

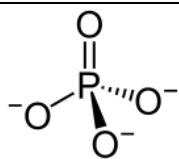
	<h2>Inorganic Phosphates REACH Consortium</h2>
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Version	<b>SUBSTANCE IDENTIFICATION PROFILE (SIP)</b>
v.3	
04/11/16	

No	1.1. Chemical Name	1.2. EC Number	1.3. CAS Number	1.4. Composition Type
IP48	Orthophosphoric acid	231-633-2	7664-38-2	mono-constituent substance

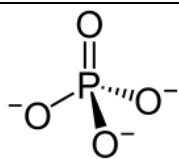
*This Substance Identification Profile (SIP) is developed to represent the Identification parameters of the substance described in line with the Substance Identification requirements of REACH Annex VI and relevant guidance for the purpose of identifying the registered substance and the provision of a 'boundary composition' for IUCLID 6 dossier updates.*

Reference	SI Parameter	Value / Not necessary / Not for SIP	Remark / Justification
<b>2.1.A</b>	<b>Name or other Identifiers of the substance</b>		
	CAS (hydrates)	n/a	
	Synonyms	phosphoric acid	
	SMILES	OP(O)(O)=O	
	Molecular formula	H3PO4	
	Structural image / diagram (indicative)		
	EU food legislation number / INS n°	n/a	
	State / form	The Dossier will address both solid phosphoric acid (colourless crystal) and liquid (solution in water)	
	Granulometry range	not applicable	Phosphoric acid is primarily marketed and used as a liquid solution therefore a study does not need to be conducted. Further, solid phosphoric acid is hygroscopic and as such small particles will not be present due to agglomeration and a study for granulometry is not technically feasible on this form of the substance.  Depending on method of particle



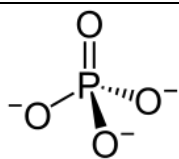
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			size determination it cannot be excluded that the substance falls under the proposed horizontal EU nano definition from 2011, but since validated methodology is missing and a revision of the definition is expected, there is no way to confirm the status
	pH range for aqueous solutions		
<b>2.1.B</b>	<b>Substances (with core identifiers) also falling under this substance (with justification)</b>		
	Name or other Identifiers of the substance	Not applicable	
	EC Number		
	CAS number		
	Additional information		
<b>2.3</b>	<b>Chemical Composition of the substance</b>		
<b>2.3.1</b>	<b>Main Constituent</b>		
	Name	orthophosphoric acid	
	Typical concentration (%w/w)	85%	
	Concentration range (%w/w)	80-100%	
<b>2.3.2</b>	<b>Typical Impurity / Impurities (above 1% or lower if contributing to the hazard or PBT profile) - create repeat blocks if necessary</b>		
<b>2.3.2.1</b>	Name -Impurity (1)	Iron expressed as Fe2O3	
	CAS Number -Impurity (1)	1309-37-1	
	EC Number -Impurity (1)	215-168-2	
	Molecular Formula - Impurity (1)	Fe2O3	
	Typical concentration (%w/w) -Impurity (1)	≤6%	
	Concentration range (%w/w) -Impurity (1)	0-6%	
	Relevant for classification and labelling?	N	
		Iron is present in ionic form in orthophosphoric acid, and expressed here as Fe2O3	
<b>2.3.2.2</b>	Name -Impurity (2)	Aluminium expressed as Al2O3	
	CAS Number -Impurity (2)	1344-28-1	
	EC Number -Impurity (2)	215-691-6	
	Molecular Formula - Impurity (2)	Al2O3	
	Typical concentration (%w/w) -Impurity (2)	≤8%	



