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| **Table S3.** The status of phosphine (PH3) as a phytosanitary treatment for imported wood products for individual National Plant Protection Organizations (NPPO) | | | | |
| **#** | **Country** | **Status** | **Date of correspondence and contact** | **Comments** |
| 1 | Afghanistan | Unknown | n/a | NPPO was contacted on July 5, 2024, and September 16, 2024. They did not respond to our questions. |
| 2 | Albania | Unknown | n/a | NPPO was not contacted. |
| 3 | Algeria | Unknown | n/a | NPPO was contacted on July 1, 2024, and July 8, 2024. They did not respond to our questions. |
| 4 | American Samoa | Unknown | n/a | NPPO was not contacted. |
| 5 | Angola | Not approved | September 18, 2024  Goncalves José Rodrigues | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 6 | Anguilla | Unknown | n/a | NPPO was not contacted. |
| 7 | Antigua and Barbuda | Unknown | n/a | NPPO was not contacted. |
| 8 | Argentina | Not approved | June 26, 2024  Diego Quiroga | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 9 | Armenia | Unknown | n/a | NPPO was contacted on July 5, 2024, and September 18, 2024. They did not respond to our questions. |
| 10 | Australia | Not approved | May 20, 2024  Chris Howard | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products [1, 2]. |
| 11 | Austria | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the European Union (EU) showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 12 | Azerbaijan | Approved | July 6, 2024  Taleh Shamiyev | NPPO confirmed that PH3 is accepted as an import treatment for debarked wood and timber materials. No specific treatment schedule is approved, but these wood products “*must be subjected to an appropriate treatment (fumigation), and it should be stated in the phytosanitary certificate*.” [3]. |
| 13 | Bahamas | Unknown | n/a | NPPO was not contacted. |
| 14 | Bahrain | Unknown | n/a | NPPO was not contacted. |
| 15 | Bangladesh | Unknown | n/a | NPPO was not contacted. |
| 16 | Barbados | Unknown | n/a | NPPO was not contacted. |
| 17 | Belarus | Unknown | n/a | NPPO was not contacted. |
| 18 | Belgium | Not approved | June 25, 2024  Maarten Trybou | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. It is also “*not authorised for use in Belgium as a plant protection fumigant of wood or timber products*.” In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 19 | Belize | Approved | September 18, 2024  Francisco Gutierrez | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 20 | Benin | Unknown | n/a | NPPO was not contacted. |
| 21 | Bermuda | Unknown | n/a | NPPO was not contacted. |
| 22 | Bhutan | Unknown | n/a | NPPO was not contacted. |
| 23 | Bolivia | Approved | n/a | NPPO was contacted on June 24, 2024, and July 4, 2024. They did not respond to our questions. However, the Chilean NPPO has stated that green wicker (*Salix viminalis*) rods and green tineo (*Weinmannia trichosperma*) and green pine (*Pinus radiata*) sawn timber exported to Bolivia are treated with PH3. See comments for Chile below. |
| 24 | Bosnia and Herzegovina | Unknown | n/a | NPPO was not contacted. |
| 25 | Botswana | Not approved | July 9, 2024  Velleminah Sizwile Pelokgale | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 26 | Brazil | Not approved | June 25, 2024  Débora Maria Rodrigues Cruz | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 27 | Brunei Darussalam | Unknown | n/a | NPPO was not contacted. |
| 28 | Bulgaria | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 29 | Burundi | Unknown | n/a | NPPO was not contacted. |
| 30 | Cabo Verde | Unknown | n/a | NPPO was not contacted. |
| 31 | Cambodia | Unknown | n/a | NPPO was not contacted. |
| 32 | Cameroon | Unknown | n/a | NPPO was contacted on July 1, 2024, and July 9, 2024. They did not respond to our questions. |
| 33 | Canada | Not approved | n/a | NPPO was not directly contacted as the phytosanitary requirements for imported wood products are clearly stated on their website [4-7]. |
| 34 | Canary Islands | Unknown | n/a | NPPO was not contacted. |
