

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 26/07/2022 Revision date: 26/07/2022 Supersedes version of: 01/04/2016 Version: 3.0

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

1.1. Product identifier

Product form : Mixture
Trade name : PROTECTOR
Product code : 295027
Product group : Trade product

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

1.2.1. Relevant identified uses

Intended for general public

Main use category : Consumer use, Professional use

Use of the substance/mixture : ANTI-CORROSION, ANTI-SCALING PRODUCT FOR HEATING SYSTEMS. Multi-purpose,

non-acidic product for controlling corrosion and scaling in boilers and heating systems. It guarantees total protection for all metal materials present in the system, including

aluminium. Suitable for use with hard or low hardness water.

Function or use category : Corrosion inhibitors

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

VIRAX SAS

39, quai Marne - CS 40197 FR- 51206 EPERNAY Cedex

T +33 (0)3 26 59 56 56 - F +33 (0)3 26 59 56 60

hse@virax.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	NHS 111/NHS 24/NHS Direct		111	or call a doctor
			0845 4647	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]. No labelling applicable

2.3. Other hazards

PBT: not yet assessed vPvB: not yet assessed

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
phosphoric acid %, orthophosphoric acid %	CAS-No.: 7664-38-2	≥ 2 - < 5	Skin Corr. 1B, H314
substance with national workplace exposure limit(s)	EC-No.: 231-633-2		
(GB); substance with a Community workplace	EC Index-No.: 015-011-00-6		
exposure limit	REACH-no: 01-		
(Note B)	2119485924-24		

Specific concentration limits:					
Name	Product identifier	Specific concentration limits			
phosphoric acid %, orthophosphoric acid %	CAS-No.: 7664-38-2	(10 ≤C < 25) Eye Irrit. 2, H319			
	EC-No.: 231-633-2	(10 ≤C < 25) Skin Irrit. 2, H315			
	EC Index-No.: 015-011-00-6	(25 ≤C ≤ 100) Skin Corr. 1B, H314			
	REACH-no: 01-				
	2119485924-24				

Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If medical advice is needed, have product container or label at hand. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label

where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON

CENTER/doctor.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately

call a POISON CENTER/doctor.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Drink

plenty of water.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Advice for firefighters

Precautionary measures fire

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

: Evacuate area.

chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate unnecessary personnel. Avoid contact with skin and eyes. Evacuate area. Try to

stop release if without risk.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Relevant water authorities should

be notified of any large spillage to water course or drain.

6.1.2. For emergency responders

: Do not attempt to take action without suitable protective equipment. Equip cleanup crew Protective equipment

with proper protection. For further information refer to section 8: "Exposure

controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Restrict liquid from spreading over surface with floating screens if possible. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or

diatomaceous earth as soon as possible.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid

contact with the skin and the eyes. PREVENT GENERATION OF MISTS. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when

leaving work. Do not breathe vapours.

: Wash hands and other exposed areas with mild soap and water before eating, drinking or Hygiene measures smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat,

drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Store in original container. Store tightly closed in a dry, cool and well-ventilated place. Keep

container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

See Section 1.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

phosphoric acid %, orthophosphoric acid % (7664-38-2)			
EU - Indicative Occupational Exposure Limit (IOEL)			
Local name	Orthophosphoric acid		
IOEL TWA	1 mg/m³		
IOEL STEL	2 mg/m³		
Regulatory reference COMMISSION DIRECTIVE 2000/39/EC			
United Kingdom - Occupational Exposure Limits			
Local name	Orthophosphoric acid		
WEL TWA (OEL TWA) [1]	1 mg/m³		
WEL STEL (OEL STEL)	2 mg/m³		
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE		

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

phosphoric acid %, orthophosphoric acid % (7664-38-2)			
DNEL/DMEL (Workers)			
Long-term - local effects, inhalation 2,92 mg/m³			
DNEL/DMEL (General population)			
Long-term - local effects, inhalation 0,73 mg/m³			

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):





8.2.2.1. Eye and face protection

Eye protection:

Safety glasses with side shields. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Chemical resistant safety shoes. Long sleeved protective clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work

Hand protection:

Protective gloves. Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Time of penetration is to be checked with the glove producer

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Other skin protection

Materials for protective clothing:

Wear suitable protective clothing

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke during use. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Yellow. Odour : characteristic. Odour threshold : Not available Melting point : Not applicable Freezing point : < -1 °C : Not available Boiling point : Not applicable Flammability Explosive limits : Not available Lower explosion limit : Not available : Not available Upper explosion limit : Not available Flash point Not available Auto-ignition temperature Decomposition temperature : Not available рΗ : 7(6,5-7,5)Viscosity, kinematic Not available Solubility : Soluble in water. Partition coefficient n-octanol/water (Log Kow) : Not available : Not available Vapour pressure Vapour pressure at 50 °C : Not available

Density : 1,09 (1,087 – 1,093) kg/l

Relative density : Not available Relative vapour density at 20 °C : Not available Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Does not require any particular or specific measures. Respect the general rules for occupational hygiene. Avoid shock and friction.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met) Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met) Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

phosphoric acid %, orthophosphoric acid % (7664-38-2)		
LD50 oral rat	2600 mg/kg	
LD50 dermal rabbit	2740 mg/kg	

