

1. Product and company identification

Product identifier

Trade name: 636K3 - Plastic Wood

This safety data sheet pertains to the following products:
636K3 = Plastisches Holz

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

General use: plastic wood filling compound for orthopedic procedures.
For use in industrial installations and professional treatment only.

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

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 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: pasty
Color: brown

Odor: like ketone

Classification: Flammable Solid - Category 1. Eye Irritation - Category 2A.
Specific Target Organ Toxicity (Single Exposure) - Category 3.

Hazard symbols:



Signal word:

Danger

Hazard statements: Flammable solid.
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.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Call a POISON CENTER/doctor/.../if you feel unwell.

Regulatory status

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

Hazards not otherwise classified

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Mixture of the substances listed below with non-hazardous additions.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 67-64-1	Acetone	30 - 60 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 9004-70-0	Nitrocellulose	5 - 20 %	Flammable Solid - Category 1.

Additional information: Contains Titanium dioxide. The maximum workplace exposure limits are, where necessary, listed in section 8.

4. First aid measures

General information: Immediately remove any wetted clothing, shoes or stockings.
First aider: Pay attention to self-protection!

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing.
If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. Do not allow victim to become chilled. Keep victim warm.
If victim is at risk of losing consciousness, position and transport on their side.

Following skin contact: Thoroughly wash skin with soap and water. Follow up by applying skin cream.
Seek medical attention if irritation persists.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
Subsequently seek the immediate attention of an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water.
Do not induce vomiting. Danger of aspiration!
Immediately get medical attention.

Most important symptoms/effects, acute and delayed

In case of inhalation: Do not breathe vapors. Higher doses may have a narcotic effect.

The following symptoms may occur: Headache, dizziness.

After contact with skin:

Prolonged or repeated contact with the product affects the skin's natural oils and induces drying up. This may lead to irritation/dermatitis.

After eye contact: irritant

Information to physician

Combat acidosis. Monitor alkali reserves. Monitor breathing. If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. Attention: several hours latency period.

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

approx. -2.2 °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

Flammable solid. In case of fire may be liberated: Titanium dioxide-smoke, Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus to prevent exposure to poisonous gases that may develop.

Additional information:

Use fine water spray to cool endangered containers.

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

6. Accidental release measures

Personal precautions:

Keep away from sources of ignition.

Do not breathe vapors. Wear appropriate protective equipment.

Keep unprotected people away. Provide adequate ventilation.

Avoid contact with skin and eyes.

Environmental precautions:

Do not allow to enter into surface water or drains.

If necessary, notify appropriate authorities.

Methods for clean-up:

Remove all sources of ignition. Provide adequate ventilation.

Take up mechanically, placing in appropriate containers for disposal.

Additional information:

Flammable solid.

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. Ignition by hot surfaces, sparks and open flames.

Potentially explosive mixtures with air may form above water surface.

Product flocculates in water. Parts of the solvent used may dissolve in water.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.
Do not breathe vapors. Avoid contact with skin and eyes.

Precautions against fire and explosion:

Take precautionary measures against static discharges.
Keep away from sources of ignition - No smoking.
Highly flammable vapors.
Forms explosive mixtures with air, also in empty, uncleaned containers.
Exposure to temperatures exceeding 122 °F will increase pressure: resulting in danger of bursting or explosion.

Specific use(s) plastic wood filling compound

Storage

Requirements for storerooms and containers:

Protect from heat and direct sunlight.
Store container tightly closed in a dry and cool place.

Hints on joint storage: Do not store together with oxidizing agents. Keep away from alkalis.
Keep away from food, drink and animal feedingstuffs.

Further details: Steel, stainless steel and aluminium are stable container materials.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
67-64-1	Acetone	USA: ACGIH: STEL	500 ppm
		USA: ACGIH: TWA	250 ppm
		USA: IDLH: TWA	2,500 ppm
		USA: NIOSH: TWA	590 mg/m ³ ; 250 ppm
		USA: OSHA: TWA	2,400 mg/m ³ ; 1,000 ppm
13463-67-7	Titanium dioxide	USA: ACGIH: TWA	0.2 mg/m ³ (nanoparticle, respirable fraction)
		USA: ACGIH: TWA	2.5 mg/m ³ (Fine dust, respirable fraction)
		USA: IDLH: TWA	5,000 mg/m ³
		USA: OSHA: TWA	15 mg/m ³ (total dust)

