Safety Data Sheet

Complies with Annex II of REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code:	**0030210**
Name	**OX FIVE**
Chemical name and synonyms	**OX FIVE**

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

Sector of use	**SU22 – Professional uses SU21 – Consumer uses**
Product category	**PC15 – Products for the treatment of non-metallic surfaces**
Description/Usage	**Aging solution for wood**

1.3. Information about the supplier of the safety data sheet

Business name	**MARBEC SRL**
Address	**VIA CROCE ROSSA 5/i**
Locality and State	**51037 MONTALE (PISTOIA)** **ITALY**
	tel. +039 0573/959848
	fax
e-mail of the competent person, responsible for the safety data sheet	**info@marbec.it**

1.4. Emergency telephone number

For urgent information please contact

MARBEC srl
+390573959848 8.30am-1pm 2pm-6pm or +393348578502
Telephone number of Poison Control Centers active 24 hours a day
National Poisons Information Service (Birmingham Unit) +44 844 892 0111
IRCSS Maugeri Foundation –
Pavia 0039-0382-24444
CAV Ospedali Riuniti –
Bergamo 0039-800-883300
CAV Niguarda Ca` Granda Hospital –
Milan 0039-02-66101029
CAV Careggi Hospital - Florence 0039-055-7947819
CAV Gemelli Polyclinic –
Rome 0039-06-3054343
CAV Policlinico Umberto I –
Rome 0039-06 49978000
CAV Cardarelli Hospital –
Naples 0039-081 5453333
CAV Verona Integrated Hospital Company - Verona 800011858

SECTION 2. Hazard Identification

2.1. Substance or mixture classification

The product is classified as dangerous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments).
The product therefore requires a safety data sheet compliant with the provisions of Regulation (EU) 2020/878.
Any additional information regarding risks to health and/or the environment is reported in the sections. 11 and 12 of this sheet.

Hazard classification and indications:

Serious eye damage, category 1	H318	Causes serious eye damage.

2.2. Label elements

Hazard labeling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:

Warnings: Danger

Hazard Statements:

H318	Causes serious eye damage.

Precautionary advice:

P305+P351+P338	IN CASE OF CONTACT WITH EYES: rinse thoroughly for several minutes. Remove any contact lenses if it is easy to do so. Continue rinsing.
P280	Protect your eyes/face.
P310	Immediately call a POISON CENTER / doctor / . . .

Contains: ammonium carbamate

2.3. Other dangers

Based on available data, the product does not contain PBT or vPvB substances in percentages ≥ 0.1%.

The product does not contain substances with properties that interfere with the endocrine system in concentrations ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
AMMONIUM BICARBONATE		
CAS 1066-33-7	3 ≤ x < 9	Acute Tox. 4 H302
CE 213-911-5		Oral LD50: 1576
INDEX -		
REACH Reg. 01-2119486970-26		
ammonium carbamate		
CAS 1111-78-0	3 ≤ x < 9	Acute Tox. 4 H302, Eye Dam. 1 H318
CE 214-185-2		Oral LD50: >1000
INDEX -		
REACH Reg. 01-2119493982-22		

The complete text of the hazard indications (H) is shown in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove any contact lenses. Wash immediately and abundantly with water for at least 15 minutes, opening the eyelids wide. Consult a doctor if the problem persists.

SKIN: Take off contaminated clothing. Shower immediately. Wash the contaminated garments before reusing them.

INHALATION: Move the subject to fresh air. If breathing stops, give artificial respiration. Call a doctor immediately.

INGESTION: Call a doctor immediately. Do not induce vomiting. Do not administer anything that is not expressly authorized by your doctor.

4.2. Main symptoms and effects, both acute and delayed

There is no specific information on the symptoms and effects caused by the product.

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

Information not available

SECTION 5. Fire fighting measures

5.1. Fire fighting

SUITABLE EXTINGUISHING MEANS
Choose the most appropriate extinguishing media for the specific situation.
UNSUITABLE EXTINGUISHING MEANS
No one in particular.

5.2. Special hazards arising from the substance or mixture

DANGERS DUE TO EXPOSURE IN THE EVENT OF FIRE
The product is not flammable or combustible.

