



Safety data sheet

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

1.1. Product identifier

Code: 15/013
Product name: ECOPHOR A/447

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

Description: Resin in solution
Intended use: Organic phosphating system:
Pre-treatment by immersion or spray (flow coating) of metal surfaces before painting.

1.3. Details of the supplier of the safety data sheet

Name: CHEMTEC S.r.l
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e-mail address of the competent person responsible for the Safety Data Sheet: labo@chemtec.it
Product distribution by: CHEMTEC S.r.l

1.4. Emergency telephone number

For urgent inquiries refer to: +39 02 92867461 in office hours 8.30-12.30 - 13.30-17.30

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in 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 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.

2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols: Xi
R phrases: 36/38

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

2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



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Signal words: Warning

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.

Precautionary statements:

P264 Wash the hands thoroughly after handling.
P280 Wear protective gloves / eye protection / face protection.
P302+P352 IF ON SKIN: wash with plenty of water
P332+P313 If skin irritation occurs: Get medical advice / attention.

2.3. Other hazards.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 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).
3-BUTOXY-2-PROPANOL			
CAS. 5131-66-8	88 - 98	Xi R36/38	Flam. Liq. 3 H226, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC. 225-878-4			
INDEX. 603-052-00-8			
Reg. no. 01-211945527-28-0001/2			
PHOSPHORIC ACID			
CAS. 7664-38-2	0,05 - 0,1	C R34, Note B	Met. Corr. 1 H290, Skin Corr. 1B H314, Note B
EC. 231-633-2			
INDEX. 015-011-00-6			
Reg. no. 01-2119485924-24-0021			

Note: Upper limit is not included into the range.

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

T+ = 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), N = Dangerous for the Environment(N)

SECTION 4. First aid measures.**4.1. Description of first aid measures.**

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

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

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

Follow doctor's indications

SECTION 5. Firefighting measures.**5.1. Extinguishing media.**

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

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 extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.**6.1. Personal precautions, protective equipment and emergency procedures.**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. 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.

SECTION 7. Handling and storage.**7.1. Precautions for safe handling.**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Organic phosphating system: Pre-treatment by immersion or spray (flow coating) of metal surfaces before painting.

SECTION 8. Exposure controls/personal protection.**8.1. Control parameters.**

Regulatory References:

AUS	Österreich	Grenzwerteverordnung 2011 - GKV 2011
BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail 2012. / Grenzwerte am Arbeitsplatz
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GRB	United Kingdom	EH40/2005 Workplace exposure limits
IRL	Éire	Code of Practice Chemical Agent Regulations 2011
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	TLV-ACGIH	ACGIH 2014

3-BUTOXY-2-PROPANOL

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,525	mg/l
Normal value in marine water	0,0525	mg/l
Normal value for fresh water sediment	2,36	mg/kg
Normal value for marine water sediment	0,236	mg/kg
Normal value for water, intermittent release	5,25	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,16	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.		Effects on workers					
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	8,75 mg/kg				
Inhalation.			VND	33,8 mg/m3			VND	270,5 mg/m3
Skin.			VND	16 mg/kg			VND	44 mg/kg

PHOSPHORIC ACID**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
MAK	AUS	1		2	
VLEP	BEL	1		2	
VEL	CHE	1		2	
MAK	CHE	1		2	
AGW	DEU	2		4	INHAL.
MAK	DEU	2		4	INHAL.
VLA	ESP	1		2	
VLEP	FRA	1	0,2	2	0,5
WEL	GRB	1		2	
OEL	IRL	1		2	
TLV	ITA	1		2	
OEL	EU	1		2	
TLV-ACGIH		1		3	

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.		Effects on workers					
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.			0,73 mg/m3	VND	VND	2 mg/m3	1 mg/m3	VND

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Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties.**9.1. Information on basic physical and chemical properties.**

Appearance	Liquid slightly viscous
Colour	Colorless / yellowish
Odour	Characteristic of solvent
Odour threshold.	Not available.
pH.	3,5 - 5
Melting point / freezing point.	Not available.
Initial boiling point.	> 165 °C.
Boiling range.	Not available.
Flash point.	> 60 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	Not applicable
Lower inflammability limit.	1,30 % (V/V).
Upper inflammability limit.	9,00 % (V/V).
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	0,870 - 0,890 Kg/l
Solubility	in water: Limited
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	260 °C.
Decomposition temperature.	Not available.
Viscosity	50 - 60 sec in C.F.2
Explosive properties	Not applicable.
Oxidising properties	Not available.

9.2. Other information.

VOC (Directive 1999/13/EC) :	98,17 %
VOC (volatile carbon) :	61,85 %

SECTION 10. Stability and reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

PHOSPHORIC ACID: decomposes at temperatures over 200°C.

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.

PHOSPHORIC ACID: risk of explosion on contact with nitromethane. May react dangerously with alkalis and sodium borohydride.

10.4. Conditions to avoid.

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

10.5. Incompatible materials.

PHOSPHORIC ACID: Metals, strong alkalis, aldehydes, sulphides and peroxides.

10.6. Hazardous decomposition products.

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

PHOSPHORIC ACID: phosphorus oxide.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.

Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin.

Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

PHOSPHORIC ACID

LD50 (Oral).	1530 mg/kg Rat
LD50 (Dermal).	2740 mg/kg Rabbit
LC50 (Inhalation).	> 0,85 mg/l/1h Rat

3-BUTOXY-2-PROPANOL

LD50 (Oral).	3300 mg/kg Rat
LD50 (Dermal).	> 2000 mg/kg Rat
LC50 (Inhalation).	> 3,4 mg/l Rat

SECTION 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.

PHOSPHORIC ACID

LC50 - for Fish. 75,1 mg/l/96h *Oryzias latipes*

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EC50 - for Crustacea. > 100 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants. > 100 mg/l/72h Desmodesmus subspicatus

3-BUTOXY-2-PROPANOL

LC50 - for Fish. > 100 mg/l/96h Pimephales promelas
EC50 - for Crustacea. > 1000 mg/l/48h Daphnia magna

12.2. Persistence and degradability.

PHOSPHORIC ACID

Solubility in water. > 850000 mg/l
Biodegradability: Information not available.

3-BUTOXY-2-PROPANOL

Solubility in water. 52000 mg/l
Rapidly biodegradable.

12.3. Bioaccumulative potential.

3-BUTOXY-2-PROPANOL: no appreciable bioaccumulation potential (log Ko/w 1-3).

3-BUTOXY-2-PROPANOL

Partition coefficient: n-octanol/water. 1,2

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

Information not available.

SECTION 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.

SECTION 14. Transport information.**14.1. UN number.**

Not applicable.

14.2. UN proper shipping name.

Not applicable.

14.3. Transport hazard class(es).

Not applicable.

14.4. Packing group.

Not applicable.

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14.5. Environmental hazards.

Not applicable.

14.6. Special precautions for user.

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.

Information not relevant.

SECTION 15. Regulatory information.**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.**

Seveso category. None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.

Point. 3

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

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.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Skin Corr. 1B	Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.

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H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R34	CAUSES BURNS.
R36/38	IRRITATING TO EYES AND SKIN.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments
 2. Directive 67/548/EEC and following amendments and adjustments
 3. Regulation (EU) 1907/2006 (REACH) of the European Parliament
 4. Regulation (EU) 1272/2008 (CLP) of the European Parliament
 5. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 6. Regulation (EU) 453/2010 of the European Parliament
 7. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 8. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 9. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 10. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 11. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - Niosh - Registry of Toxic Effects of Chemical Substances
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - ECHA website

Note for users:

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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.
Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.