



2025/157

30.1.2025

**COMMISSION IMPLEMENTING REGULATION (EU) 2025/157**

**of 29 January 2025**

**concerning the authorisation of microcrystalline cellulose, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose as feed additives for all animal species**

**(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition <sup>(1)</sup>, and in particular Article 9(2) thereof,

Whereas:

- (1) Regulation (EC) No 1831/2003 provides for the authorisation of additives for use in animal nutrition and for the grounds and procedures for granting such an authorisation. Article 10(2) of that Regulation provides for the re-evaluation of additives authorised pursuant to Council Directive 70/524/EEC <sup>(2)</sup>.
- (2) The substances microcrystalline cellulose, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose were authorised without a time limit pursuant to Directive 70/524/EEC as feed additives for all animal species. Those substances were subsequently entered in the Register of Feed Additives as existing products, in accordance with Article 10(1), point (b), of Regulation (EC) No 1831/2003.
- (3) In accordance with Article 10(2) of Regulation (EC) No 1831/2003 in conjunction with Article 7 thereof, applications were submitted for the re-evaluation of microcrystalline cellulose, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose as feed additives for all animal species. The applicants requested microcrystalline cellulose, methyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose to be classified in the additive category 'technological additives' and in the functional groups 'emulsifiers', 'stabilisers', 'thickeners' and 'gelling agents'; ethyl cellulose in the additive category 'technological additives' and in the functional group 'stabilisers' and hydroxypropyl cellulose in the additive category 'technological additives' and in the functional groups 'emulsifiers', 'stabilisers', 'thickeners' and 'gelling agents'. The applications were accompanied by the particulars and documents required under Article 7(3) of Regulation (EC) No 1831/2003.
- (4) In addition, in accordance with Article 7 of Regulation (EC) No 1831/2003, applications were submitted for the authorisation of microcrystalline cellulose, methyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose as feed additives for all animal species, requesting them to be classified in the additive category 'technological additives' and in the functional group 'binders'. Those applications were accompanied by the particulars and documents required under Article 7(3) of Regulation (EC) No 1831/2003.

<sup>(1)</sup> OJ L 268, 18.10.2003, p. 29, ELI: <https://eur-lex.europa.eu/eli/reg/2003/1831/oj>.

<sup>(2)</sup> Council Directive 70/524/EEC of 23 November 1970 concerning additives in feedingstuffs (OJ L 270, 14.12.1970, p. 1, ELI: <http://data.europa.eu/eli/dir/1970/524/oj>).

- (5) The European Food Safety Authority ('the Authority') concluded in its opinions of 2 July 2020 <sup>(3)</sup> and 31 January 2024 <sup>(4)</sup> that, under the proposed conditions of use, microcrystalline cellulose, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose, are safe for all animal species, the consumer and the environment. In the absence of data, it was not in the position to conclude on the safety for the user. No specific data on the efficacy of these additives in feedingstuffs were provided, but as they are all authorised for use as food additives, the Authority concluded that the effect seen when those substances are used in food could reasonably be expected to be seen when they are used as additives in feed. It also verified the reports on the method of analysis of the feed additives in feed submitted by the Reference Laboratory set up by Regulation (EC) No 1831/2003.
- (6) In view of the above, the Commission considers that microcrystalline cellulose, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose satisfy the conditions provided for in Article 5 of Regulation (EC) No 1831/2003. Accordingly, the use of those substances should be authorised. In addition, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on the health of the users of the additives.
- (7) Since safety reasons do not require the immediate application of the modifications to the conditions of authorisation of the substances concerned, as far as they belong to the functional groups 'emulsifiers', 'stabilisers', 'thickeners' and 'gelling agents', it is appropriate to provide for a transitional period for interested parties to prepare themselves to meet the new requirements resulting from the authorisation.
- (8) The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed,

HAS ADOPTED THIS REGULATION:

#### *Article 1*

### **Authorisation**

The substances specified in the Annex, belonging to the additive category 'technological additives' and the functional groups 'emulsifiers', 'stabilisers', 'thickeners', 'gelling agents' or 'binders', are authorised as additives in animal nutrition, subject to the conditions laid down in that Annex.

