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RESPIRATORY PROTECTION If the threshold value for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an E or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141). The use of breathing protection equipment, such as masks with organic vapour and dust/mist cartridges, is necessary in the absence of technical measures limiting worker exposure. The protection provided by masks is in any case limited. If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138). An emergency eye washing and shower system must be provided.			
9. Physical and chemical properties.			
9.1. Information on basic physical and chemical properties.			
Appearance	clear liquid		
Colour	straw yellow		
Odour	characteristic		
Odour threshold	Not available		
pH	13,5 +/- 0,5		
Melting or freezing point	Not available		
Boiling point	100 °C		
Distillation range	Not available		
Flash point	Not applicable		
Evaporation Rate	Not available		
Flammability of solids and gases	Not available		
Lower inflammability limit	Not available		
Upper inflammability limit	Not available		
Lower explosive limit	Not available		
Upper explosive limit	Not available		
Vapour pressure	Not available		
Vapour density	Not available		
Specific gravity	1,136 +/- 0,010	g/ml	
Solubility	soluble in water		
Partition coefficient: n-octanol/water	Not available		
Ignition temperature	Not available		
Decomposition temperature	Not available		
Viscosity	Not available		
Reactive Properties	Not available		
9.2. Other information. Not available			
10. Stability and reactivity.			
10.1. Reactivity. There are no particular risks of reaction with other substances in normal conditions of use.			
2-BUTOXYETHANOL: decomposes in the presence of heat.			
10.2. Chemical stability. The product is stable in normal conditions of use and storage.			
10.3. Possibility of hazardous reactions. The vapours may also form explosive mixtures with the air. POTASSIUM HYDROXIDE: attacks aluminium, tin, lead and zinc. Reacts violently with acids. 2-BUTOXYETHANOL: can react dangerously with: aluminium, oxidising agents. Forms peroxide with air.			
10.4. Conditions to avoid. Avoid overheating, electrostatic discharge and all sources of ignition. POTASSIUM HYDROXIDE: naked flames and heat. 2-BUTOXYETHANOL: avoid exposure to sources of heat and naked flames.			
10.5. Incompatible materials. POTASSIUM HYDROXIDE: Acids, metals, some plastics and rubber, water, halogenated hydrocarbons and maleic anhydride.			
10.6. Hazardous decomposition products. In the event of thermal decomposition or fire, vapours potentially dangerous to health may be released.			


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POTASSIUM HYDROXIDE: When boiled, it develops phosphine. Above decomposition temperature toxic potassium oxide fumes may develop. 2-BUTOXYETHANOL: hydrogen.			
11. Toxicological information.			
11.1. Information on toxicological effects. This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. Possible vapours are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness. If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.			
POTASSIUM HYDROXIDE LD50 (Oral): 270 mg/kg Rat 2-BUTOXYETHANOL LC50 (Inhalation): 2,21 mg/l/4h Rat LD50 (Dermal): 600 mg/kg Rabbit			
12. Ecological information.			
Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.			
12.1. Toxicity. Information not available.			
12.2. Persistence and degradability. Information not available.			
12.3. Bioaccumulative potential. Information not available.			
12.4. Mobility in soil. Information not available.			
12.5. Results of PBT and vPvB assessment. Information not available.			
12.6. Other adverse effects. Information not available.			
13. Disposal considerations.			
13.1. Waste treatment methods. Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. CONTAMINATED PACKAGING Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.			
14. Transport information.			
These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packaging or in packaging made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.			

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Road and rail transport:			
ADR/RID Class:	8 UN:	1719	
Packing Group:	III		
Label:	8		
Nr. Kemler:	80		
Limited Quantity	5 L		
Tunnel restriction code	(E)		
Proper Shipping Name:	CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE)		
Carriage by sea (shipping):			
IMO Class:	8 UN:	1719	
Packing Group:	III		
Label:	8		
EMIS:	F-A, S-B		
Marine Pollutant	NO		
Proper Shipping Name:	CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE)		
Transport by air:			
IATA:	8 UN:	1719	
Packing Group:	III		
Label:	8		
Cargo:			
Packaging instructions:	856	Maximum quantity:	60 L
Pass:			
Special Instructions:	A803		
Proper Shipping Name:	CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE)		
15. Regulatory information.			
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.			
<u>Seveso category:</u> None.			
<u>Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006:</u> <u>Product:</u> <u>Point:</u> 3			
<u>Substances in Candidate List (Art. 59 REACH):</u> None.			
<u>Substances subject to authorisation (Annex XIV REACH):</u> None.			
<u>Healthcare controls:</u> Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.			
<u>Inredients according Regulation (EC) No 648/2004</u> less than 5 % phosphonates, anionic surfactants, non-ionic surfactants, EDTA sodium salt			
15.2. Chemical safety assessment. No chemical safety assessment has been processed for the mixture and the substances it contains.			
16. Other information.			
Text of hazard (H) indications mentioned in section 2-3 of the sheet:			
Acute Tox. 4	Acute toxicity, category 4		
Skin Corr. 1A	Skin corrosion, category 1A		
Eye Irrit. 2	Eye irritation, category 2		
Skin Irrit. 2	Skin irritation, category 2		
H332	Harmful if inhaled.		
H312	Harmful in contact with skin.		