| 35 | Cayman Islands | Unknown | n/a | NPPO was not contacted. |
| 36 | Central African Republic | Unknown | n/a | NPPO was not contacted. |
| 37 | Chad | Not approved | July 1, 2024  Abdoulaye Moussa Abderaman | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 38 | Chile | Approved | July 17, 2024  Maco Muñoz | NPPO confirmed that they accept PH3 as an import treatment for the following wood products from specific countries.   |  |  |  | | --- | --- | --- | | **Product name** | **Wood product** | **Origin country** | | Curupaú (*Piptadenia macrocarpa* Benth.) | Wooden sleepers | Bolivia, Paraguay | | Cuchi (*Astronium urundeuva* (Allemao) Engl.) | Wooden sleepers | Bolivia | | Tajibo (*Tabebuia impetiginosa* (Mart.) Standl.) | Wooden sleepers | Bolivia | | Almedrillo macho (*Taralea oppositifolia* Aublet) | Wooden sleepers | Bolivia | | Quebracho (*Schinopsis brasiliensis*) | Wooden sleepers | Bolivia | | Quebracho colorado (*Schinopsis quebracho-colorado* (Schldl.)) | Wooden sleepers | Bolivia, Paraguay | | Artigas tree (*Peltophorum dubium* (Spreng) Taub.) | Wooden sleepers | Paraguay | | Astronium (*Astronium* sp.) | Wooden sleepers | Paraguay | | Anchicho (*Parapiptadenia rigida*) | Wooden sleepers | Paraguay | | Guajayvi (*Patagonula americana* L) | Wooden sleepers | Paraguay | | Insira (*Chlorophoro tinctoria*) | Wooden sleepers | Paraguay | | Quebracho (*Schinopsis balansae* Engl.) | Wooden sleepers | Paraguay | | Quebracho colorado (*Schinopsis balansae* Engl.) | Wooden sleepers | Argentina | | Quillobordón (*Aspidosperma* spp.) | Wooden sleepers | Paraguay | | Conifers | Logs | Countries without the presence of *Bursaphelenchus xylophilus* | | Conifers | Sawn wood (unused or used) and wooden packaging imported or returned as merchandise | Countries without the presence of *Bursaphelenchus xylophilus* | | Broadleaf woods belonging to the genus *Populus* spp. (Poplar) | Logs | All | | Broadleaf woods belonging to the genus *Populus* spp. (Poplar) | Sawn wood (unused or used) and wooden packaging imported or returned as merchandise | All | | Broadleaf woods belonging to the genus *Eucalyptus* spp. (Eucalyptus) | Logs | All | | Broadleaf woods belonging to the genus *Eucalyptus* spp. (Eucalyptus) | Sawn wood (unused or used) and wooden packaging imported or returned as merchandise | All | | Broadleaf wood not belonging to the genus *Eucalyptus* spp or *Populus* spp | Logs | All | | Broadleaf wood not belonging to the genus *Eucalyptus* spp or *Populus* spp | Sawn wood (unused or used) and wooden packaging imported or returned as merchandise | All |   NPPO also confirmed that PH3 is used in Chile to treat wood products exported to the following countries.   |  |  |  | | --- | --- | --- | | **Product name** | **Wood product** | **Destination country** | | Pine (*Pinus radiata*) | Logs | China | | Oregon Pine (*Pseudotzuga menziesii*) | Logs | China | | Ponderosa Pine (*Pinus ponderosa*) | Logs | China | | Scots Pine (*Pinus sylvestris*) | Logs | China | | Green colihue (*Chusquea culeou*) | Rods | Perú, México | | Naturally dried colihue (*Chusquea culeou*) | Rods | Perú | | Green pine (*Pinus radiata*) | Sawn wood | Perú, Bolivia | | Green eucayltus (*Eucalyptus globulus*) | Sawn wood | Perú | | Green eucayltus (*Eucalyptus nitens*) | Sawn wood | Perú | | Green eucayltus (*Eucalyptus regnans*) | Sawn wood | Perú | | Green wicker (*Salix viminalis*) | Rods | Bolivia, Venezuela, México | | Green tineo (*Weinmannia trichosperma*) | Sawn wood | Bolivia | |
| 39 | China | Approved | n/a | NPPO was contacted on December 07, 2023, and January 24, 2024. They did not respond to our questions. However, several countries are known to use PH3 to treat wood products exported to China, i.e., New Zealand, Uruguay, Chile and the Czech Republic. |
| 40 | Colombia | Not approved | July 18, 2024  Diana Lucía Villamil Torres | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. However, if a treatment is necessary, “*the use of phosphine would only be accepted if there is the relevant technical support*.” |