5.3. Recommendations for fire fighters

EQUIPMENT
Normal fire-fighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN469), flame retardant gloves (EN 659) and fire fighter boots (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop the leak if there is no danger.
Wear appropriate protective equipment (including personal protective equipment referred to in section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. These indications are valid both for workers and for emergency interventions.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and materials for containment and cleanup

Suck up the spilled product into a suitable container. Evaluate the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material.
Provide sufficient ventilation of the area affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

Any information regarding personal protection and disposal is reported in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for Safe Handling

Handle the product after consulting all other sections of this safety data sheet. Avoid dispersing the product into the environment. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Keep containers closed, in a well-ventilated place, away from direct sunlight. Store containers away from any incompatible materials, checking section 10.

Storage class TRGS 510 (Germany):
12

7.3. Specific end uses

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

AMMONIUM BICARBONATE

Predicted no-effect concentration on the environment - PNEC		
Reference value in fresh water	0.37	mg/l
Reference value in sea water	0.037	mg/l
Reference value for sediments in fresh water	0.1332	mg/kg
Reference value for sediments in sea water	0.01332	mg/kg
Reference value for water, intermittent release	0.63	mg/l
Reference value for STP microorganisms	1347	mg/l
Reference value for the terrestrial compartment	74.9	mg/kg

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Inhalation		143.91 mg/m3		13.33 mg/m3		160.7 mg/m3		62.5 mg/m3
Dermal				34.2 mg/kg/d				57 mg/kg/d

ammonium carbamate

Predicted no-effect concentration on the environment - PNEC		
Reference value in fresh water	0.037	mg/l
Reference value in sea water	0.0037	mg/l
Reference value for sediments in fresh water	0.167	mg/kg
Reference value for sediments in sea water	0.0167	mg/kg
Reference value for water, intermittent release	0.37	mg/l
Reference value for STP microorganisms	10	mg/l
Reference value for the terrestrial compartment	0.0117	mg/kg

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Inhalation				12.3 mg/m3				49.8 mg/m3
Dermal				7.1 mg/kg/d				14.1 mg/kg/d

VND = hazard identified but no DNEL/PNEC available; NEA = no expected exposure; NPI = no hazard identified.

Components with limit values to be respected in the workplace.

124-38-9: carbon dioxide
TWA value 9,000 mg/m3; 5,000 ppm (OUL (EU)) indicative
TWA value 9,000 mg/m3; 5,000 ppm (OEL (IT))

7664-41-7: anhydrous ammonia
TWA value 14 mg/m3; 20 ppm (OEL (EU)) indicative
STEL value 36 mg/m3; 50 ppm (OEL (EU)) indicative
TWA value 14 mg/m3; 20 ppm (OEL (IT))
STEL value 36 mg/m3; 50 ppm (OEL (IT))

8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local extraction.
When choosing personal protective equipment, ask your chemical suppliers for advice if necessary.
Personal protective equipment must bear the CE marking which certifies their compliance with current regulations.

Provide emergency shower with eyecup.

HAND PROTECTION
Protect your hands with category III work gloves (ref. standard EN 374).
For the final choice of work glove material, the following must be considered: compatibility, degradation, breaking time and permeation.
In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is unpredictable. The gloves have a wear time that depends on the duration and method of use.

SKIN PROTECTION
Wear work clothes with long sleeves and safety footwear for professional category I use (ref. Regulation 2016/425 and standard EN ISO 20344). Wash with soap and water after removing protective clothing.

EYE PROTECTION
We recommend wearing airtight protective glasses (ref. standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) of the substance or one or more of the substances present in the product is exceeded, it is recommended to wear a mask with a type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (ref. standard EN 14387). If gases or vapors of a different nature and/or gases or vapors with particles (aerosols, fumes, mists, etc.) are present, combined filters must be provided.
The use of respiratory protection means is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. However, the protection offered by masks is limited.
In the event that the substance considered is odorless or its olfactory threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit compressed air breathing apparatus (ref. standard EN 137) or a self-contained breathing apparatus external air (ref. EN 138 standard). For the correct choice of respiratory protection device, refer to the EN 529 standard.

ENVIRONMENTAL EXPOSURE CONTROLS
Emissions from production processes, including those from ventilation equipment, should be controlled for compliance with environmental protection legislation.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Value	Information
Physical State	liquid	
Color	rose	
Odor	characteristic	
Melting or freezing point	Not applicable	
Initial boiling point	Not available	
Flammability	incombustible	
Lower explosive limit	Not applicable	
Upper explosive limit	Not applicable	
Flash point	> 90 °C	
Auto-ignition temperature	Not applicable	
pH	11	
Kinematic viscosity	Not available	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapor pressure	Not available	
Density and/or Relative density	1.05 kg/l	
Relative vapor density	Not available	

Characteristics of the particles	Not applicable

9.2. More information

9.2.1. Information regarding physical hazard classes

Information not available

9.2.2. Other safety features

VOC (Directive 2010/75/EU)	0
Explosive properties	not explosive
Oxidizing properties	non-oxidizing

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular dangers of reaction with other substances under normal conditions of use.