#### *Article 2*

### **Transitional measures**

1. The feed additives microcrystalline cellulose, methyl cellulose, ethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose and sodium carboxymethyl cellulose, as authorised pursuant to Directive 70/524/EEC and premixtures containing these additives, which are produced and labelled before 19 August 2025 in accordance with the rules applicable before 19 February 2025 may continue to be placed on the market and used until the stocks concerned are exhausted.
2. Compound feed and feed materials containing the feed additives referred to in paragraph 1, which are produced and labelled before 19 February 2026 in accordance with the rules applicable before 19 February 2025 may continue to be placed on the market and used until the stocks concerned are exhausted if they are intended for food-producing animals.

<sup>(3)</sup> EFSA Journal 2020;18(7):6209; EFSA Journal 2020;18(7):6212; EFSA Journal 2020;18(7):6210; EFSA Journal 2020;18(7):6213; EFSA Journal 2020;18(7):6234; EFSA Journal 2020;18(7):6211.

<sup>(4)</sup> EFSA Journal 2024;22:e8625; EFSA Journal 2024;22:e8637; EFSA Journal 2024;22:e8636; EFSA Journal 2024;22:e8626.

3. Compound feed and feed materials containing the feed additives referred to in paragraph 1, which are produced and labelled before 19 February 2027 in accordance with the rules applicable before 19 February 2025 may continue to be placed on the market and used until the stocks concerned are exhausted if they are intended for non-food producing animals.

#### *Article 3*

#### **Entry into force**

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 29 January 2025.

*For the Commission*  
*The President*  
Ursula VON DER LEYEN

## ANNEX

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: emulsifiers								
1c460i	Microcrystalline cellulose	<i>Additive composition</i> Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis)  Solid form  <i>Characterisation of the active substance</i> Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis), manufactured from wood pulp partially depolymerised with a hydrolysis process obtained with heat and mineral acid  CAS No: 9004-34-6  Loss on drying: ≤ 7 %  Water-soluble matters: ≤ 0,24 %  Sulfated ash: ≤ 0,5 %  Starch: not detectable  Carboxyl groups ≤ 1 %  Particle size: ≤ 10 % of particles of less than 5 µm	All animal species	-	-	-	<div><div>1.</div><div>In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div></div> <div><div>2.</div><div>For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div></div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		<i>Analytical method</i> <sup>(1)</sup> For the identification/characterisation of microcrystalline cellulose in the feed additive:  — Commission Regulation (EU) No 231/2012 <sup>(2)</sup> for microcrystalline cellulose and the corresponding methods of the FAO JECFA ‘microcrystalline cellulose’ monograph and the ‘Volume 4’ of FAO JECFA combined compendium for food additives specifications						

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

<sup>(2)</sup> Commission Regulation (EU) No 231/2012 of 9 March 2012 laying down specifications for food additives listed in Annexes II and III to Regulation (EC) No 1333/2008 of the European Parliament and of the Council (OJ L 83, 22.3.2012, p. 1, ELI: <http://data.europa.eu/eli/reg/2012/231/oj>).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: stabilisers								
1c460i	Microcrystalline cellulose	<i>Additive composition</i> Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis)  Solid form  <i>Characterisation of the active substance</i> Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis), manufactured from wood pulp partially depolymerised with a hydrolysis process obtained with heat and mineral acid  CAS No: 9004-34-6  Loss on drying: ≤ 7 %  Water-soluble matters: ≤ 0,24 %  Sulfated ash: ≤ 0,5 %  Carboxyl groups ≤ 1 %  Particle size: ≤ 10 % of particles of less than 5 µm  <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of microcrystalline cellulose in the feed additive:  — Regulation (EU) No 231/2012 for microcrystalline cellulose and the corresponding methods of the FAO	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		JECFA ‘microcrystalline cellulose’ monograph and the ‘Volume 4’ of FAO JECFA combined compendium for food additives specifications						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: thickeners**

1c460i	Microcrystalline cellulose	<p><i>Additive composition</i></p> <p>Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis)</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis), manufactured from wood pulp partially depolymerised with a hydrolysis process obtained with</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		heat and mineral acid CAS No: 9004-34-6 Loss on drying: ≤ 7 % Water-soluble matters: ≤ 0,24 % Sulfated ash: ≤ 0,5 % Carboxyl groups ≤ 1 % Particle size: ≤ 10 % of particles of less than 5 µm <i>Analytical method</i> (1) For the identification/characterisation of microcrystalline cellulose in the feed additive: — Regulation (EU) No 231/2012 for microcrystalline cellulose and the corresponding methods of the FAO JECFA 'microcrystalline cellulose' monograph and the 'Volume 4' of FAO JECFA combined compendium for food additives specifications					resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).



Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: gelling agents								
1c460i	Microcrystalline cellulose	<i>Additive composition</i> Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis)  Solid form  <i>Characterisation of the active substance</i> Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis), manufactured from wood pulp partially depolymerised with a hydrolysis process obtained with heat and mineral acid  CAS No: 9004-34-6  Loss on drying: ≤ 7 %  Water-soluble matters: ≤ 0,24 %  Sulfated ash: ≤ 0,5 %  Carboxyl groups ≤ 1 %  Particle size: ≤ 10 % of particles of less than 5 µm  <i>Analytical method (*)</i> For the identification/characterisation of microcrystalline cellulose in the feed additive:  — Regulation (EU) No 231/2012 for microcrystalline cellulose and the corresponding methods of the FAO	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		JECFA ‘microcrystalline cellulose’ monograph and the ‘Volume 4’ of FAO JECFA combined compendium for food additives specifications						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: binders**

1c460i	Microcrystalline cellulose	<p><i>Additive composition</i></p> <p>Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis)</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Microcrystalline cellulose ≥ 97 % (calculated as cellulose on the anhydrous basis), manufactured from wood pulp</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		partially depolymerised with a hydrolysis process obtained with heat and mineral acid CAS No: 9004-34-6 Loss on drying: ≤ 7 % Water-soluble matters: ≤ 0,24 % Sulfated ash: ≤ 0,5 % Carboxyl groups ≤ 1 % Particle size: ≤ 10 % of particles of less than 5 µm <i>Analytical method</i> <sup>(1)</sup> For the identification/characterisation of microcrystalline cellulose in the feed additive:  — Regulation (EU) No 231/2012 for microcrystalline cellulose and the corresponding methods of the FAO JECFA 'microcrystalline cellulose' monograph and the 'Volume 4' of FAO JECFA combined compendium for food additives specifications					organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: emulsifiers								
1c461	Methyl cellulose	<i>Additive composition</i> Methyl cellulose Solid form <i>Characterisation of the active substance</i> Methyl cellulose obtained from wood pulp or cotton by treatment with alkali and methylation of the alkali cellulose with methyl chloride CAS No: 9004-67-5 Content not less than 25 % and not more than 33 % of methoxyl groups (-OCH <sub>3</sub> ) and not more than 5 % of hydroxyethoxyl groups (-OCH <sub>2</sub> CH <sub>2</sub> OH) Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of methyl cellulose in the feed additive: — Regulation (EU) No 231/2012 for methyl cellulose and the corresponding methods of the FAO JECFA 'Methyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		food additives specifications and the European Pharmacopoeia monograph 0345						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: stabilisers**

1c461	Methyl cellulose	<p><i>Additive composition</i></p> <p>Methyl cellulose</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Methyl cellulose obtained from wood pulp or cotton by treatment with alkali and methylation of the alkali cellulose with methyl chloride</p> <p>CAS No: 9004-67-5</p> <p>Content not less than 25 % and not more than 33 % of methoxyl groups (-OCH<sub>3</sub>)</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		and not more than 5 % of hydroxyethoxyl groups (-OCH <sub>2</sub> CH <sub>2</sub> OH) Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % <i>Analytical method</i> <sup>(1)</sup> For the identification/characterisation of methyl cellulose in the feed additive: — Regulation (EU) No 231/2012 for methyl cellulose and the corresponding methods of the FAO JECFA 'Methyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0345					eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: thickeners								
1c461	Methyl cellulose	<i>Additive composition</i> Methyl cellulose Solid form <i>Characterisation of the active substance</i> Methyl cellulose obtained from wood pulp or cotton by treatment with alkali and methylation of the alkali cellulose with methyl chloride CAS No: 9004-67-5 Content not less than 25 % and not more than 33 % of methoxyl groups (-OCH <sub>3</sub> ) and not more than 5 % of hydroxyethoxyl groups (-OCH <sub>2</sub> CH <sub>2</sub> OH) Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of methyl cellulose in the feed additive: — Regulation (EU) No 231/2012 for methyl cellulose and the corresponding methods of the FAO JECFA 'Methyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		food additives specifications and the European Pharmacopoeia monograph 0345						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: gelling agents**