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: 7 (6,5 – 7,5)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

pH: 7 (6,5 - 7,5)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met) : Not classified (Based on available data, the classification criteria are not met) Germ cell mutagenicity Carcinogenicity : Not classified (Based on available data, the classification criteria are not met) Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met) STOT-single exposure : Not classified (Based on available data, the classification criteria are not met) STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met) Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms

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

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

: Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term

: Not classified (Based on available data, the classification criteria are not met)

(chronic)

phosphoric acid %, orthophosphoric acid % (7664-38-2)			
LC50 - Fish [1]	138 mg/l		
EC50 - Crustacea [1]	> 100 mg/l Daphnia magna (Water flea)		

12.2. Persistence and degradability

No additional information available

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12.3. Bioaccumulative potential

PROTECTOR	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

PROTECTOR	
PBT: not yet assessed	
vPvB: not yet assessed	

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations. Ensure all national/local regulations

are observed.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of this

material and its container at hazardous or special waste collection point.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID	
14.1. UN number or ID	number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated	
14.2. UN proper shippir	ng name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated	
14.3. Transport hazard	class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated	
14.4. Packing group					
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated	
14.5. Environmental hazards					
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated	
No supplementary informati	on available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

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Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)			
Reference code	Applicable on	Entry title or description	
3(b)	phosphoric acid %, orthophosphoric acid %	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Directive 2012/18/EU (SEVESO III)

Seveso Additional information : Not relevant

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

Ensure all national/local regulations are observed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of cl	Indication of changes					
Section	Changed item	Change	Comments			
1.1	Trade name	Modified				
1.1	Name	Modified				
1.1	Product group	Added				
1.2	Use of the substance/mixture	Modified				
1.2	Main use category	Modified				
ű i		Added				
2.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]		Removed				
2.2	Precautionary statements (CLP)					
2.2	Hazard pictograms (CLP)	Removed				
2.2	Signal word (CLP)	Removed				
2.2	No labelling obligation	Added				
2.2	Hazard statements (CLP)	Removed				
3	Composition/information on ingredients	Modified				
4.1	First-aid measures after ingestion	Modified				
4.1	First-aid measures after eye contact	Modified				
4.1	First-aid measures general	Modified				

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4.1	First-aid measures after inhalation	Modified
4.2	Symptoms/effects	Modified
4.3	Other medical advice or treatment	Added
5.1	Unsuitable extinguishing media	Modified
5.2	Hazardous decomposition products in case	Added
	of fire	
5.3	Precautionary measures fire	Added
5.3	Protection during firefighting	Modified
6.1	General measures	Added
6.1	Protective equipment	Modified
6.1	Emergency procedures	Modified
6.3	Other information	Added
6.3	Methods for cleaning up	Modified
6.4	Reference to other sections (8, 13)	Modified
7.1	Hygiene measures	Modified
7.1	Precautions for safe handling	Modified
7.2	Storage conditions	Modified
7.3	Specific end uses	Added
8.2	Skin and body protection	Modified
8.2	Appropriate engineering controls	Added
8.2	Environmental exposure controls	Added
8.2	Materials for protective clothing	Added
8.2	Eye protection	Modified
8.2	Hand protection	Modified
8.2	Other information	Modified
9.1	Freezing point	Added
9.1	Melting point	Modified
9.1	рН	Modified
9.1	Colour	Modified
9.1	Density	Modified
10.1	Reactivity	Modified
10.2	Chemical stability	Modified
10.3	Possibility of hazardous reactions	Modified
10.4	Conditions to avoid	Modified
10.6	Hazardous decomposition products	Modified
11.1	Additional information	Added
11.1	Reason for no classification	Added
12.1	Ecology - water	Removed
12.1	Ecology - general	Added
12.2	Persistence and degradability	Removed
13.1	Waste treatment methods	Added
13.1	Regional legislation (waste)	Added
13.1	Waste disposal recommendations	Modified
15.1	Regulatory reference	Added
15.1	REACH Annex XVII	Added
16	Training advice	Added
16	Abbreviations and acronyms	Added
16	Data sources	Modified
16	Other information	Modified

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	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
IARC	International Agency for Research on Cancer	
LC50	Median lethal concentration	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	

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DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
EC50	Median effective concentration
SDS	Safety Data Sheet
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
EC-No.	European Community number
EN	European Standard
OEL	Occupational Exposure Limit
ThOD	Theoretical oxygen demand (ThOD)
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
ED	Endocrine disrupting properties
IOELV	Indicative Occupational Exposure Limit Value
WGK	Water Hazard Class
TRGS	Technical Rules for Hazardous Substances

Data sources

Training advice

Other information

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 . 17 ATP Inserted / Updated.

 Normal use of this product shall imply use in accordance with the instructions on the packaging.

: DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. Ensure all national/local regulations are observed.

Full text of H- and EUH-statements:		
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H314	Causes severe skin burns and eye damage.	
H315	Causes skin irritation.	
H319	Causes serious eye irritation.	
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.