor form. Possible subsequent damage to the optical nerv. Measurably irritates the eyes and respiratory system. In severe cases, pneumonia or a pulmonary edema may develop.

symptoms:

Eye, nose, throat irritation, headache, at higher concentrations dizziness and nausea, unconsciousness and apnea.

Short term effect:

A concentration that is hazardous to health occurs rapidly. Long exposure to vapor-enriched air may cause serious damage with lasting side effects.

In case of inhalation: Vapors may cause drowsiness and dizziness.

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity:

Information about methyl acetate:

Fish toxicity:

LC50 Danio rerio (zebrafish): 250 - 350 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 1026.7 mg/L/48h (OECD 202)

Algae toxicity:

EC50 Desmodesmus subspicatus (green algae), growth rate: > 120 mg/L/72h (OECD 201)

Information about n-Butyl acetate:

Fish toxicity:

LC50 Pimephales promelas (fathead minnow): 18 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Ceriodaphnia spec.: 44 mg/L/48h (OECD 202)

NOEC Daphnia magna (Big water flea): 23 mg/L/21d (OECD 211, read across)

Algae toxicity:

EC50 Desmodesmus subspicatus (green algae), growth rate: 397 mg/L/72h (OECD 201, read across)

### Persistence and degradability

Further details:

No data available

### Bioaccumulative potential

Partition coefficient: n-octanol/water:

No data available

### Mobility in soil

No data available

### Other adverse effects

General information:

Do not allow to penetrate into soil, waterbodies or drains. Avoid spills and leaks. Very small amounts contaminates drinking water.

## 13. Disposal considerations

### Waste treatment methods

#### Product

Recommendation:

Incinerate according to applicable local, state and federal regulations.

#### Package

Recommendation:

Dispose of waste according to applicable legislation.

## 14. Transport information

### UN number

DOT:

UN1133

IMDG, IATA-DGR:

UN 1133



### UN proper shipping name

DOT, IMDG, IATA-DGR: UN 1133, ADHESIVES

### Transport hazard class(es)

DOT: 3  
 IMDG: Class 3, Subrisk -  
 IATA-DGR: Class 3



### Packing group

DOT, IMDG, IATA-DGR: II

### Environmental hazards

Marine pollutant: no

### Transport in bulk according to IMO instruments

No data available

### Special precautions for user

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

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:

#### Sea transport (IMDG)

EmS: F-E, S-D  
 Special Provisions: -  
 Limited quantities: 5 L  
 Excepted quantities: E2  
 Package - Instructions: P001  
 Package - 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: no  
 Segregation group: none

### Air transport (IATA)

Proper shipping name:	UN 1133, ADHESIVES
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

Methyl acetate:	TSCA Inventory: listed Clean Air Act: CAA SOCM Chemical: yes NIOSH Recommendations: Occupational Health Guideline: 0391*
Nitrocellulose solutions, with not more than 12,6% nitrogen, by dry mass, and not more than 55% nitrocellulose:	TSCA Inventory: listed OSHA Process Safety Management: Threshold 02500 lbs.
n-Butyl acetate:	TSCA Inventory: listed Clean Water Act: CWA Hazardous Substances: Category D; RQ 5000.0 lbs Other Environmental Laws: CERCLA: RQ 5000 lbs. NIOSH Recommendations: Occupational Health Guideline: 0072

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

n-Butyl acetate:	New York Right-To-Know: listed
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### Further regulations, limitations and legal requirements

No data available

## 16. Other information

Text for labeling:	Contains 50 - 100 % Methyl acetate, 25 - 50 % Nitrocellulose solutions, with not more than 12,6% nitrogen, by dry mass, and not more than 55% nitrocellulose, 2.5 - 10 % n-Butyl acetate.
Revision date:	11/28/2025
Date of first version:	9/27/1994
Reason of change:	General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)

### 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

### Abbreviations and acronyms:

AS/NZS: Australian Standards/New Zealand Standards  
CAS: Chemical Abstracts Service  
CFR: Code of Federal Regulations  
CLP: Classification, Labelling and Packaging  
CNS: Central Nervous System  
DMEL: Derived minimal effect level  
DNEL: Derived no-effect level  
DOT: Department of Transportation's Safety Regulations (USA)  
EC: European Community  
EC50: Effective Concentration 50%  
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods  
EN: European Standard  
EQ: Excepted quantities  
Eye Irritation: Eye irritation  
Flammable Liquid: Flammable liquid  
Flammable Solid: Flammable solid  
IATA: International Air Transport Association  
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations  
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IMDG Code: International Maritime Dangerous Goods Code  
IMO: International Maritime Organization  
LC50: Median lethal concentration  
LD50: Lethal dose 50%  
LEL: Lower Explosion Limit  
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships  
NOEC: No Observed Effect Concentration  
OECD: Organisation for Economic Co-operation and Development  
OEL: Occupational Exposure Limit Value  
OSHA: Occupational Safety and Health Administration  
PBT: Persistent, bioaccumulative and toxic  
PNEC: Predicted no-effect concentration  
STOT SE: Specific target organ toxicity - single exposure  
TLV: Threshold Limit Value  
TRGS: Technical Rules for Hazardous Substances  
UN: United Nations  
vPvB: Very persistent and very bioaccumulative  
WEL: Workplace Exposure Limit

### Department issuing data sheet

Contact person: see section 1: Department 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.