1c461	Methyl cellulose	<i>Additive composition</i> Methyl cellulose Solid form  <i>Characterisation of the active substance</i> Methyl cellulose obtained from wood pulp or cotton by treatment with alkali and methylation of the alkali cellulose with methyl chloride CAS No: 9004-67-5	All animal species	-	-	-	1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.  2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		<p>Content not less than 25 % and not more than 33 % of methoxyl groups (-OCH<sub>3</sub>) and not more than 5 % of hydroxyethoxyl groups (-OCH<sub>2</sub>CH<sub>2</sub>OH)</p> <p>Loss on drying: ≤ 10 %</p> <p>Sulfated ash: ≤ 1,5 %</p> <p><i>Analytical method</i> <sup>(1)</sup></p> <p>For the identification/characterisation of methyl cellulose in the feed additive:</p> <p>— Regulation (EU) No 231/2012 for methyl cellulose and the corresponding methods of the FAO JECFA ‘Methyl cellulose’ monograph, the ‘Volume 4’ of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0345</p>					<p>resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</p>	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: binders								
1c461	Methyl cellulose	<i>Additive composition</i> Methyl cellulose Solid form <i>Characterisation of the active substance</i> Methyl cellulose obtained from wood pulp or cotton by treatment with alkali and methylation of the alkali cellulose with methyl chloride CAS No: 9004-67-5 Content not less than 25 % and not more than 33 % of methoxyl groups (-OCH <sub>3</sub> ) and not more than 5 % of hydroxyethoxyl groups (-OCH <sub>2</sub> CH <sub>2</sub> OH) Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of methyl cellulose in the feed additive: — Regulation (EU) No 231/2012 for methyl cellulose and the corresponding methods of the FAO JECFA 'Methyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		food additives specifications and the European Pharmacopoeia monograph 0345						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: stabilisers**

1d462	Ethyl cellulose	<p><i>Additive composition</i></p> <p>Ethyl cellulose</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Ethyl cellulose, obtained by reaction of partially depolymerised cellulose with ethyl chloride</p> <p>Ethoxyl groups (-OC<sub>2</sub>H<sub>5</sub>): &gt; 44 % and &lt; 50 % on the dried basis (equivalent to not more than 2,6 ethoxyl groups per</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use.</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		anhydroglucose unit) CAS No: 9004-57-3 Loss on drying: ≤ 3% Sulfated ash: ≤ 0,4 % <i>Analytical method</i> <sup>(1)</sup> For the identification/characterisation of ethyl cellulose in the feed additive: — Regulation (EU) No 231/2012 for ethyl cellulose and the corresponding methods described in the FAO JECFA 'Ethyl cellulose' monograph and the European Pharmacopoeia monograph 0822					Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: emulsifiers								
1c463	Hydroxypropyl cellulose	<i>Additive composition</i> Hydroxypropyl cellulose  Solid form  <i>Characterisation of the active substance</i> Hydroxypropyl cellulose, obtained by partial etherification of cellulose from fibrous plant material with hydroxypropyl groups  Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): ≤ 80,5 % equivalent to not more than 4,6 hydroxypropyl groups per anhydroglucose unit on the anhydrous basis  CAS No: 9004-64-2  Loss on drying: ≤ 10 %  Sulfated ash: ≤ 0,5 %  Propylene chlorohydrins ≤ 0,1 mg/kg  <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of hydroxypropyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl cellulose and the corresponding methods of FAO JECFA ‘hydroxypropyl cellulose’ monograph, the ‘Volume 4’ of FAO JECFA combined compendium for	All animal species	-	-	-	1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.  2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		food additives specifications and the European Pharmacopeia monograph 0337						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: stabilisers**

