



2026/2053

14.9.2026

COMMISSION IMPLEMENTING REGULATION (EU) 2026/2053

of 10 September 2026

**granting a Union authorisation for the biocidal product family ‘Glutaraldehyde formulations’ in
accordance with Regulation (EU) No 528/2012 of the European Parliament and of the Council**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products ⁽¹⁾, and in particular Article 44(5), first subparagraph, thereof,

Whereas:

- (1) On 23 September 2016, Solenis Switzerland GmbH submitted an application to the European Chemicals Agency (‘the Agency’) in accordance with Article 43(1) of Regulation (EU) No 528/2012 and Article 4 of Commission Implementing Regulation (EU) No 414/2013 ⁽²⁾ for Union authorisation of the same biocidal product family, as referred to in Article 1 of Implementing Regulation (EU) No 414/2013, named ‘Glutaraldehyde formulations’, of product-types 6, 11 and 12, as described in Annex V to Regulation (EU) No 528/2012. The application was recorded under case number BC-WA027111-62 in the Register for Biocidal Products. The application referred to the biocidal product family ‘GA 24-50 BPF’ authorised by Commission Implementing Regulation (EU) 2025/1906 ⁽³⁾ with authorisation number EU-0030162-0000.
- (2) The biocidal product family ‘Glutaraldehyde formulations’ contains glutaraldehyde as the active substance, included in the Union list of approved active substances referred to in Article 9(2) of Regulation (EU) No 528/2012 for product-types 6, 11 and 12.
- (3) On 30 April 2025, the Agency submitted to the Commission its opinion ⁽⁴⁾, in accordance with Article 6 of Implementing Regulation (EU) No 414/2013, and the draft summary of the product characteristics (‘SPC’) of ‘Glutaraldehyde formulations’ in all the official languages of the Union in accordance with Article 44(4) of Regulation (EU) No 528/2012.
- (4) In its opinion, the Agency concludes that the proposed differences between the biocidal product family ‘Glutaraldehyde formulations’ and the related reference biocidal product family ‘GA 24-50 BPF’ are limited to information which can be the subject of an administrative change in accordance with Commission Implementing Regulation (EU) No 354/2013 ⁽⁵⁾, and that based on the assessment of the related reference biocidal product family ‘GA 24-50 BPF’ and subject to compliance with the draft SPC, the same biocidal product family ‘Glutaraldehyde formulations’ meets the conditions laid down in Article 19(1) of Regulation (EU) No 528/2012.

⁽¹⁾ OJ L 167, 27.6.2012, p. 1, ELI: <http://data.europa.eu/eli/reg/2012/528/oj>.

⁽²⁾ Commission Implementing Regulation (EU) No 414/2013 of 6 May 2013 specifying a procedure for the authorisation of same biocidal products in accordance with Regulation (EU) No 528/2012 of the European Parliament and of the Council (OJ L 125, 7.5.2013, p. 4, ELI: http://data.europa.eu/eli/reg_impl/2013/414/oj).

⁽³⁾ Commission Implementing Regulation (EU) 2025/1906 of 12 September 2025 granting a Union authorisation for the biocidal product family GA 24-50 BPF in accordance with Regulation (EU) No 528/2012 of the European Parliament and of the Council (OJ L, 2025/1906, 30.9.2025, ELI: http://data.europa.eu/eli/reg_impl/2025/1906/oj).

⁽⁴⁾ European Chemicals Agency opinion of 30 April 2025 on the Union authorisation of the same biocidal product family ‘Glutaraldehyde formulations’, <https://echa.europa.eu/opinions-on-union-authorisation>.

⁽⁵⁾ Commission Implementing Regulation (EU) No 354/2013 of 18 April 2013 on changes of biocidal products authorised in accordance with Regulation (EU) No 528/2012 of the European Parliament and of the Council (OJ L 109, 19.4.2013, p. 4, ELI: http://data.europa.eu/eli/reg_impl/2013/354/oj).

- (5) The Commission concurs with the opinion of the Agency and considers it therefore appropriate to grant a Union authorisation for the same biocidal product family 'Glutaraldehyde formulations'.
- (6) The expiry date of the authorisation should be aligned with the expiry date of the authorisation of the related reference biocidal product family 'GA 24-50 BPF'.
- (7) The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Biocidal Products,

HAS ADOPTED THIS REGULATION:

Article 1

A Union authorisation with authorisation number EU-0034830-0000 is hereby granted to Solenis Switzerland GmbH for the making available on the market and use of the same biocidal product family 'Glutaraldehyde formulations' in accordance with the summary of the product characteristics set out in the Annex.

The Union authorisation is valid from 4 October 2026 until 30 September 2030.