| 41 | Comoros | Unknown | n/a | NPPO was not contacted. |
| 42 | Congo | Unknown | n/a | NPPO was not contacted. |
| 43 | Cook Islands | Unknown | n/a | NPPO was not contacted. |
| 44 | Costa Rica | Unknown | n/a | NPPO was contacted on June 24, 2024, and July 4, 2024. They did not respond to our questions. |
| 45 | Côte d’lvoire | Unknown | n/a | NPPO was not contacted. |
| 46 | Croatia | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 47 | Cuba | Unknown | n/a | NPPO was contacted on July 16, 2024, and September 18, 2024. They did not respond to our questions. |
| 48 | Cyprus | Not approved | n/a | NPPO was contacted on July 5, 2024. They did not respond to our questions. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 49 | Czech Republic | Not approved | July 3, 2024  Vladislav Rašovský | NPPO confirmed that PH3 fumigation of shipping containers loaded with wood is permitted. However, they did not respond to our follow-up questions to clarify whether this was for imported or exported wood. Our assumption is that this statement relates to the treatment of logs exported to China, not imported wood products. In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 50 | Denmark | Not approved | June 24, 2024  Ulla Katja Thybo | NPPO confirmed that PH3 is not approved as a treatment for imported wood packaging material (WPM), i.e., ISPM (International Standards for Phytosanitary Measures) 15. In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 51 | Djibouti | Not approved | July 15, 2024  Mouktar Mahamoud Waberi | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. They also stated that the “*product* (PH3) *is banned in Djibouti* (English translation)1.” |
| 52 | Dominica | Unknown | n/a | NPPO was not contacted. |
| 53 | Dominican Republic | Unknown | n/a | NPPO was contacted on July 16, 2024, and September 18, 2024. They did not respond to our questions. |
| 54 | Ecuador | Not approved | May 13, 2024  Carmen Amelia Mullo Aimacaña | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 55 | El Salvador | Unknown | n/a | NPPO was contacted on July 16, 2024, and August 6, 2024. They did not respond to our questions. |
| 56 | Equatorial Guinea | Unknown | n/a | NPPO was not contacted. |
| 57 | Eritrea | Approved | July 1, 2024  Tekleab Mesghena Ketema | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 58 | Estonia | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 59 | Eswatini | Unknown | n/a | NPPO was not contacted. |
| 60 | Ethiopia | Not approved | July 14, 2024  Wondale Habtamu Teferi | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 61 | Fiji | Not approved | June 24, 2024  Nitesh Datt | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 62 | Finland | Not approved | June 24, 2024  Marja Savonmäki | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 63 | France | Not approved | August 28, 2024  Julien Gozard | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 64 | French Guiana | Unknown | n/a | NPPO was contacted on July 16, 2024, and September 18, 2024. They did not respond to our questions. |
| 65 | French Polynesia | Unknown | n/a | NPPO was not contacted. |
| 66 | Gabon | Unknown | n/a | NPPO was not contacted. |
| 67 | Gambia | Unknown | n/a | NPPO was not contacted. |
| 68 | Georgia | Not approved | July 8, 2024  Bezhan Rekhviashvili | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. They also stated, “*As we know from the scientific resources, the phosphines are not effective for the fumigation of wood materials*.” |
| 69 | Germany | Not approved | June 24, 2024  Thomas Schröder | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. They also stated that PH3 is not approved in “*the EU, as all phytosanitary regulations are harmonised for all 27 EU-member states. And the reason* (that PH3 isn’t approved) *is simply that no NPPO and/or company asked for approval of a PH3 fumigation.*” In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 70 | Ghana | Approved | July 2, 2024  Eric Bentsil Quaye | NPPO confirmed that PH3 is approved as a treatment for imported wood products. The only exception is India; “*aluminium phosphide is accepted for other countries*.” No specific treatment schedule was defined. |