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	Concentration range (%w/w) -Impurity (2)	0-8%	
	Relevant for classification and labelling?	N	
		Aluminium is present in ionic form in orthophosphoric acid, and expressed here as Al <sub>2</sub> O <sub>3</sub>	
2.3.2.3	Name -Impurity (3)	Magnesium expressed as MgO and/or MgF <sub>2</sub> and/or MgSiF <sub>6</sub>	
	CAS Number -Impurity (3)	1309-48-4	
	EC Number -Impurity (3)	215-171-9	
	Molecular Formula - Impurity (3)	MgO	
	Typical concentration (%w/w) -Impurity (3)	≤3%	as magnesium oxide
	Concentration range (%w/w) -Impurity (3)	0-3%	
	Relevant for classification and labelling?	N	
		Magnesium is typically present as impurity in orthophosphoric acid, in ionic form. Silicon and fluoride result to the formation of silicofluoride anion, forming complexes with magnesium (MgSiF <sub>6</sub> ). Excess magnesium has been expressed as MgO and excess Si as SiO <sub>2</sub>	
2.3.2.4	Name -Impurity (4)	Calcium expressed as Calcium sulphate	
	CAS Number -Impurity (4)	7778-18-9	
	EC Number -Impurity (4)	231-900-3	
	Molecular Formula - Impurity (4)	Ca.H <sub>2</sub> O <sub>4</sub> S	
	Typical concentration (%w/w) -Impurity (4)	≤2%	
	Concentration range (%w/w) -Impurity (4)	0-2%	
	Relevant for classification and labelling?	N?	
2.3.2.5	Name -Impurity (5)	Sulphate SO <sub>4</sub> <sup>2-</sup> (%) expressed as H <sub>2</sub> SO <sub>4</sub>	
	CAS Number -Impurity (5)	7664-93-9	
	EC Number -Impurity (5)	231-639-5	
	Molecular Formula - Impurity (5)	H <sub>2</sub> SO <sub>4</sub>	



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	Typical concentration (%w/w) -Impurity (5)	≤7.5%	
	Concentration range (%w/w) -Impurity (5)	0-7.5%	
	Relevant for classification and labelling?	N	
		Sulphate is typically present as impurity in orthophosphoric acid, in ionic form. Calcium and sulphate results to the formation of Calcium sulphate. Excess of Sulphate is expressed sulfuric acid	
2.3.2.6	Name -Impurity (6)	Fluoride F-(%) expressed as magnesium hexafluorosilicate	Na <sub>2</sub> SiF <sub>6</sub> , MgF <sub>2</sub> and/or CaF <sub>2</sub> and/or MgSiF <sub>6</sub>
	CAS Number -Impurity (6)	16949-65-8	
	EC Number -Impurity (6)	241-022-2	
	Molecular Formula - Impurity (6)	MgSiF <sub>6</sub>	
	Typical concentration (%w/w) -Impurity (6)	≤3%	
	Concentration range (%w/w) -Impurity (6)	0-3%	
	Relevant for classification and labelling?	N	
		Magnesium is typically present as impurity in orthophosphoric acid, in ionic form. Silicon and fluoride result to the formation of silicofluoride anion, forming complexes with magnesium (MgSiF <sub>6</sub> ). Excess magnesium has been expressed as MgO and excess Si as SiO <sub>2</sub>	
2.3.2.7	Name -Impurity (7)	Phosphorous acid as H <sub>3</sub> PO <sub>3</sub>	
	CAS Number -Impurity (7)	10294-56-1	
	EC Number -Impurity (7)	233-663-1	
	Molecular Formula - Impurity (7)	H <sub>3</sub> PO <sub>3</sub>	
	Typical concentration (%w/w) -Impurity (7)	<3%	
	Concentration range (%w/w) -Impurity (7)	0-3%	
	Relevant for classification and labelling?	N	
<b>2.3.3</b>	<b>Additives - create block similar to impurities if relevant</b>		



Not relevant	
<b>2.4</b>	<b>Classification and labelling</b>
Yes - See ECHA Chem website	
<b>2.5</b>	<b>Justification for deviation from substance identity rules</b>
not applicable	