Article 2

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, 10 September 2026.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX

SUMMARY OF PRODUCT CHARACTERISTICS FOR A BIOCIDAL PRODUCT FAMILY

Glutaraldehyde formulations

Product type(s)

PT06: Preservatives for products during storage

PT12: Slimicides

PT11: Preservatives for liquid-cooling and processing systems

Authorisation number EU-0034830-0000**R4BP asset number** EU-0034830-0000

PART I

FIRST INFORMATION LEVEL

1. ADMINISTRATIVE INFORMATION

1.1. Family name

Name	Glutaraldehyde formulations
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1.2. Product type(s)

Product type(s)	PT06: Preservatives for products during storage PT12: Slimicides PT11: Preservatives for liquid-cooling and processing systems
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1.3. Authorisation holder

Name and address of the authorisation holder	Name	Solenis Switzerland GmbH
	Address	Mühlentalstrasse 38 8200 Schaffhausen CH
Authorisation number	EU-0034830-0000	
R4BP asset number	EU-0034830-0000	
Date of the authorisation	4.10.2026	
Expiry date of the authorisation	30.9.2030	

1.4. Manufacturer(s) of the product

Name of manufacturer	Solenis Switzerland GmbH
Address of manufacturer	Mühlentalstrasse 38 8200 Schaffhausen Switzerland

Location of manufacturing sites	Solenis Technologies Germany GmbH Füttingsweg 20 D-47805 Krefeld Germany Solenis Sweden AB Högastensgatan 18 252 32 Helsingborg Sweden Diversey UK Production Ltd Cotes Park Industrial Estate, Somercotes DE55 4PA Alfreton United Kingdom of Great Britain and Northern Ireland (the) Diversey Italy Production Srl Strada Statale 235 26010 Bagnolo Cremasco (CR) Italy Diversey España Production S.L.U Avenida Conde Duque 5, 7 y 9, Poligono Industrial La Postura 28343 Valdemoro (Madrid) Spain Diversey Netherlands Production BV Rembrandtlaan 414 7545 ZW Enschede Netherlands (the) Diversey Germany Production oHG Morschheimer Strasse 12 67292 Kirchheimbolanden Germany
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1.5. Manufacturer(s) of the active substance(s)

Active substance	Glutaraldehyde
Name of manufacturer	MC (US) 3 LLC
Address of manufacturer	Route 25 West Virginia 25112, Institute United States (the)
Location of manufacturing sites	MC (US) 3 LLC site 1 Route 25 West Virginia 25112 Institute, United States (the)

Active substance	Glutaraldehyde
Name of manufacturer	BASF SE
Address of manufacturer	Carl-Bosch Str. 38 67056 Ludwigshafen Germany
Location of manufacturing sites	BASF SE Carl-Bosch Str. 38 67056 Ludwigshafen Germany

2. PRODUCT FAMILY COMPOSITION AND FORMULATION

2.1. Qualitative and quantitative information on the composition of the family

Common name	IUPAC name	Function	CAS number	EC number	Content (%)
Glutaraldehyde	1,5-pentanedial	Active substance	111-30-8	203-856-5	12,9 - 55,3 % (w/w)

2.2. Type(s) of formulation

Formulation type(s)	AL Any other liquid
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PART II

SECOND INFORMATION LEVEL META SPC(S)

1. META SPC 1 ADMINISTRATIVE INFORMATION

1.1. Meta SPC 1 identifier

Identifier	Meta SPC: meta SPC GA 50
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1.2. Suffix to the authorisation number

Number	1-1
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1.3. Product type(s)

Product type(s)	PT06: Preservatives for products during storage PT12: Slimicides
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2. META SPC 1 COMPOSITION

2.1. Qualitative and quantitative information on the composition of the meta SPC 1

Common name	IUPAC name	Function	CAS number	EC number	Content (%)
Glutaraldehyde	1,5-pentanedial	Active substance	111-30-8	203-856-5	48,5 - 55,3 % (w/w)

2.2. Type(s) of formulation of the meta SPC 1

Formulation type(s)	AL Any other liquid
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3. HAZARD AND PRECAUTIONARY STATEMENTS OF THE META SPC 1

Hazard statements	H301: Toxic if swallowed. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H330: Fatal if inhaled. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H410: Very toxic to aquatic life with long lasting effects. EUH071: Corrosive to the respiratory tract.
Precautionary statements	P260: Do not breathe spray. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves. P284: [In case of inadequate ventilation] wear respiratory protection. P273: Avoid release to the environment. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER. P330: Rinse mouth.