| 71 | Greece | Not approved | July 9, 2024  Marianna Patsou | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 72 | Grenada | Unknown | n/a | NPPO was not contacted. |
| 73 | Guadeloupe | Unknown | n/a | NPPO was not contacted. |
| 74 | Guam | Unknown | n/a | NPPO was not contacted. |
| 75 | Guatemala | Unknown | n/a | NPPO was contacted on July 16, 2024, and September 18, 2024. They did not respond to our questions. |
| 76 | Guernsey | Unknown | n/a | NPPO was not contacted. |
| 77 | Guinea | Unknown | n/a | NPPO was not contacted. |
| 78 | Guinea-Bissau | Unknown | n/a | NPPO was not contacted. |
| 79 | Guyana | Approved | July 16, 2024  Brian Sears | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 80 | Haiti | Approved | July 16, 2024  Jean Frisner Clerveus | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated that “*Methyl bromide is still in use there for wood packaging materials and forestry products as quarantine pest control. However, we accept PH3 as control for some species of coleoptera that exist in Haiti*.” No specific treatment schedule was defined. |
| 81 | Honduras | Unknown | n/a | NPPO was contacted on July 16, 2024, and September 18, 2024. They did not respond to our questions. |
| 82 | Hungary | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 83 | Iceland | Not approved | July 1, 2024  Hafdís Inga Ingvarsdóttir | NPPO confirmed that the rules for plant protection products (PPP; for quarantine and pre-shipment [QPS] uses) are the same for Iceland as the EU, i.e., regulation No 1107/2009. Therefore, Iceland and EU members do not currently accept PH3 as a treatment for imported wood products. |
| 84 | India | Approved | n/a | NPPO was contacted on January 25, 2024, and July 10, 2024. They did not respond to our questions. In 2018, the Methyl Bromide Technical Options Committee (MBTOC) stated that teak logs exported from Ecuador to India were treated with PH3 [8]. However, the Ecuadorian NPPO has confirmed that this approval is related to sawn timber, not logs, and that “*currently no company in Ecuador has renewed the authorization from India to apply this treatment, which is why sawn wood with phosphine treatment is not being exported*.” (C. Aimacaña, personal communication, May 8, 2024). |
| 85 | Indonesia | Unknown | n/a | NPPO was contacted on June 23, 2024, and July 4, 2024. They did not respond to our questions. |
| 86 | Iran | Unknown | n/a | NPPO was contacted on June 23, 2024, and July 4, 2024. They did not respond to our questions. |
| 87 | Iraq | Approved | July 11, 2024  Hasan Lilo | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 88 | Ireland | Not approved | July 3, 2024  John Eivers | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. In addition, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 89 | Israel | Not approved | September 22, 2024  David Opatowski | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 90 | Italy | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 91 | Jamaica | Unknown | n/a | NPPO was not contacted. |
| 92 | Japan | Not approved | June 24, 2024  Kagatsume Ryuichi | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 93 | Jersey | Unknown | n/a | NPPO was not contacted. |
| 94 | Jordan | Not approved | July 8, 2024  Imad Alawad | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 95 | Kazakhstan | Unknown | n/a | NPPO was contacted on June 24, 2024, September 18, 2024. They did not respond to our questions. |
| 96 | Kenya | Not approved | June 24, 2024  Isaac Macharia | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 97 | Kiribati | Unknown | n/a | NPPO was not contacted. |
| 98 | Korea, Republic of | Approved | September 19, 2024  Park Ji-im | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 99 | Kuwait | Unknown | n/a | NPPO was not contacted. |
| 100 | Kyrgyzstan | Unknown | n/a | NPPO was not contacted. |
| 101 | Laos | Unknown | n/a | NPPO was not contacted. |
