

**1. Product and company identification**

**Product identifier**

Trade name: 633F14 - Molykote DX Paste

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

General use: Lubricating agent.  
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  
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: pasty  
Color: white  
Odor: weak  
Classification: Skin Irritation - Category 2; Eye Irritation - Category 2A; Aquatic toxicity - acute - Category 1; Aquatic toxicity - chronic - Category 3;

Hazard symbols:



Signal word: **Warning**

**633F14 - Molykote DX Paste**

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Hazard statements: Causes skin irritation.  
 Causes serious eye irritation.  
 Very toxic to aquatic life.  
 Harmful to aquatic life with long lasting effects.

Precautionary statements: Wash hands and face thoroughly after handling.  
 Avoid release to the environment.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 IF ON SKIN: Wash with plenty of water/soap.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Specific treatment (see ' First aid ' on this label).  
 If skin irritation occurs: Get medical advice/attention.  
 If eye irritation persists: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.  
 Collect spillage.  
 Dispose of contents/container to hazardous or special waste collection point.

**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: mixture contains anorganic materials, Organic materials

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	30 - 50 %	not applicable
CAS 64741-96-4	Distillates (petroleum), solvent-refined heavy naphthenic	10 - 20 %	not applicable
CAS 64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	5 - 10 %	not applicable
CAS 61791-53-5	amines, N-tallow alkyltrimethylenedi-, oleates	< 5 %	Skin Corrosion - Category 1B. Eye Damage - Category 1. Aquatic toxicity - acute - Category 1.
CAS 1314-13-2	Zinc oxide	< 5 %	Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 7620-77-1	Lithium 12-hydroxystearate	< 5 %	not applicable
CAS 1592-23-0	Calcium distearate	< 5 %	not applicable

Additional information: Information about amines, N-tallow alkyltrimethylenedi-, oleates: M-factor =100

## 4. First aid measures

- General information: Remove affected person from the danger area and lay down.
- In case of inhalation: Move victim to fresh air. If you feel unwell, seek medical advice.
- Following skin contact: Take off immediately all contaminated clothing and wash it before reuse. After contact with skin, wash immediately with soap and plenty of water. 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. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently seek the immediate attention of an ophthalmologist.
- After swallowing: Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention.

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

Causes skin irritation. Causes serious eye irritation.

**Information to physician**

Treat symptomatically.

## 5. Fire fighting measures

- Flash point/flash point range:  
> 392 °F (c.c.)
- Auto-ignition temperature: No data available
- Suitable extinguishing media:  
Water spray jet, dry chemical powder, alcohol resistant foam, carbon dioxide.
- Extinguishing media which must not be used for safety reasons:  
strong water jet

**Specific hazards arising from the chemical**

In case of fire may be liberated: metallic oxides, nitrogen oxides (NOx), carbon monoxide and carbon dioxide, Phosphorus oxides, hydrogen fluoride.

- Protective equipment and precautions for firefighters:  
Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

- Additional information: Keep containers cool with water spray until well after the fire is out. Do not allow fire water to penetrate into surface or ground water.

## 6. Accidental release measures

- Personal precautions: Provide adequate ventilation. Avoid contact with the substance. Do not breathe dust. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away. Avoid contact with skin and eyes. Keep away from sources of ignition.
- Environmental precautions:  
Do not allow to penetrate into soil, waterbodies or drains.
- Methods for clean-up: Dam spills. Take up mechanically, placing in appropriate containers for disposal.
- Additional information: Special danger of slipping by leaking/spilling product.

## 7. Handling and storage

### Handling

Advices on safe handling: Provide adequate ventilation. Avoid contact with the substance. Do not breathe dust. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.  
Keep unprotected people away. Avoid contact with skin and eyes. Keep away from sources of ignition.

Precautions against fire and explosion:  
Keep away from sources of ignition - No smoking.

### Storage

Requirements for storerooms and containers:  
Keep only in the original container in a cool, well-ventilated place.  
Keep container tightly closed and dry. Protect from moisture contamination.

Hints on joint storage: Do not store together with: oxidizing agents

## 8. Exposure controls / personal protection

### Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
1314-13-2	Zinc oxide	NIOSH: Ceiling	15 mg/m <sup>3</sup>
		USA: ACGIH: STEL	10 mg/m <sup>3</sup>
		USA: ACGIH: TWA	2 mg/m <sup>3</sup>
		USA: NIOSH: STEL	10 mg/m <sup>3</sup>
		USA: NIOSH: TWA	5 mg/m <sup>3</sup>
		USA: OSHA: TWA	15 mg/m <sup>3</sup>
		USA: OSHA: TWA	5 mg/m <sup>3</sup>

### Engineering controls

Provide adequate ventilation.  
The use of local exhaust ventilation is recommended.  
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.  
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.  
Glove material: nitrile rubber butyl caoutchouc (butyl rubber)  
Breakthrough time: >480 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Wear a dust mask, in case of excessive dust.  
When vapors form, use respiratory protection.  
Combination filter: Use filter type AK-P according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

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General hygiene considerations:

Avoid contact with skin and eyes. Eye wash facility must be provided. Do not breathe dust. Take off immediately all contaminated clothing and wash it before reuse. When using do not eat, drink or smoke. Wash hands before breaks and after work.