	P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310: Immediately call a POISON CENTER. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER. P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER. P391: Collect spillage. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P501: Dispose of contents to a hazardous waste disposal service in accordance with the statutory regulations. P501: Dispose of container to a hazardous waste disposal service in accordance with the statutory regulations.
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4. AUTHORISED USE(S) OF THE META SPC

4.1. Use description

Table 1

Preservation of pigment pastes/mineral slurries to colour a wide variety of products (e.g. textiles, inks, paints, paper).

Product type	PT06: Preservatives for products during storage
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria
Field(s) of use	Indoor use Pigment pastes and mineral slurries used to colour a wide variety of products (e.g. textiles (carpet fibres, carpet backing, canvas, cordage, drapes and shower curtains), inks, paints, paper).
Application method(s)	Method: closed system Detailed description: Good mixing and uniform distribution of the biocidal product shall be ensured using automated or manual metering. Pigment pastes are readily incorporated by low energy mixing equipment requiring no additional dispersion.
Application rate(s) and frequency	Application Rate: 0,25 to 0,5 g glutaraldehyde per kg of the pigment paste/mineral slurry for preventive use. 0,25 to 0,5 g glutaraldehyde per kg of the pigment paste/mineral slurry with a contact time of 2 days for curative use. Number and timing of application: Once per production run of the product to preserve. Glutaraldehyde provides immediate efficacy and prevents re-growth for a period up to 3 weeks.
Category(ies) of users	Industrial Trained professional

Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 220 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.
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4.1.1. *Use-specific instructions for use*

Dose the biocidal product to the pigment paste or mineral slurry at a point to ensure adequate mixing using automated or manual metering.

Dose 0,25 to 0,5 g glutaraldehyde per kg of the pigment paste or mineral slurry.

The dose strongly depends on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.1.2. *Use-specific risk mitigation measures*

See general directions for use.

4.1.3. *Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment*

See general directions for use.

4.1.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.1.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

4.2. **Use description**

Table 2

Preservation of additives for the production of paper

Product type	PT06: Preservatives for products during storage
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: yeasts Common name: fungi

Field(s) of use	Indoor use Preservation of paper additives used in paper mills.
Application method(s)	Method: closed system Detailed description: The biocidal product is automatically added by means of a dosing pump and dedicated feeding lines in the additives tank.
Application rate(s) and frequency	Application rate: For bacteria, 0,1 to 0,5 g glutaraldehyde per kg of the paper additive for preventive use. For yeasts and fungi, 0,25 to 0,5 g glutaraldehyde per kg of the paper additive for preventive use. For bacteria, 0,1 to 0,5 g glutaraldehyde per kg of the paper additive with a contact time of 2 days for curative use. For yeasts and fungi, 0,25 to 0,5 g glutaraldehyde per kg of the paper additive with a contact time of 2 days for curative use. Number and timing of application: Once per production run of the product to preserve. Glutaraldehyde provides immediate efficacy and prevents re-growth for a period up to 3 weeks.
Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 220 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.

4.2.1. Use-specific instructions for use

Dose the biocidal product to the paper additive at a point to ensure adequate mixing using automated or manual metering.

For bacteria, 0,1 to 0,5 g glutaraldehyde per kg of the paper additive.

For yeasts and fungi, 0,25 to 0,5 g glutaraldehyde per kg of the paper additive.

The dose strongly depends on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.2.2. Use-specific risk mitigation measures

See general directions for use.

4.2.3. Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

See general directions for use.

4.2.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.2.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

4.3. **Use description**

Table 3

Slimicide treatment in the wet-end stage of the pulp and paper manufacturing process.

Product type	PT12: Slimicides
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: fungi Common name: yeasts
Field(s) of use	Indoor use Slimicide treatment in the wet-end stage of the pulp and paper manufacturing process.
Application method(s)	Method: closed system Detailed description: Automatic dosing by a pump and fixed pipes into the primary circuit, usually in the collection sump or in the headbox.
Application rate(s) and frequency	Application rate: Initial dose (wet-end defouling treatment): 250 g glutaraldehyde per ton paper pulp. Wet-end maintenance dose: 100 g glutaraldehyde per ton paper pulp. Number and timing of application: Initial dose (Wet end de-fouling treatment): 2-6 automatic slug (= shock) dose additions/day. Repeat 1 to 3 days until control is achieved. Wet-end maintenance dose: 2-6 automatic slug dose additions/day, as necessary to maintain control.
Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 220 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.

4.3.1. *Use-specific instructions for use*

Dose in a well-mixed point of the primary circuit, below the water level. Heavily fouled systems shall be boiled out prior to initial treatment.

Each slug dose lasts 15-30 minutes.

Initial dose (wet-end defouling treatment): 250 g glutaraldehyde per ton paper pulp.