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H302	Harmful if swallowed.		
H314	Causes severe skin burns and eye damage.		
Text of risk (R) phrases mentioned in section 2-3 of the sheet:			
R20/21/22	HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.		
R22	HARMFUL IF SWALLOWED.		
R36	CAUSES SEVERE BURNS.		
R38	IRRITATING TO EYES.		
R36/38	IRRITATING TO EYES AND SKIN.		
R41	RISK OF SERIOUS DAMAGE TO EYES.		
GENERAL BIBLIOGRAPHY			
1. Directive 1999/45/EC and following amendments 2. Directive 67/548/EEC and following amendments and adjustments 3. Regulation (EC) 1907/2006 (REACH) of the European Parliament 4. Regulation (EC) 1272/2008 (CLP) of the European Parliament 5. Regulation (EC) 790/2009 (I Alp. CLP) of the European Parliament 6. Regulation (EC) 453/2010 of the European Parliament 7. The Merck Index. - 10th Edition 8. Handling Chemical Safety 9. Niosh - Registry of Toxic Effects of Chemical Substances 10. INRS - Fiche Toxicologique (toxicological sheet) 11. Patty - Industrial Hygiene and Toxicology 12. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition 13. IATA - Dangerous goods Regulations 54th Editions Jan. 2013 14. ADR - Dangerous goods Agreement for Transport by road, Jan. 2013 15. IMDG - International Maritime Goods Code, 35th Amendment 2010. Note for Users:			
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control, therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.			
Changes to previous review: The following sections were modified: 14			

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Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name
UNOX.Det&Rinse

Intended use
Self drying cleaner for UNOX ovens

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

1.3. Details of the supplier of the safety data sheet

Name
UNOX spa

Full address
via Majorana, 22

District and Country
35010 Cadoneghe (PD)

e-mail address of the competent person responsible for the Safety Data Sheet
Chiara.franzolin@unox.com

Tel. +39 049 8657511

Fax +39 049 8657555

2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in Directives 67/548/EEC and 1999/45/EC and EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Danger symbols:
C

R phrases:
35

2.2. Label elements

Hazard labeling pursuant to Directives 67/548/EEC and 1999/45/EC and subsequent amendments and supplements.

2.3. Other hazards

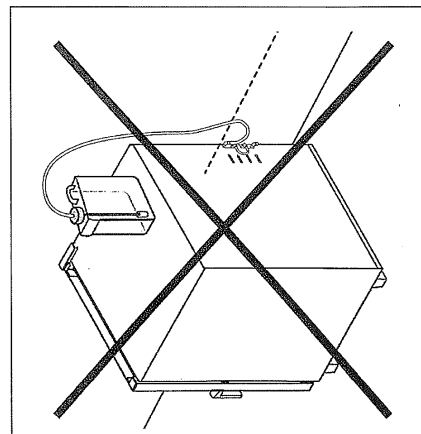
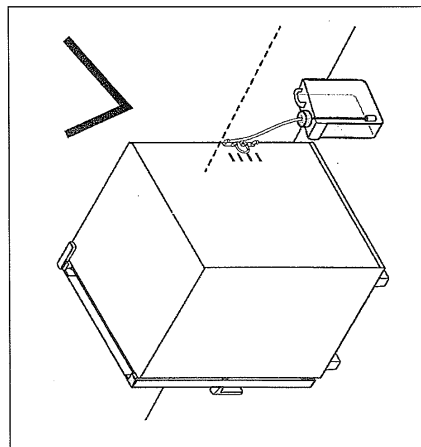
Contains:
POTASSIUM HYDROXIDE

S362/373/39
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION. IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

S28
IN CASE OF CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER.

R35
CAUSES SEVERE BURNS.

Information not available.