AMMONIUM BICARBONATE

Decomposes above 60°C/140°F.

10.2. Chemical stability

The product is stable under normal conditions of use and storage.

10.3. Possibility of dangerous reactions

Under normal conditions of use and storage, dangerous reactions are not foreseeable.

10.4. Conditions to avoid

None in particular. However, follow the usual precautions regarding chemical products.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

AMMONIUM BICARBONATE

May develop: ammonia.

SECTION 11. Toxicological information

In the absence of experimental toxicological data on the product itself, any health hazards of the product were assessed based on the properties of the substances contained, according to the criteria established by the reference legislation for classification.

Therefore, consider the concentration of the individual dangerous substances possibly mentioned in section. 3, to evaluate the toxicological effects resulting from exposure to the product.

11.1. Information on the hazard classes defined in Regulation (EC) no. 1272/2008

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Immediate, delayed and chronic effects resulting from short- and long-term exposures

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no relevant component)
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no relevant component)

AMMONIUM BICARBONATE

LD50 (Oral):	1576 mg/kg Rat

ammonium carbamate

LD50 (Oral):	> 1000 mg/kg rat

SKIN CORROSION / SKIN IRRITATION

It does not meet the classification criteria for this hazard class

AMMONIUM BICARBONATE
Evaluation of irritant effect: non-irritating to the skin. The product has not been fully tested. The statements were derived in part from products of similar structure or composition.

ammonium carbamate
Non-irritating to the skin

SERIOUS EYE DAMAGE / EYE IRRITATION

Causes serious eye damage

AMMONIUM BICARBONATE
Evaluation of irritant effect: non-irritating to the eyes. The product has not been fully tested. The statements were derived in part from products of similar structure or composition.

ammonium carbamate
Risk of serious eye damage

RESPIRATORY OR SKIN SENSITIZATION

It does not meet the classification criteria for this hazard class

AMMONIUM BICARBONATE
Evaluation of the sensitizing effect: the chemical composition does not suggest a sensitizing effect.

Respiratory sensitization

ammonium carbamate
The chemical composition does not suggest a sensitization effect

Skin sensitization

ammonium carbamate
The chemical composition does not suggest a sensitization effect

MUTAGENICITY ON GERM CELLS

It does not meet the classification criteria for this hazard class

AMMONIUM BICARBONATE

The substance did not prove to be mutagenic on bacteria. The substance was not mutagenic in mammalian cell culture.

ammonium carbamate
Mutagenicity tests did not reveal genotoxic potential. The product has not been fully tested. The statements were derived in part from products of similar structure or composition.

CARCINOGENICITY

It does not meet the classification criteria for this hazard class

AMMONIUM BICARBONATE
All available information provides no indication of a possible carcinogenic effect. The product has not been tested. The claims were derived from substances/products of similar composition or structure.

ammonium carbamate
It did not show carcinogenic effects in experimental animals. The product has not been tested. The statements were derived in part from products of similar structure or composition.

REPRODUCTION TOXICITY

It does not meet the classification criteria for this hazard class

AMMONIUM BICARBONATE
Scientifically unjustified study

ammonium carbamate
Scientifically unjustified study

Harmful effects on sexual function and fertility

Information not available

Harmful effects on the development of offspring

Information not available

Effects on or through breastfeeding

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

It does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

It does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

DANGER IN CASE OF ASPIRATION

It does not meet the classification criteria for this hazard class

11.2. Information about other hazards

Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on human health being evaluated.

SECTION 12. Ecological information

Use according to good working practices, avoiding dispersing the product into the environment. Notify the competent authorities if the product has reached watercourses or if it has contaminated the soil or vegetation.

12.1. Toxicity

ammonium carbamate

LC50 - Pisces	37 mg/l/96h Pimephales promelas
EC50 - Crustaceans	63 mg/l/48h - Daphnia magna
EC50 - Algae / Aquatic Plants	129.1 mg/l/72h Desmodesmus subspicatus (Scenedesmus subspicatus)

12.2. Persistence and degradability

AMMONIUM BICARBONATE

Solubility in water	220000 mg/l

Degradability: data not available

ammonium carbamate

Degradability: data not available

12.3. Bioaccumulative potential

AMMONIUM BICARBONATE

Partition coefficient: n-octanol/water	-2.4

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain PBT or vPvB substances in percentages ≥ 0.1%.