Wet-end maintenance dose: 100 g glutaraldehyde per ton of paper pulp.

The dose and frequency strongly depend on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.3.2. *Use-specific risk mitigation measures*

Application is only allowed in paper factories that comply with Directive 2010/75/EU where wastewater is purified in an on-site industrial sewage treatment plant including a biological treatment step in accordance with the Best Available Techniques (BAT) as prescribed in the BAT-reference document (BREF) for the production of pulp, paper and board. The effluent must be diluted at least 200 times. Paper factories that are exempted from Directive 2010/75/EU must discharge to the municipal sewer.

4.3.3. *Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment*

See general directions for use.

4.3.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.3.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

4.4. **Use description**

Table 4

Slimicide treatment in the de-inking process of the pulp and paper.

Product type	PT12: Slimicides
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: fungi Common name: yeasts
Field(s) of use	Indoor use Slimicide treatment in the de-inking process of the pulp and paper.
Application method(s)	Method: closed system Detailed description: Automatic dosing by pump and fixed pipes into the circuit, usually in the pulper.

Application rate(s) and frequency	Application rate: Initial dose (de-fouling treatment): 250 g glutaraldehyde per ton paper pulp. Maintenance dose: 100 g glutaraldehyde per ton paper pulp. Number and timing of application: Initial dose (de-fouling treatment): 1-2 automatic slug (= shock) dose additions/day. Repeat for 1 to 2 days until control is achieved. Maintenance dose: 1-2 automatic slug dose additions/day, as necessary to maintain control.
Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.

4.4.1. Use-specific instructions for use

Dose in a well-mixed point of the primary circuit, below the water level. Heavily fouled systems shall be boiled out prior to initial treatment.

Each slug dose lasts 30 minutes.

Initial dose (de-fouling treatment): 250 g glutaraldehyde per ton paper pulp.

Maintenance dose: 100 g glutaraldehyde per ton paper pulp.

The dose and frequency strongly depend on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.4.2. Use-specific risk mitigation measures

See general directions for use.

Application is only allowed in paper factories that comply with Directive 2010/75/EU where wastewater is purified in an on-site industrial sewage treatment plant including a biological treatment step in accordance with the Best Available Techniques (BAT) as prescribed in the BAT-reference document (BREF) for the production of pulp, paper and board. Paper factories that are exempted from Directive 2010/75/EU must discharge to the municipal sewer.

4.4.3. Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

See general directions for use.

4.4.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.4.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

5. **GENERAL DIRECTIONS FOR USE OF THE META SPC 1**

5.1. **Instructions for use**

See use specific instructions for use.

5.2. **Risk mitigation measures**

Disconnecting the product container manually:

The use of eye protection (chemical goggles) consistent with EN 166 or equivalent during handling of the product is mandatory.

Wear a protective coverall [type 3 or type 4] consistent with EN 14605 or equivalent.

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

Use of respiratory protective equipment (RPE) providing a protection factor of 40 is mandatory. Providing at least a powered air purifying respirator with helmet/hood/mask (TH3 (EN 12941 or equivalent)/TM3 (EN 12942 or equivalent)), or a full-face mask (EN 136 or equivalent) with particle filter P3 (EN 12083 or equivalent).

During tank cleaning & maintenance:

Wear a protective coverall [type 3 or type 4] consistent with EN 14605 or equivalent.

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

Use of respiratory protective equipment (RPE) providing a protection factor of 10 is mandatory. Providing at least a powered air purifying respirator with helmet/hood/mask (TH1 (EN 12941 or equivalent)/TM1 (EN 12942 or equivalent)), a half/quarter mask (EN 140 or equivalent) or a full-face mask (EN 136 or equivalent) with particle filter P2 (EN 12083 or equivalent) each or a filtering half mask (FFP2, EN 149 or equivalent).

Draining, cleaning and maintenance of closed re-circulating system:

Wear a protective coverall [type 3 or type 4] consistent with EN 14605 or equivalent.

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

Loading/unloading slurry tanks:

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

The product must be poured using an automated dosing system.

Ensure that application is carried out in well-ventilated areas.

Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.

Use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration.

Regarding the personal protective equipment listed in this section, this is without prejudice to the application by employers of Council Directive 98/24/EC and other Union legislation in the area of health and safety at work.

See section 6 for the full references to that act and the European Standards.

5.3. Particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

IF INHALED: Move to fresh air and keep at rest in a position comfortable for breathing.

If symptoms: Immediately call 112/ambulance for medical assistance.

IF SWALLOWED: If conscious, immediately rinse mouth. Give something to drink, if exposed person is able to swallow. Do NOT induce vomiting. Call 112/ambulance for medical assistance.