**9. Physical and chemical properties**

**Information on basic physical and chemical properties**

Appearance:	Form: pasty Color: white
Odor:	weak
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	> 392 °F (c.c.)
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	1.14 g/cm <sup>3</sup>
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Explosive properties:	not explosive

**10. Stability and reactivity**

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts with oxidizing agents
Conditions to avoid:	Protect from: heat, humidity
Incompatible materials:	Oxidising agent
Hazardous decomposition products:	In case of fire may be liberated: metallic oxides, nitrogen oxides (NO <sub>x</sub> ), carbon monoxide and carbon dioxide, Phosphorus oxides, hydrogen fluoride.
Thermal decomposition:	No data available

## 11. Toxicological information

### Toxicological tests

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

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

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: 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): Lack of data.

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.

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Information about amines, N-tallow alkyltrimethylenedi-, oleates. The given toxical dates are determined by analogy conclusion.

Algae toxicity:  
EC50: 0.01 - 0.1 mg/L/72h

Daphnia toxicity:  
EC50 Daphnia magna (Big water flea): 0.001 - 0.01 mg/L/48h

Fish toxicity:  
LC50: 0.1 - 1 mg/L/96h

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

### Additional ecological information

Volatile organic compounds (VOC):

0 % by weight

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.

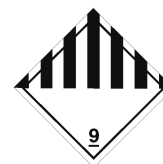
**Contaminated packaging**

Recommendation: Waste key number  
 ASN150104 Metallic packaging.  
 ASN150102 Plastic packaging.  
 Dispose of waste according to applicable legislation.  
 Empty carefully and completely, if possible.

**14. Transport information**

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

Identification number: UN3077  
 Proper shipping name: UN 3077, UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.  
 Hazard class or Division: 9  
 Packing Group: III  
 Labels: 9  
 Special provisions: 8, 146, 335, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33  
 Packaging – Exceptions: 155  
 Packaging – Non-bulk: 213  
 Packaging – Bulk: 240  
 Quantity limitations – Passenger aircraft / rail: No limit  
 Quantity limitations – Cargo only: No limit  
 Vessel stowage – Location: A



**Sea transport (IMDG)**

UN number: UN 3077  
 Proper shipping name: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, amines, N-tallow alkyltrimethylenedi-, oleates)  
 Class or division, Subsidiary risk: Class 9, Subrisk -  
 Packing Group: III  
 EmS: F-A, S-F  
 Special provisions: 274, 335, 966, 967, 969  
 Limited quantities: 5 kg  
 Excepted quantities: E1  
 Contaminated packaging - Instructions: P002, LP02  
 Contaminated packaging - Provisions: PP12  
 IBC - Instructions: IBC08  
 IBC - Provisions: B3  
 Tank instructions - IMO: -  
 Tank instructions - UN: T1, BK2, BK2, BK3  
 Tank instructions - Provisions: TP33  
 Stowage and handling: Category A. SW23  
 Properties and observations: -  
 Marine pollutant: yes  
 Segregation group: none

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**Air transport (IATA)**

UN/ID number: UN 3077  
 Proper shipping name: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, amines, N-tallow alkyltrimethylenedi-, oleates)  
 Class or division, Subsidiary risk: Class 9  
 Packing Group: III  
 Hazard label: Miscellaneous  
 Excepted Quantity Code: E1  
 Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y956 - Max. Net Qty/Pkg. 30 kg G  
 Passenger and Cargo Aircraft: Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg  
 Cargo Aircraft only: Pack.Instr. 956 - Max. Net Qty/Pkg. 400 kg  
 Special provisions: A97 A158 A179 A197  
 Emergency Response Guide-Code (ERG): 9L

**15. Regulatory information**

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

Distillates (petroleum), hydrotreated heavy naphthenic: TSCA Inventory: listed; UVCB  
 TSCA HPVC: not listed  
 Distillates (petroleum), solvent-refined heavy naphthenic: TSCA Inventory: listed; UVCB  
 TSCA HPVC: not listed  
 Distillates (petroleum), solvent-dewaxed heavy paraffinic: TSCA Inventory: listed; UVCB  
 TSCA HPVC: not listed  
 Zinc oxide: TSCA Inventory: listed  
 TSCA HPVC: not listed  
 NIOSH Recommendations:  
 Occupational Health Guideline:  
 0675\*

**National regulations - Great Britain**

Hazchem-Code: 2Z

**16. Other information**

Text for labeling: Contains 30 - 50 % Distillates (petroleum), hydrotreated heavy naphthenic, 10 - 20 % Distillates (petroleum), solvent-refined heavy naphthenic, 5 - 10 % Distillates (petroleum), solvent-dewaxed heavy paraffinic, < 5 % amines, N-tallow alkyltrimethylenedi-, oleates, < 5 % Zinc oxide, < 5 % Lithium 12-hydroxystearate, < 5 % Calcium distearate. Safety data sheet available on request.

Hazard rating systems:



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

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

Reason of change: Changes in section 1.3: Corporate headquarters  
 Date of first version: 4/7/2016





# SAFETY DATA SHEET

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

## 633F14 - Molykote DX Paste

Material number 633F14

Revision date: 3/22/2018

Version: 3

Language: en-US

Date of print: 5/24/2018

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### 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.