| 102 | Latvia | Not approved | n/a | NPPO was contacted on June 24, 2024. They did not respond to our questions. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 103 | Lebanon | Not approved | September 19, 2024  Rania El Hayek | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 104 | Lesotho | Unknown | n/a | NPPO was not contacted. |
| 105 | Liberia | Unknown | n/a | NPPO was not contacted. |
| 106 | Libya | Unknown | n/a | NPPO was contacted on June 24, 2024, and July 4, 2024. They did not respond to our questions. |
| 107 | Lithuania | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 108 | Luxembourg | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 109 | Madagascar | Approved | July 6, 2024  Saholy Nomenjanahary Ramiliarijaona | NPPO confirmed that PH3 is approved as a treatment for imported timber that is <5 cm from the surface of the timber. However, “*for pallets, the woods must be heat treated with respect of ISPM 15 standards*.” |
| 110 | Malawi | Unknown | n/a | NPPO was not contacted. |
| 111 | Malaysia | Approved | March 19, 2024  Abdullah Fauzi Samsudin | NPPO confirmed that PH3 is approved as a treatment for imported wood products. This treatment is accepted for all wood products from all countries. The treatment schedule is “*5 g/m3 for 120 hours*” [9]. No conditions (i.e., treatment temperature, concentration x time (CT) value, loading, etc.) are required for the treatment to be considered successful and “*it is also acceptable during cold season.*” |
| 112 | Maldives | Unknown | n/a | NPPO was not contacted. |
| 113 | Mali | Not approved | July 3, 2024  Halidou Mohomodou | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 114 | Malta | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 115 | Marshall Islands | Unknown | n/a | NPPO was not contacted. |
| 116 | Martinique | Unknown | n/a | NPPO was not contacted. |
| 117 | Mauritania | Unknown | n/a | NPPO was contacted on June 30, 2024, and July 8, 2024. They did not respond to our questions. |
| 118 | Mauritius | Unknown | n/a | NPPO was not contacted. |
| 119 | Mayotte | Unknown | n/a | NPPO was not contacted. |
| 120 | Mexico | Not approved | July 3, 2024  Ana Lilia Montealegre Lara | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. However, the Chilean NPPO has stated that green colihue (*Chusquea culeou*) and green wicker (*Salix viminalis*) rods exported to Mexico are treated with PH3. See comments for Chile above. |
| 121 | Micronesia – Federated States of | Unknown | n/a | NPPO was not contacted. |
| 122 | Moldova | Unknown | n/a | NPPO was not contacted. |
| 123 | Mongolia | Approved | July 4, 2024  Otgonbayar Norovsuren | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated that “*There are no detailed instructions for treating wood and wood materials*” with PH3. |
| 124 | Montenegro | Unknown | n/a | NPPO was not contacted. |
| 125 | Montserrat | Unknown | n/a | NPPO was not contacted. |
| 126 | Morocco | Not approved | July 2, 2024  Dris Barik | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. The “*Moroccan NPPO accepts the treatments set out in ISPM 15. For wood, phosphine is not considered an approved treatment for plant import quarantine*.” |
| 127 | Mozambique | Approved | July 1, 2024  Afonso Sitole | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated that “*Phosphine is for all types of commodities/wood as we are gradually phasing out the methyl bromide*.” However, specific standardized treatment schedules for PH3 do not currently exist. |
| 128 | Myanmar | Not approved | June 26, 2024  Zaw Lin | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 129 | Namibia | Unknown | n/a | NPPO was contacted on June 30, 2024, and July 8, 2024. They did not respond to our questions. |
| 130 | Nauru | Unknown | n/a | NPPO was not contacted. |
| 131 | Nepal | Not approved | June 28, 2024  Bhoj Raj Sapkota | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. They also stated that “*We do not accept such treatments* (i.e., PH3) *in the imported timbers. There is a penetration issue regarding PH3 in the wooden materials*.” |