IF ON SKIN: Immediately wash skin with plenty of water. Thereafter take off all contaminated clothing and wash it before reuse. Continue to wash the skin with water for 15 minutes. Call a POISON CENTRE or a doctor. If skin irritation or rash occur: Get medical advice.

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Call 112/ambulance for medical assistance.

Information to Healthcare personnel/doctor:

Immediately initiate life support measures, thereafter call a POISON CENTRE.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Personal precautions, protective equipment and emergency procedures in case of accidental release measures: Evacuate area. Keep upwind of spill. Ventilate area of leak or spill. Only trained and properly protected personnel must be involved in clean-up operations. Use appropriate safety equipment.

Methods and materials for containment and cleaning up: Avoid making contact with spilled material, since glutaraldehyde will be absorbed by most shoes. When cleaning up a spill always wear the appropriate protective equipment, including respiratory protection, gloves, protective clothing and eye protection. A self-contained breathing apparatus or respirator and absorbents may be necessary, depending on the size of the spill and the adequacy of ventilation.

Small spills: Wear the correct protective equipment including gloves and protective clothing and cover the liquid with absorbent material. Collect and seal the material and the dirt that has absorbed the spilled material in polyethylene bags and place in a drum for transit to an approved disposal site. Rinse away the remaining spilled material with water to reduce odour, and discharge the rinsate into a municipal or industrial sewer, not into a natural waterway.

Large spills: In case of nasal and respiratory irritation, vacate the room immediately. Personnel cleaning up shall be trained and equipped with a self-contained breathing apparatus, or an officially approved or certified full-face respirator equipped with an organic vapor cartridge, glove, and clothing impervious to glutaraldehyde, including rubber boots or shoe protection. Deactivate with sodium bisulfite (2-3 parts (by weight) per part of glutaraldehyde), collect the neutralized liquid and place in a drum for transit to an approved disposal site.

5.4. Instructions for safe disposal of the product and its packaging

The biocidal product, when being disposed of in its unused and uncontaminated state shall be treated as a hazardous waste in accordance with Directive 2008/98/EC.

Deactivate with sodium bisulfite (2-3 parts (by weight) per part of glutaraldehyde), collect the neutralized liquid and place in a drum for transit to an approved disposal site. If the concentration of glutaraldehyde is up to 2 %, deactivate by the addition of aqueous sodium hydroxide solution in an amount sufficient to maintain a pH of 12 for 8 h, followed by neutralization (i.e. neutral pH) with the careful addition of an inorganic acid, e.g. hydrochloric acid, before disposal by appropriate means. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. Do not dump into any sewers, on the ground, or into any body of water. Avoid release to the environment. High-temperature incineration is an acceptable practice glutaraldehyde burns cleanly to carbon dioxide and water.

Containers used to store glutaraldehyde solutions are non-refillable. Do not reuse or refill the containers. Containers shall be triple or pressure rinsed with water promptly after they are emptied. They can then be offered for recycling or reconditioning for biocidal products, or they can be punctured and disposed of in a sanitary landfill or by other procedures approved by national and local authorities. Send waste liquid from rinsing of used containers to an approved waste handling facility.

5.5. Conditions of storage and shelf life of the product under normal conditions of storage

Do not store in and avoid contact with aluminum, carbon steel, copper, mild steel, iron. Avoid contact with amines, ammonia, strong acids, strong bases, strong oxidizers.

Store at temperatures <40 °C

Shelf life:

meta SPC GA 50: 12 months in HDPE and stainless steel

6. OTHER INFORMATION

The full titles of the EN standards referenced in the Risk mitigation measures are:

EN ISO 374 - Protective gloves against dangerous chemicals and micro-organisms

EN 166 - Eye protection against chemicals.

EN 14605 - Protective clothing against liquid chemicals - Performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4]).

EN 12941 - Respiratory protective devices - Powered filtering devices incorporating a loose fitting respiratory interface - Requirements, testing, marking

EN 12942 - Respiratory protective devices - Powered filtering devices incorporating full face masks, half masks or quarter masks - Requirements, testing, marking

EN 136 - Respiratory protective devices. Full face masks. Requirements, testing, marking

EN 140 - Respiratory protective devices - Half masks and quarter masks - Requirements, testing, marking

EN 149 - Respiratory protective devices - Filtering half masks to protect against particles - Requirements, testing, marking

EN 12083 - Respiratory protective devices - Filters with breathing hoses (Non-mask mounted filters) - Particle filters, gas filters, and combined filters - Requirements, testing, marking

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (OJ L 131, 5.5.1998, p. 11, ELI: <http://data.europa.eu/eli/dir/1998/24/oj>).