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

Engineering controls

Explosion protection required. Work only with resistant materials.
Provide for good ventilation or exhaust system or work with completely self-contained equipment.
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>Protective gloves according to OSHA Standard - 29 CFR: 1910.138.</p> <p>Glove material: Nitrile rubber-Layer thickness: 0,35 mm.</p> <p>Butyl caoutchouc (butyl rubber)-Layer thickness: 0,5 mm.</p> <p>Breakthrough time: >480 min.</p> <p>Observe glove manufacturer's instructions concerning penetrability and breakthrough time.</p>
Respiratory protection:	<p>Use filter type AX (= against vapors of low boiling organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.</p> <p>Have a breathing apparatus that is not dependent on the circulating air ready for emergencies. In case of prolonged or repeated exposures: use self-contained breathing apparatus.</p>
General hygiene considerations:	<p>Take off immediately all contaminated clothing.</p> <p>Do not breathe vapors.</p> <p>Avoid contact with skin and eyes.</p> <p>Wash hands before breaks and after work.</p> <p>When using do not eat, drink or smoke.</p>

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	<p>Form: pasty</p> <p>Color: brown</p>
Odor:	like ketone
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	approx. -2.2 °F
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	<p>LEL (Lower Explosion Limit): 2.60 Vol-%</p> <p>UEL (Upper Explosive Limit): 13.00 Vol-%</p>
Vapor pressure:	at 68 °F: 239.5 hPa
Vapor density:	No data available
Density:	at 68 °F: 0.79 g/mL
Water solubility:	partially miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	not self-igniting
Thermal decomposition:	No data available

Explosive properties: Product is not explosive.
Vapors may form explosive mixtures with air.

Ignition temperature: 356 °F

10. Stability and reactivity

Reactivity: Flammable solid.

Chemical stability: Stable under recommended storage conditions.
Unsuitable materials: Rubber

Possibility of hazardous reactions:
Vapors may form explosive mixtures with air.
Forms explosive mixtures with air, also in empty, uncleaned containers. Concentrated vapors are heavier than air. May become electrostatically charged.

Conditions to avoid: Protect against heat /sun rays.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharge.
Use explosion-proof electrical/ventilating/lighting equipment.

Incompatible materials: Strong oxidizing agents
Attacks many plastics and rubbers. On contact with barium hydroxide, sodium hydroxide and many other alkaline materials condensation may occur.

Hazardous decomposition products:
In case of fire may be liberated: Titanium dioxide-smoke, Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Thermal decomposition: No data available

11. Toxicological information

Toxicological tests

Acute toxicity: LD50 Rat, oral: (Information about acetone) 5,800 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: 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

In case of inhalation: Do not breathe vapors. Higher doses may have a narcotic effect.
 The following symptoms may occur: Headache, dizziness.
 After contact with skin:
 Prolonged or repeated contact with the product affects the skin's natural oils and induces drying up. This may lead to irritation/dermatitis.
 After eye contact: irritant

General remarks

sensitization: Not known to cause sensitization.

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Information about acetone:
 Leuciscus idus test LC0: 6320 - 7900 mg/l - LC 50: 7505 - 11300 mg/l -
 LC100: 10670 - 15800 mg/l
 Goldfish: LC50/24h: > 5000 mg/l
 Acute toxicity values: bacteria: 2,8 - fish: 2,0
 Toxic to aquatic organisms.
 LD 50 Daphnia magna: 10 mg/l
 Toxic concentration limit:
 Microcystis aeruginosa 530 mg/l - Entosiphon sulcatum: 28 mg/l
 Pseudomonas putida: 1700 mg/l - Scenedesmus quadricauda: 7500 mg/l

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

Volatile organic compounds (VOC):

55 % by weight / 434.5 g/L

General information:

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

13. Disposal considerations

Product

Recommendation:

Do not dispose of with household waste.

Incinerate according to applicable local, state and federal regulations.

Package

Recommendation:

Dispose of waste according to applicable legislation.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

UN 3175

UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 3175, SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (acetone)

Transport hazard class(es)

ADR/RID:

Class 4.1, Code: F1

IMDG:

Class 4.1, Subrisk -

IATA-DGR:

Class 4.1



Packing group

ADR/RID, IMDG, IATA-DGR:

II

Environmental hazards

Marine pollutant:

no

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

No data available

USA: Department of Transportation (DOT)

Identification number: UN3175
 Proper shipping name: UN 3175,
 SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (acetone)
 Hazard class or Division: 4.1
 Packing Group: II
 Labels: 4.1
 Symbols: G
 Special Provisions: 47, IB6, IP2, T3, TP33
 Packaging – Exceptions: 151
 Packaging – Non-bulk: 212
 Packaging – Bulk: 240
 Quantity limitations – Passenger aircraft / rail:
 15 kg
 Quantity limitations – Cargo only: 50 kg
 Vessel stowage – Location: B