| 132 | Netherlands | Not approved | July 5, 2024  Johanneke Wingelaar | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. However, “*a biocidal product* (i.e., non-quarantine and pre-shipment [non-QPS] uses) *DEGESCH-PLATES, DEGESCH-STRIP (active substance: magnesiumfosfide) is authorized for fumigation of wood/timber products*.” |
| 133 | New Caledonia | Unknown | n/a | NPPO was not contacted. |
| 134 | New Zealand | Approved | n/a | NPPO was not directly contacted as the phytosanitary requirements for imported wood products are clearly stated on their website [10]. Two documents outline the requirements for importing timber and wood products: (1) Import Health Standard – Poles, piles, rounds and sleepers from all countries [11]; and (2) Import Health Standards – Sawn wood from all countries [12]. PH3 is not currently approved as a treatment for these imported wood products. However, it is approved as a treatment for miscellaneous wooden items (e.g., pine cones, wood shavings, sticks and wood up to 300 mm in thickness or cross-section) for the control of invertebrate pests [13]. PH3 is not approved for the control of ants, fungi, pathogens and extraneous organic material (e.g., leaves, twigs and soil) associated with these miscellaneous wooden items. |
| 135 | Nicaragua | Approved | September 20, 2024  Ricardo José Somarriba Reyes | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 136 | Niger | Unknown | n/a | NPPO was not contacted. |
| 137 | Nigeria | Not approved | June 25, 2024  Idachaba Ebenezer | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 138 | Niue | Unknown | n/a | NPPO was not contacted. |
| 139 | Northern Mariana Islands | Unknown | n/a | NPPO was not contacted. |
| 140 | Norway | Not approved | July 2, 2024  Hilde Paulsen | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. They also stated, “*In the current legislation there are no options specifying phosphine-fumigation*.” |
| 141 | Oman | Unknown | n/a | NPPO was not contacted. |
| 142 | Pakistan | Unknown | n/a | NPPO was contacted on June 24, 2024, and July 4, 2024. They did not respond to our questions. |
| 143 | Palau | Unknown | n/a | NPPO was not contacted. |
| 144 | Panama | Unknown | n/a | NPPO was contacted on June 24, 2024, and July 4, 2024. They did not respond to our questions. |
| 145 | Papua New Guinea | Not approved | May 14, 2024  Alphonse Bannick | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 146 | Paraguay | Approved | July 1, 2024  Pablo Cardozo | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated that “*the treatment used on wood products with phosphine is only for certain products, that is, only for those products with risk category 2 and 3 (processing purposes). In case of wood products used for consume purposes, fumigation measures are not necessary (MDF, hardwood floor, cutting boards etc)*.” |
| 147 | Peru | Approved | n/a | NPPO was contacted on July 16, 2024. They did not respond to our questions. However, the Chilean NPPO has stated that green and naturally dried colihue (*Chusquea culeou*) rods and green pine (*Pinus radiata*) and green eucayltus (*Eucalyptus globulus, Eucalyptus nitens* and *Eucalyptus regnans*) sawn wood exported to Peru are treated with PH3. See comments for Chile above. |
| 148 | Philippines | Unknown | n/a | NPPO was not contacted. |
| 149 | Poland | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 150 | Portugal | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 151 | Puerto Rico | Unknown | n/a | NPPO was not contacted. |
| 152 | Qatar | Unknown | n/a | NPPO was not contacted. |
| 153 | Réunion | Unknown | n/a | NPPO was not contacted. |