With respect to the 'Category (ies) of users' note: 'Professionals users (including industrial users)' means trained professionals if this is required by national legislation.

7. THIRD INFORMATION LEVEL: INDIVIDUAL PRODUCTS IN THE META SPC 1

7.1. Trade name(s), authorisation number and specific composition of each individual product

Trade name(s)			Spectrum™ RX7815 MICROBIOCIDE	Market area: EU		
Authorisation number			EU-0034830-0001 1-1			
Common name	IUPAC name	Function	CAS number	EC number	Content (%)	
Glutaraldehyde	1,5-pentanedial	Active substance	111-30-8	203-856-5	50,5 % (w/w)	

1. META SPC 2 ADMINISTRATIVE INFORMATION

1.1. Meta SPC 2 identifier

Identifier	Meta SPC: meta SPC GA 24
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1.2. Suffix to the authorisation number

Number	1-2
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1.3. Product type(s)

Product type(s)	PT06: Preservatives for products during storage PT11: Preservatives for liquid-cooling and processing systems PT12: Slimicides
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2. META SPC 2 COMPOSITION

2.1. Qualitative and quantitative information on the composition of the meta SPC 2

Common name	IUPAC name	Function	CAS number	EC number	Content (%)
Glutaraldehyde	1,5-pentanedial	Active substance	111-30-8	203-856-5	23,4 - 25,9 % (w/w)

2.2. Type(s) of formulation of the meta SPC 2

Formulation type(s)	AL Any other liquid
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3. HAZARD AND PRECAUTIONARY STATEMENTS OF THE META SPC 2

Hazard statements	H302: Harmful if swallowed. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H331: Toxic if inhaled. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H412: Harmful to aquatic life with long lasting effects. EUH071: Corrosive to the respiratory tract.
Precautionary statements	P260: Do not breathe spray. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves. P273: Avoid release to the environment. P284: [In case of inadequate ventilation] wear respiratory protection. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

	P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310: Immediately call a POISON CENTER. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER. P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P501: Dispose of contents to a hazardous waste disposal service in accordance with the statutory regulations. P501: Dispose of container to a hazardous waste disposal service in accordance with the statutory regulations.
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4. AUTHORISED USE(S) OF THE META SPC

4.1. Use description

Table 1

Preservation of pigment pastes/mineral slurries to colour a wide variety of products (e.g. textiles, inks, paints, paper).

Product type	PT06: Preservatives for products during storage
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria
Field(s) of use	Indoor use Pigment pastes and mineral slurries used to colour a wide variety of products (e.g. textiles (carpet fibres, carpet backing, canvas, cordage, drapes and shower curtains), inks, paints, paper).
Application method(s)	Method: closed system Detailed description: Good mixing and uniform distribution of the biocidal product shall be ensured using automated or manual metering. Pigment pastes are readily incorporated by low energy mixing equipment requiring no additional dispersion.
Application rate(s) and frequency	Application rate: 0,25 to 0,5 g glutaraldehyde per kg of the pigment paste/mineral slurry for preventive use. 0,25 to 0,5 g glutaraldehyde per kg of the pigment paste/mineral slurry with a contact time of 2 days for curative use. Number and timing of application: Once per production run of the product to preserve. Glutaraldehyde provides immediate efficacy and prevents re-growth for a period up to 3 weeks.
Category(ies) of users	Industrial Trained professional

Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.
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4.1.1. *Use-specific instructions for use*

Dose the biocidal product to the pigment paste or mineral slurry at a point to ensure adequate mixing using automated or manual metering.

Dose 0,25 to 0,5 g glutaraldehyde per kg of the pigment paste/mineral slurry.

The dose strongly depends on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.1.2. *Use-specific risk mitigation measures*

See general directions for use.

4.1.3. *Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment*

See general directions for use.

4.1.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.1.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

4.2. **Use description**

Table 2

Preservation of additives for the production of paper

Product type	PT06: Preservatives for products during storage
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: fungi Common name: yeasts

Field(s) of use	Indoor use Preservation of paper additives used in paper mills.
Application method(s)	Method: closed system Detailed description: The biocidal product is automatically added by means of a dosing pump and dedicated feeding lines in the additives tank.
Application rate(s) and frequency	Application rate: For bacteria, 0,1 to 0,5 g glutaraldehyde per kg of the paper additive for preventive use. For yeasts and fungi, 0,25 to 0,5 g glutaraldehyde per kg of the paper additive for preventive use. For bacteria, 0,1 to 0,5 g glutaraldehyde per kg of the paper additive with a contact time of 2 days for curative use. For yeasts and fungi, 0,25 to 0,5 g glutaraldehyde per kg of the paper additive with a contact time of 2 days for curative use. Number and timing of application: Once per production run of the product to preserve. Glutaraldehyde provides immediate efficacy and prevents re-growth for a period up to 3 weeks.
Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.