Sea transport (IMDG)

UN number: UN 3175
 Proper shipping name: UN 3175, SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (acetone)
 Class or division, Subsidiary risk: Class 4.1, Subrisk -
 Packing Group: II
 EmS: F-A, S-I
 Special Provisions: 216 274
 Limited quantities: 1 kg
 Excepted quantities: E2
 Package - Instructions: P002
 Package - Provisions: PP9
 IBC - Instructions: IBC06
 IBC - Provisions: B21
 Tank instructions - IMO: -
 Tank instructions - UN: T3, BK2
 Tank instructions - Provisions: TP33
 Stowage and handling: Category B.
 Properties and observations: Mixtures of non-dangerous solids (such as soil, sand, production materials etc.) and flammable liquids.
 Marine pollutant: no
 Segregation group: none

Air transport (IATA)

UN/ID number: UN 3175
 Proper shipping name: UN 3175, SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (acetone)
 Class or division, Subsidiary risk: Class 4.1
 Packing Group: II
 Hazard label: Flamm. solid
 Excepted Quantity Code: E2
 Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y441 - Max. Net Qty/Pkg. 5 kg
 Passenger and Cargo Aircraft: Pack.Instr. 445 - Max. Net Qty/Pkg. 15 kg
 Cargo Aircraft only: Pack.Instr. 448 - Max. Net Qty/Pkg. 50 kg
 Special Provisions: A46
 Emergency Response Guide-Code (ERG): 3L

15. Regulatory information

National regulations - U.S. Federal Regulations

Acetone:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA SOCM Chemical: yes</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>RCRA Hazardous Wastes: Code U002</p> <p>RCRA Groundwater Monitoring: Methods 8240 / PQL 100</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0004*</p>
Nitrocellulose:	<p>TSCA Inventory: listed</p> <p>OSHA Process Safety Management: Threshold 02500 lbs.</p>
Titanium dioxide:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status:</p> <p>IARC Rating: Group 2B</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0617</p>

National regulations - U.S. State Regulations

Acetone:	<p>California Prop 65 List: None</p> <p>Delaware Air Quality Management List:</p> <p>DRQ: 5000 - RQ State: Federal Regulations Apply</p> <p>Idaho Air Pollutant List:</p> <p>Title 585: AAC: 89 - EL: 119 - OEL: 1780</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9</p> <p>Minnesota Haz. Substance:</p> <p>Codes: AON - Ratings: 7.16 - Status: Title III</p> <p>New York List of Hazardous Substances:</p> <p>RQ-Air: 5000 - RQ-Land: 1 - Note: No Note Associated with this chemical.</p> <p>Pennsylvania Haz. Substance code: E</p> <p>Washington Air Contaminant:</p> <p>TWA: 750 ppm - 1800 mg - STEL: 1000 ppm - 2400 mg</p>
Nitrocellulose:	<p>California Proposition 65 code: -</p> <p>Delaware Air Quality Management List:</p> <p>DRQ: 500 - RQ State: State requirement differs from Federal</p> <p>Massachusetts Haz. Substance codes: 5,6</p> <p>New Jersey RTK Hazardous Substance:</p> <p>DOT: 0340 - Sub No.: 3642 - TPQ: -</p> <p>Pennsylvania Haz. Substance code: -</p>

National regulations - Canada

Acetone:	DSL: listed
Nitrocellulose:	DSL: listed
Titanium dioxide:	DSL: listed

National regulations - Great Britain

Hazchem-Code: 1Z

16. Other information

Text for labeling:

Contains 30 - 60 % Acetone, 5 - 20 % Nitrocellulose.

Hazard rating systems:



contains acetone

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:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 AS/NZS: Australian Standards/New Zealand Standards
 CAS: Chemical Abstracts Service
 CFR: Code of Federal Regulations
 CLP: Classification, Labelling and Packaging
 DMEL: Derived minimal effect level
 DNEL: Derived no-effect level
 EC: European Community
 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
 LC0: Lethal concentration 0%
 LC50: Median lethal concentration
 LEL: Lower Explosion Limit
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, bioaccumulative and toxic
 PNEC: Predicted no-effect concentration
 RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
 STOT SE: Specific target organ toxicity - single exposure
 TRGS: Technical Rules for Hazardous Substances
 UN: United Nations
 vPvB: Very persistent and very bioaccumulative

Reason of change:

Changes in section 8: Occupational exposure limit values

Date of first version:

10/24/1994

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.