| 154 | Romania | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 155 | Russia | Approved | July 29, 2024  Svetlana Alexeyeva | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated, “*According to the State Catalogue of pesticides and agrochemicals authorised for use in the Russian Federation, the use of the pesticide Quickphos, TABLET (560 g/kg) (active ingredient: aluminium phosphide) is permitted for fumigation of timber under film or in other sealed containers*.” and “*There are no restrictions on the fumigation agents used for timber imported into the territory of the Russian Federation*.” Aluminium phosphide (AlP) tablets must be evenly spread throughout the treated space at a dose of 6 g/m3 for 3-5 days at ambient temperatures above 15°C (A. Karmazin, personal communication, September 27, 2024). |
| 156 | Rwanda | Unknown | n/a | NPPO was not contacted. |
| 157 | Saint Kitts and Nevis | Unknown | n/a | NPPO was not contacted. |
| 158 | Saint Lucia | Unknown | n/a | NPPO was not contacted. |
| 159 | Saint Vincent and the Grenadines | Unknown | n/a | NPPO was not contacted. |
| 160 | Samoa | Not approved | May 3, 2024  Nafanua Malele | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 161 | Sao Tome and Principe | Unknown | n/a | NPPO was not contacted. |
| 162 | Saudi Arabia | Approved | August 8, 2024  Talal Abdullah Al-Mutairi | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 163 | Senegal | Approved | July 1, 2024  Abdoulaye Ndiaye | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated that “*Generally, it is ISPM 15 of the IPPC, in particular the heat treatment that is used for wood. But also PH3 is a possibility, but, it will be necessary to describe the details of the treatment in the phytosanitary certificate* (English translation)1.”No specific treatment schedule was defined. |
| 164 | Serbia | Unknown | n/a | NPPO was not contacted. |
| 165 | Seychelles | Unknown | n/a | NPPO was not contacted. |
| 166 | Sierra Leone | Approved | July 12, 2024  Alie Mansaray | NPPO confirmed that PH3 is approved as a treatment for imported wood products. No specific treatment schedule was defined. |
| 167 | Singapore | Unknown | n/a | NPPO was not contacted. |
| 168 | Slovakia | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 169 | Slovenia | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 170 | Solomon Islands | Unknown | n/a | NPPO was not contacted. |
| 171 | Somalia | Unknown | n/a | NPPO was contacted on June 30, 2024, and July 8, 2024. They did not respond to our questions. |
| 172 | South Africa | Unknown | n/a | NPPO was contacted on July 1, 2024, and September 18, 2024. They did not respond to our questions. |
| 173 | South Sudan | Unknown | n/a | NPPO was contacted on June 30, 2024, and July 8, 2024. They did not respond to our questions. |
| 174 | Spain | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 175 | Sri Lanka | Unknown | n/a | NPPO was not contacted. |
| 176 | Sudan | Not approved | July 2, 2024  Abdelmoniem Abdeltam | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 177 | Suriname | Unknown | n/a | NPPO was contacted on May 14, 2024, and May 20, 2024. They did not respond to our questions. |
| 178 | Sweden | Not approved | n/a | NPPO was not directly contacted. However, correspondence with other NPPOs in the EU showed that none of the member states currently accept PH3 as an import treatment for wood products. |
| 179 | Switzerland | Unknown | n/a | NPPO was not contacted. |
| 180 | Syrian Arab Republic | Approved | July 22, 2024  Eyad Mohammed | NPPO confirmed that PH3 is approved as a treatment for imported wood products. They also stated, “*that if it is not possible to use methyl bromide in fumigation, we accept the use of phosphine to fumigate wood /timber*.” No specific treatment schedule was defined. |
| 181 | Tajikistan | Unknown | n/a | NPPO was not contacted. |
| 182 | Tanzania | Not approved | July 1, 2024  Mdili Sambayi Katemani | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. |
| 183 | Thailand | Unknown | n/a | NPPO was not contacted. |
| 184 | The Republic of North Macedonia | Unknown | n/a | NPPO was not contacted. |
| 185 | Timor-Leste | Unknown | n/a | NPPO was not contacted. |
| 186 | Togo | Unknown | n/a | NPPO was not contacted. |
| 187 | Tokelau | Unknown | n/a | NPPO was not contacted. |
| 188 | Tonga | Unknown | n/a | NPPO was not contacted. |
| 189 | Trinidad and Tobago | Unknown | n/a | NPPO was not contacted. |