12.6. Endocrine disrupting properties

Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on the environment being evaluated.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal Considerations

13.1. Waste treatment methods

Reuse if possible. Product residues are to be considered hazardous special waste. The dangerousness of waste that partly contains this product must be assessed based on current legislative provisions.
Disposal must be entrusted to a company authorized to manage waste, in compliance with national and possibly local regulations.
CONTAMINATED PACKAGING
Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14. Transportation Information

The product is not to be considered dangerous pursuant to the provisions in force regarding the transport of dangerous goods by road (ADR), by rail (RID), by sea (IMDG Code) and by air (IATA).

14.1. UN number or ID number

Not applicable

14.2. Official UN shipping name

Not applicable

14.3. Transport hazard classes

Not applicable

14.4. Packing group

Not applicable

14.5. Dangers for the environment

Not applicable

14.6. Special precautions for users

Not applicable

14.7. Maritime transport in bulk in accordance with IMO acts

Information not relevant

SECTION 15. Regulatory information

15.1. Health, safety and environmental laws and regulations specific for the substance or mixture

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or substances contained according to Annex XVII Regulation (EC) 1907/2006

Product
Point 3

Regulation (EU) 2019/1148 - relating to the placing on the market and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

Based on available data, the product does not contain SVHC substances in percentages ≥ 0.1%.

Substances subject to authorization (Annex XIV REACH)

None

Substances subject to export notification requirements Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Sanitary checks

Workers exposed to this chemical agent dangerous to health must be subjected to health surveillance carried out in accordance with the provisions of the art. 41 of Legislative Decree 81 of 9 April 2008 unless the risk to the safety and health of the worker has been assessed as irrelevant, in accordance with the provisions of art. 224 paragraph 2.

Water pollution classification in Germany (AwSV, vom 18. April 2017)

WGK 1: Not very dangerous for water

15.2. Chemical safety assessment

A chemical safety assessment has not been developed for the mixture / substances indicated in section 3.

SECTION 16. Other information

Text of the hazard statements (H) mentioned in sections 2-3 of the sheet:

Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
H302	Harmful if ingested.
H318	Causes serious eye damage.

LEGEND:
- ADR: European Agreement for the transport of dangerous goods by road
- CAS: Chemical Abstract Service Number
- CE: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived no-effect level
- EC50: Concentration that gives effect to 50% of the population subject to testing
- EmS: Emergency Schedule
- GHS: Globally Harmonized System for the Classification and Labeling of Chemical Products
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Immobilization concentration of 50% of the population subject to testing
- IMDG: International Maritime Code for the Transport of Dangerous Goods
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational exposure level
- PBT: Persistent, bioaccumulating and toxic according to REACH
- PEC: Predictable environmental concentration
- PEL: Predictable level of exposure
- PNEC: Predictable no-effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulations for the international transport of dangerous goods by train
- STA: Acute Toxicity Estimate
- TLV: Threshold limit value
- TLV CEILING: Concentration that must not be exceeded during any moment of occupational exposure.
- TWA: Weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic compound
- vPvB: Very persistent and very bioaccumulating according to REACH
- WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY:
1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 2020/878 (Annex II of the REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)

16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- NI Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA Agency website
- Database of SDS models of chemical substances - Ministry of Health and Istituto Superiore di Sanità

Note for the user:
The information contained in this sheet is based on the knowledge available to us at the date of the latest version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.
This document should not be interpreted as a guarantee of any specific property of the product.
Since the use of the product does not fall under our direct control, it is the user's obligation to observe the laws and regulations in force regarding hygiene and safety under his own responsibility. We do not assume responsibility for improper use.
Provide adequate training to personnel assigned to the use of chemical products.
CLASSIFICATION CALCULATION METHODS
Chemical-physical hazards: The classification of the product was derived from the criteria established by the CLP Regulation Annex I Part 2. The methods of evaluation of the chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on the calculation methods in Annex I of CLP Part 3, unless otherwise indicated in section 11.
Environmental hazards: The classification of the product is based on the calculation methods in Annex I of CLP Part 4, unless otherwise indicated in section 12.

Changes compared to the previous revision
Changes have been made to the following sections:
01 / 02 / 03 / 09 / 11 / 12 / 15 / 16.