4.2.1. Use-specific instructions for use

Dose the biocidal product to the paper additive at a point to ensure adequate mixing using automated or manual metering.

For bacteria, 0,1 to 0,5 g glutaraldehyde per kg of the paper additive.

For yeasts and fungi, 0,25 to 0,5 g glutaraldehyde per kg of the paper additive.

The dose strongly depends on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.2.2. Use-specific risk mitigation measures

See general directions for use.

4.2.3. Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

See general directions for use.

4.2.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.2.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

4.3. **Use description**

Table 3

Preservation of liquids used in closed re-circulating cooling systems

Product type	PT11: Preservatives for liquid-cooling and processing systems
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria
Field(s) of use	Indoor use Outdoor use Liquid-closed re-circulating cooling/heating and processing systems.
Application method(s)	Method: closed system Detailed description: Dosing into the cooling system.
Application rate(s) and frequency	Application rate: 25 to 200 g glutaraldehyde per m ³ of water. Number and timing of application: Bi- or tri- monthly according to the characteristics of the system and the stability of the biocidal product in the treated water.
Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.

4.3.1. *Use-specific instructions for use*

Mechanically cleanse dirty systems with fresh water before starting the treatment with the biocidal product.

Dose in a well-mixed point of the circuit, below the water level. When opening the system for servicing or maintenance, biocide can be added to reach the initial dosing concentrations.

System monitor

Control the level of biocide with a test kit at least every 3 months and prior to shut off period of the system. Control microbial contamination with dip slides or other appropriate techniques at least every 3 months.

Particular attention shall be addressed during the shut off period of the system where stagnant fluids are more susceptible to microbial contamination.

Dose 25 to 200 g glutaraldehyde per m³ of water.

The dose and frequency strongly depend on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.3.2. Use-specific risk mitigation measures

Drain off preserved cooling fluids at least five days after the last addition of the biocidal product.

See also the general directions for use.

4.3.3. Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

See general directions for use.

4.3.4. Where specific to the use, the instructions for safe disposal of the product and its packaging

See general directions for use.

4.3.5. Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage

See general directions for use.

4.4. Use description

Table 4

Preservation of liquids used in open re-circulating cooling systems.

Product type	PT11: Preservatives for liquid-cooling and processing systems
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: green algae
Field(s) of use	Outdoor use Liquid-open re-circulating cooling and processing systems.
Application method(s)	Method: open system Detailed description: Glutaraldehyde is automatically added in the water circuit, usually as upstream as possible, by means of injection by a dosing pump and dedicated feeding lines. A timer is used for intermittent dosage.
Application rate(s) and frequency	Application rate: 25 to 50 g glutaraldehyde per m ³ of water Number and timing of application: Typical dose: 1-2 days

Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1 000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1 000 IG (4546 l), material of construction is stainless steel.

4.4.1. *Use-specific instructions for use*

For control of microbial growth in industrial cooling water systems treated with a biocidal product by slug dosing.

Not intended for use in once-through cooling systems.

Mechanically cleanse dirty systems before starting the treatment with the biocidal product.

Dose in a well-mixed point of the circuit, below the water level.

Typical dose: 1-2 days. Each slug dose lasts 15-30 minutes, depending on the pump capacity and the volume of water in the circuit. Treatment shall not exceed 2 days.

Dose 25 to 50 g glutaraldehyde per m³ of water.

The dose and frequency strongly depend on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.4.2. *Use-specific risk mitigation measures*

The use is restricted to small cooling systems with a maximum blowdown of 2 m³/h. Waste water must be discharged to the municipal sewer, purified in an on-site industrial sewage treatment plant including a biological treatment step, or directly to surface water via a settling pond that allows sufficient retention.

4.4.3. *Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment*

See general directions for use.

4.4.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.4.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

4.5. Use description

Table 5

Slimicide treatment in the wet-end stage of the pulp and paper manufacturing process

Product type	PT12: Slimicides
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: fungi Common name: yeasts
Field(s) of use	Indoor use Slimicide treatment in the wet-end stage of the pulp and paper manufacturing process.
Application method(s)	Method: closed system Detailed description: Automatic dosing by a pump and fixed pipes into the primary circuit, usually in the collection sump or in the headbox.
Application rate(s) and frequency	Application rate: Initial dose (wet-end defouling treatment): 250 g glutaraldehyde per ton paper pulp. Wet-end maintenance dose: 100 g glutaraldehyde per ton paper pulp. Number and timing of application: Initial dose (Wet end de-fouling treatment): 2-6 automatic slug (= shock) dose additions/day. Repeat 1 to 3 days until control is achieved. Wet-end maintenance dose: 2-6 automatic slug dose additions/day, as necessary to maintain control.
Category(ies) of users	Industrial Trained professional
Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1000 IG (4546 l), material of construction is stainless steel.