1c463	Hydroxypropyl cellulose	<p><i>Additive composition</i></p> <p>Hydroxypropyl cellulose</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Hydroxypropyl cellulose, obtained by partial etherification of cellulose from fibrous plant material with hydroxypropyl groups</p> <p>Hydroxypropoxyl groups (-OCH<sub>2</sub>CHOHCH<sub>3</sub>): ≤ 80,5 % equivalent to not more than 4,6 hydroxypropyl groups</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		per anhydroglucose unit on the anhydrous basis CAS No: 9004-64-2 Loss on drying: ≤ 10 % Sulfated ash: ≤ 0,5 % Propylene chlorohydrins ≤ 0,1 mg/kg <i>Analytical method</i> <sup>(1)</sup> For the identification/characterisation of hydroxypropyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl cellulose and the corresponding methods of FAO JECFA 'hydroxypropyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopeia monograph 0337					eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: thickeners								
1c463	Hydroxypropyl cellulose	<i>Additive composition</i> Hydroxypropyl cellulose  Solid form  <i>Characterisation of the active substance</i> Hydroxypropyl cellulose, obtained by partial etherification of cellulose from fibrous plant material with hydroxypropyl groups  Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): ≤ 80,5 % equivalent to not more than 4,6 hydroxypropyl groups per anhydroglucose unit on the anhydrous basis  CAS No: 9004-64-2  Loss on drying: ≤ 10 %  Sulfated ash: ≤ 0,5 %  Propylene chlorohydrins ≤ 0,1 mg/kg  <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of hydroxypropyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl cellulose and the corresponding methods of FAO JECFA 'hydroxypropyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for	All animal species	-	-	-	1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.  2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	19 February 2035



Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		food additives specifications and the European Pharmacopeia monograph 0337						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: gelling agents**

1c463	Hydroxypropyl cellulose	<p><i>Additive composition</i></p> <p>Hydroxypropyl cellulose</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Hydroxypropyl cellulose, obtained by partial etherification of cellulose from fibrous plant material with hydroxypropyl groups</p> <p>Hydroxypropoxyl groups (-OCH<sub>2</sub>CHOHCH<sub>3</sub>): ≤ 80,5 % equivalent to not more than 4,6 hydroxypropyl groups</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		per anhydroglucose unit on the anhydrous basis CAS No: 9004-64-2 Loss on drying: ≤ 10 % Sulfated ash: ≤ 0,5 % Propylene chlorohydrins ≤ 0,1 mg/kg <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of hydroxypropyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl cellulose and the corresponding methods of FAO JECFA 'hydroxypropyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopeia monograph 0337					eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: emulsifiers								
1c464	Hydroxypropyl methyl cellulose	<i>Additive composition</i> Hydroxypropyl methyl cellulose Solid form <i>Characterisation of the active substance</i> Hydroxypropyl methyl cellulose manufactured reacting partially depolymerised cellulose with methyl groups and containing a small degree of hydroxypropyl substitution CAS No: 9004-65-3 Methoxyl groups: (-OCH <sub>3</sub> ) 19-30 % Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): 3-12 % Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % (for products with viscosity of 50 mPa.s or above); ≤ 3 % (for products with viscosity below 50 mPa.s) Propylene chlorohydrins: ≤ 0,1 mg/kg <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of hydroxypropyl methyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl methyl cellulose and the corresponding methods of the FAO JECFA 'Hydroxypropyl methyl	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0348						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: stabilisers**

1c464	Hydroxypropyl methyl cellulose	<i>Additive composition</i> Hydroxypropyl methyl cellulose Solid form  <i>Characterisation of the active substance</i> Hydroxypropyl methyl cellulose manufactured reacting partially depolymerised cellulose with methyl	All animal species	-	-	-	1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.  2. For users of the additive and premixtures, feed business	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		groups and containing a small degree of hydroxypropyl substitution CAS No: 9004-65-3 Methoxyl groups (-OCH <sub>3</sub> ): 19-30 % Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): 3-12 % Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % (for products with viscosity of 50 mPa.s or above); ≤ 3 % (for products with viscosity below 50 mPa.s) Propylene chlorohydrins: ≤ 0,1 mg/kg <i>Analytical method</i> <sup>(1)</sup> For the identification/characterisation of hydroxypropyl methyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl methyl cellulose and the corresponding methods of the FAO JECFA 'Hydroxypropyl methyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0348					operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: thickeners								
1c464	Hydroxypropyl methyl cellulose	<i>Additive composition</i> Hydroxypropyl methyl cellulose Solid form <i>Characterisation of the active substance</i> Hydroxypropyl methyl cellulose manufactured reacting partially depolymerised cellulose with methyl groups and containing a small degree of hydroxypropyl substitution CAS No: 9004-65-3 Methoxyl groups (-OCH <sub>3</sub> ): 19-30 % Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): 3-12 % Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % (for products with viscosity of 50 mPa.s or above); ≤ 3 % (for products with viscosity below 50 mPa.s) Propylene chlorohydrins: ≤ 0,1 mg/kg <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of hydroxypropyl methyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl methyl cellulose and the corresponding methods of the FAO JECFA 'Hydroxypropyl methyl	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0348						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: gelling agents**