| 190 | Tunisia | Unknown | n/a | NPPO was not contacted. |
| 191 | Turkey | Approved | n/a | NPPO was not contacted. However, the International Forestry Quarantine Research Group (IFQRG) stated [14]; and the Canadian NPPO confirmed that wood chips exported from Canada to Turkey have been treated with PH3, but that “*very minimal – less than 2 shipments in the past 4 years with very low volume*” have been shipped (M. Noseworthy, personal communication, May 10, 2024). |
| 192 | Turkmenistan | Unknown | n/a | NPPO was contacted on July 5, 2024, and September 18, 2024. They did not respond to our questions. |
| 193 | Turks and Caicos Islands | Unknown | n/a | NPPO was not contacted. |
| 194 | Tuvalu | Unknown | n/a | NPPO was not contacted. |
| 195 | Uganda | Unknown | n/a | NPPO was contacted on June 30, 2024, and July 8, 2024. They did not respond to our questions. |
| 196 | Ukraine | Unknown | n/a | NPPO was not contacted. |
| 197 | United Arab Emirates | Unknown | n/a | NPPO was not contacted. |
| 198 | United Kingdom | Approved | September 19, 2024  Sam Bishop | NPPO confirmed that PH3 is approved as a treatment for imported containerized conifer bark from South Africa. They stated that they “*will accept written details for suitable fumigation treatments for imported wood/timber including using phosphine (PH3)*” from other countries in accordance with Annex 7 of EU 2019/2072 [15]. AlP was approved as a treatment for imported conifer bark from South Africa on September 14, 2021. The treatment schedule is 3.75 g/m3 for 240 h at a minimum product temperature of 5-10°C. They also stated that, “*This specification is acceptable for other products e.g. logs, sawn timber, plywood, woodchips, etc, however, as per the guidance in entry 118 (a) below, we require applications to be submitted from individual NPPO and to be agreed by the UKNPPO, prior to exports taking place.*” |
| 199 | United States of America | Not approved | n/a | NPPO was not directly contacted as the phytosanitary requirements for imported wood products are clearly stated on their website [16, 17]. |
| 200 | Uruguay | Approved | n/a | NPPO was contacted on May 14, 2024. They did not respond to our questions. However, it was confirmed that PH3 is approved as a treatment for imported wood products (P. Canabez, personal communication, September 19, 2024). No specific treatment schedule is accepted. However, the conditions of the PH3 fumigation “*must be included into the Phytosanitary Certificate*.” |
| 201 | Uzbekistan | Not approved | July 21, 2024  Nazokat Tokhirova | NPPO confirmed that PH3 is not currently approved as a treatment for imported wood products. They also stated, “*Using phosphine (PH3) to fumigate imported wood/timber is no longer accepted by the NPPO of Uzbekistan. Instead EDN*(*ethanedinitrile*) *is used*.” |
| 202 | Vanuatu | Unknown | n/a | NPPO was not contacted. |
| 203 | Venezuela | Approved | n/a | NPPO was contacted on July 16, 2024. They did not respond to our questions. However, the Chilean NPPO has stated that green wicker (*Salix viminalis*) rods exported to Venezuela are treated with PH3. See comments for Chile above. |
| 204 | Vietnam | Unknown | n/a | NPPO was not contacted. |
| 205 | Virgin Islands, British | Unknown | n/a | NPPO was not contacted. |
| 206 | Virgin Islands, U.S. | Unknown | n/a | NPPO was not contacted. |
| 207 | Wallis and Futuna Islands | Unknown | n/a | NPPO was not contacted. |
| 208 | Yeman | Unknown | n/a | NPPO was not contacted. |
| 209 | Zambia | Unknown | n/a | NPPO was contacted on June 30, 2024, and July 8, 2024. They did not respond to our questions. |
| 210 | Zimbabwe | Approved | July 1, 2024  Dumisani Kutywayo | NPPO confirmed that PH3 is accepted as an import treatment for wood products “*provided there is a fumigation certificate to confirm what treatment was applied*.” No specific treatment schedule was defined. |
| 1Text translated using Google Translate <https://translate.google.com/?sl=auto&tl=en&op=translate>. | | | | |

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