ATTENZIONE: NON POSIZIONARE LA TANICA SOPRA AL FORNO O AL DI SOPRA DELLA LINEA TRATTEGGIATA.

CAUTION: DO NOT PLACE THE TANK ON THE OVEN OR ABOVE THE DOTTED LINE.

PRECAUTION: NO COLOQUE EL TANQUE EN EL HORNO O SOBRE LA LINEA PUNTEADA.

ACHTUNG: NICHT ORT DEN TANK AUF OFEN ODER OBERHALB DER GESTRICHELTEN LINIE.

ATTENTION: NE PLACEZ PAS LE RESERVOIR SUR LE FOUR OU LE DESSUS DE LA LIGNE POINTILLEE.

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3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification	Conc. %	Classification 67/548/EEC	Classification 1272/2008 (CLP)
ALKYLPOLYGLUCOSIDE CAS. 54549-24-5 EC. 259-217-6 INDEX. -	1 - 5	Xi; R41	
POTASSIUM HYDROXIDE CAS. 1310-58-3 EC. 215-181-3 INDEX. 019-002-00-8	5 - 15	C R35, Xi R22	Acute Tox. 4 H302, Skin Corr. 1A H314
2-BUTOXYETHANOL CAS. 11175-2 EC. 203-905-0 INDEX. 603-014-00-0	1 - 5	Xn R20/21/22, Xi R36/38	Acute Tox. 4 H332, Acute Tox. 4 H312, Acute Tox. 4 H302, Eye Irrit. 2 H315, Skin Irrit. 2 H315
ANIONIC SURFACTANTS CAS. 28349-53-0 EC. - INDEX. -	1 - 5	Xi R36	
EDTA SODIUM SALT CAS. 54-02-9 EC. 200-573-9 INDEX. -	1 - 5	Xn R22, Xi R41	

* = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F)

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

4. First aid measures.

4.1. Description of first aid measures.

Seek medical advice.

SKIN: Immediately wash with plenty of water. Remove all contaminated clothing. Obtain immediate medical attention. Wash contaminated clothing separately before using them again.

INHALATION: Remove to open air. If breathing is irregular or stopped, administer artificial respiration. Obtain immediate medical attention.

INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Give nothing by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed.

For symptoms and effects caused by the contained substances see chap. 11.

4.3. Indication of any immediate medical attention and special treatment needed.

Follow doctor's orders.

5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING MEDIA

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and nebulised water.

EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS

None in particular.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

5.3. Advice for firefighters.

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health.

Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinguishing and the remains of the fire according to applicable regulations.

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SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist), work gloves (fireproof, cut proof and dielectric), a depressurised mask with facemask covering the whole of the operator's face or a self-respirator (self-protector) in the event of large quantities of fume.

6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

Wear appropriate protective equipment. Send away individuals who are not suitably equipped. Use breathing equipment if fumes or powders are released into the air. Stop the leakage if there is no hazard. Do not handle damaged containers or the leaked product before donning appropriate protective gear. For information on risks for the environmental and health, respiratory tract protection, ventilation and personal protection equipment, refer to the other sections of this sheet.

6.2. Environmental precautions.

The product must not penetrate the sewers, surface water, ground water and neighbouring areas. Dilute the product well with water after collection.

6.3. Methods and material for containment and cleaning up.

For liquid products, suck into a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomaceous earth, Kieselguhr, etc). Collect the majority of the remaining material and deposit in containers for disposal. For solid products, use spark proof mechanical tools to collect the leaked product and place in plastic containers. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage.

7.1. Precautions for safe handling.

Store in closed, labelled containers.

7.2. Conditions for safe storage, including any incompatibilities.

Normal storage conditions without particular incompatibilities.

7.3. Specific end uses(s).

Information not available.

8. Exposure controls/personal protection.

8.1. Control parameters.

Name	Type	Country	TWA/8h		STEL/15min	
			mg/m ³	ppm	mg/m ³	ppm
POTASSIUM HYDROXIDE	TLV-ACGIH				2 (C)	
	OEL	IRL			2	
	WEL	UK			2	
2-BUTOXYETHANOL	TLV-ACGIH		20			Skin
	OEL	EU 98	20	246	50	Skin
	OEL	IRL	20		50	Skin
	WEL	UK	25		50	Skin

C = CEILING.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.

HAND PROTECTION

Protect hands with category III (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVA, butyl, fluorocopolymer or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

EYE PROTECTION

Wear hood visor or protective visor together with airtight goggles (ref. standard EN 166).

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.