1c464	Hydroxypropyl methyl cellulose	<i>Additive composition</i> Hydroxypropyl methyl cellulose Solid form  <i>Characterisation of the active substance</i> Hydroxypropyl methyl cellulose manufactured reacting partially depolymerised cellulose with methyl	All animal species	-	-	-	1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.  2. For users of the additive and premixtures, feed business	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		groups and containing a small degree of hydroxypropyl substitution CAS No: 9004-65-3 Methoxyl groups (-OCH <sub>3</sub> ): 19-30 % Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): 3-12 % Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % (for products with viscosity of 50 mPa.s or above); ≤ 3 % (for products with viscosity below 50 mPa.s) Propylene chlorohydrins: ≤ 0,1 mg/kg <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of hydroxypropyl methyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl methyl cellulose and the corresponding methods of the FAO JECFA 'Hydroxypropyl methyl cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0348					operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).



Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: binders								
1c464	Hydroxypropyl methyl cellulose	<i>Additive composition</i> Hydroxypropyl methyl cellulose Solid form <i>Characterisation of the active substance</i> Hydroxypropyl methyl cellulose manufactured reacting partially depolymerised cellulose with methyl groups and containing a small degree of hydroxypropyl substitution CAS No: 9004-65-3 Methoxyl groups (-OCH <sub>3</sub> ): 19-30 % Hydroxypropoxyl groups (-OCH <sub>2</sub> CHOHCH <sub>3</sub> ): 3-12 % Loss on drying: ≤ 10 % Sulfated ash: ≤ 1,5 % (for products with viscosity of 50 mPa.s or above); ≤ 3 % (for products with viscosity below 50 mPa.s) Propylene chlorohydrins: ≤ 0,1 mg/kg <i>Analytical method (*)</i> For the identification/characterisation of hydroxypropyl methyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for hydroxypropyl methyl cellulose and the corresponding methods of the FAO JECFA 'Hydroxypropyl methyl	All animal species	-	-	-	1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.  2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		cellulose' monograph, the 'Volume 4' of FAO JECFA combined compendium for food additives specifications and the European Pharmacopoeia monograph 0348						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: emulsifiers**

1c466	Sodium carboxymethyl cellulose	<p><i>Additive composition</i></p> <p>Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis)</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis), obtained by etherification reaction</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		<p>between the alkali-cellulose complex and monochloroacetic acid</p> <p>CAS No: 9000-32-4</p> <p>Carboxymethyl groups (-CH<sub>2</sub>COOH): 0,2-1,5 per anhydroglucose unit</p> <p>Loss on drying: ≤ 12 %</p> <p>Total glycolate: ≤ 0,4 % (as sodium glycolate on the anhydrous basis)</p> <p>Sodium: ≤ 12,4 % (on the anhydrous basis)</p> <p><i>Analytical method <sup>(1)</sup></i></p> <p>For the identification/characterisation of sodium carboxymethyl cellulose in the feed additive:</p> <p>— Regulation (EU) No 231/2012 for sodium carboxymethyl cellulose and the corresponding methods of FAO JECFA ‘sodium carboxymethyl cellulose’ monograph and the ‘Volume 4’ of FAO JECFA combined compendium for food additives specifications.</p>					<p>organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</p>	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: stabilisers								
1c466	Sodium carboxymethyl cellulose	<i>Additive composition</i> Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis)  Solid form  <i>Characterisation of the active substance</i> Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis), obtained by etherification reaction between the alkali-cellulose complex and monochloroacetic acid  CAS No: 9000-32-4  Carboxymethyl groups (-CH <sub>2</sub> COOH): 0,2-1,5 per anhydroglucose unit  Loss on drying: ≤ 12 %  Total glycolate: ≤ 0,4 % (as sodium glycolate on the anhydrous basis)  Sodium: ≤ 12,4 % (on the anhydrous basis)  <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of sodium carboxymethyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for sodium carboxymethyl cellulose and the corresponding methods of FAO JECFA 'sodium carboxymethyl	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		cellulose' monograph and the 'Volume 4' of FAO JECFA combined compendium for food additives specifications.						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: thickeners**

1c466	Sodium carboxymethyl cellulose	<p><i>Additive composition</i></p> <p>Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis)</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis), obtained by etherification reaction between the alkali-cellulose complex</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to</p>	19 February 2035
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Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		<p>and monochloroacetic acid</p> <p>CAS No: 9000-32-4</p> <p>Carboxymethyl groups (-CH<sub>2</sub>COOH): 0,2-1,5 per anhydroglucose unit</p> <p>Loss on drying: ≤ 12 %</p> <p>Total glycolate: ≤ 0,4 % (as sodium glycolate on the anhydrous basis)</p> <p>Sodium: ≤ 12,4 % (on the anhydrous basis)</p> <p><i>Analytical method <sup>(1)</sup></i></p> <p>For the identification/characterisation of sodium carboxymethyl cellulose in the feed additive:</p> <p>— Regulation (EU) No 231/2012 for sodium carboxymethyl cellulose and the corresponding methods of FAO JECFA ‘sodium carboxymethyl cellulose’ monograph and the ‘Volume 4’ of FAO JECFA combined compendium for food additives specifications.</p>					<p>address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</p>	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives. Functional group: gelling agents								
1c466	Sodium carboxymethyl cellulose	<i>Additive composition</i> Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis)  Solid form  <i>Characterisation of the active substance</i> Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis), obtained by etherification reaction between the alkali-cellulose complex and monochloroacetic acid  CAS No: 9000-32-4  Carboxymethyl groups (-CH <sub>2</sub> COOH): 0,2-1,5 per anydroglucose unit  Loss on drying: ≤ 12 %  Total glycolate: ≤ 0,4 % (as sodium glycolate on the anhydrous basis)  Sodium: ≤ 12,4 % (on the anhydrous basis)  <i>Analytical method <sup>(1)</sup></i> For the identification/characterisation of sodium carboxymethyl cellulose in the feed additive:  — Regulation (EU) No 231/2012 for sodium carboxymethyl cellulose and the corresponding methods of FAO JECFA 'sodium carboxymethyl	All animal species	-	-	-	<div>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</div> <div>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.</div>	19 February 2035

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		cellulose' monograph and the 'Volume 4' of FAO JECFA combined compendium for food additives specifications.						

(<sup>1</sup>) Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).

Identification number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			

**Category: technological additives. Functional group: binders**

1c466	Sodium carboxymethyl cellulose	<p><i>Additive composition</i></p> <p>Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis)</p> <p>Solid form</p> <p><i>Characterisation of the active substance</i></p> <p>Sodium carboxymethyl cellulose ≥ 99,5 % (on the anhydrous basis), obtained by etherification reaction between the alkali-cellulose complex</p>	All animal species	-	-	-	<p>1. In the directions for use of the additive and premixtures, the storage conditions and the stability to heat treatment shall be indicated.</p> <p>2. For users of the additive and premixtures, feed business operators shall establish operational procedures and organisational measures to</p>	19 February 2035
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Identifica- tion number of the feed additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
		and monochloroacetic acid CAS No: 9000-32-4 Carboxymethyl groups (-CH <sub>2</sub> COOH): 0,2-1,5 per anydroglucose unit Loss on drying: ≤ 12 % Total glycolate: ≤ 0,4 % (as sodium glycolate on the anhydrous basis) Sodium: ≤ 12,4 % (on the anhydrous basis) <i>Analytical method</i> (1) For the identification/characterisation of sodium carboxymethyl cellulose in the feed additive: — Regulation (EU) No 231/2012 for sodium carboxymethyl cellulose and the corresponding methods of FAO JECFA 'sodium carboxymethyl cellulose' monograph and the 'Volume 4' of FAO JECFA combined compendium for food additives specifications.					address potential risks resulting from their use. Where those risks cannot be eliminated by such procedures and measures, the additive and premixtures shall be used with personal skin, eye and breathing protective equipment.	

<sup>(1)</sup> Details of the analytical methods are available at the following address of the Reference Laboratory: [https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports\\_en](https://joint-research-centre.ec.europa.eu/eurl-fa-eurl-feed-additives/eurl-fa-authorisation/eurl-fa-evaluation-reports_en).