4.5.1. Use-specific instructions for use

Dose in a well-mixed point of the primary circuit, below the water level. Heavily fouled systems shall be boiled out prior to initial treatment.

Each slug dose lasts 15-30 minutes.

Initial dose (wet-end defouling treatment): 250 g glutaraldehyde per ton paper pulp.

Wet-end maintenance dose: 100 g glutaraldehyde per ton of paper pulp.

The dose and frequency strongly depend on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.5.2. Use-specific risk mitigation measures

Application is only allowed in paper factories that comply with Directive 2010/75/EU where wastewater is purified in an on-site industrial sewage treatment plant including a biological treatment step in accordance with the Best Available Techniques (BAT) as prescribed in the BAT-reference document (BREF) for the production of pulp, paper and board. The effluent must be diluted at least 200 times. Paper factories that are exempted from Directive 2010/75/EU must discharge to the municipal sewer.

4.5.3. Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

See general directions for use.

4.5.4. Where specific to the use, the instructions for safe disposal of the product and its packaging

See general directions for use.

4.5.5. Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage

See general directions for use.

4.6. Use description

Table 6

Slimicide treatment in the de-inking process of the pulp and paper.

Product type	PT12: Slimicides
Where relevant, an exact description of the authorised use	Not relevant.
Target organism(s) (including development stage)	Common name: bacteria Common name: fungi Common name: yeasts
Field(s) of use	Indoor use Slimicide treatment in the de-inking process of the pulp and paper.
Application method(s)	Method: closed system Detailed description: Automatic dosing by pump and fixed pipes into the circuit, usually in the pulper.
Application rate(s) and frequency	Application rate: Initial dose (de-fouling treatment): 250 g glutaraldehyde per ton paper pulp. Maintenance dose: 100 g glutaraldehyde per ton paper pulp. Number and timing of application: Initial dose (de-fouling treatment): 1-2 automatic slug (= shock) dose additions/day. Repeat for 1 to 2 days until control is achieved. Maintenance dose: 1-2 automatic slug dose additions/day, as necessary to maintain control.
Category(ies) of users	Industrial Trained professional

Pack sizes and packaging material	— Pails: 25 l nominal, material of construction is high density polyethylene. — Drums: 200 l nominal, material of construction is high density polyethylene. — IBC (intermediate bulk container): 1000 l nominal, material of construction is high density polyethylene. — Bulk tank truck: 28 MT max. gross weight, material of construction is stainless steel. — Bulk ISO tank: 20 MT max. gross weight, material of construction is stainless steel. — Offshore-suitable drums: 200 l, material of construction is high density polyethylene. — Offshore-suitable semi-bulk containers: 1 000 l, material of construction is stainless steel. — Offshore-suitable containers: 500 IG (2273 l), material of construction is stainless steel. — Offshore-suitable containers: 1000 IG (4546 l), material of construction is stainless steel.
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4.6.1. *Use-specific instructions for use*

Dose in a well-mixed point of the primary circuit, below the water level. Heavily fouled systems shall be boiled out prior to initial treatment.

Each slug dose lasts 30 minutes.

Initial dose (de-fouling treatment): 250 g glutaraldehyde per ton paper pulp.

Maintenance dose: 100 g glutaraldehyde per ton paper pulp.

The dose and frequency strongly depend on the formulation and intended use of the matrix to which the preservative is added. Therefore, the user shall determine dosage requirements for their specific matrix/system to be preserved. The lowest effective dose shall be used. If needed, consult the authorisation holder of the preservative product.

4.6.2. *Use-specific risk mitigation measures*

See general directions for use.

Application is only allowed in paper factories that comply with Directive 2010/75/EU where wastewater is purified in an on-site industrial sewage treatment plant including a biological treatment step in accordance with the Best Available Techniques (BAT) as prescribed in the BAT-reference document (BREF) for the production of pulp, paper and board. Paper factories that are exempted from Directive 2010/75/EU must discharge to the municipal sewer.

4.6.3. *Where specific to the use, the particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment*

See general directions for use.

4.6.4. *Where specific to the use, the instructions for safe disposal of the product and its packaging*

See general directions for use.

4.6.5. *Where specific to the use, the conditions of storage and shelf-life of the product under normal conditions of storage*

See general directions for use.

5. **GENERAL DIRECTIONS FOR USE OF THE META SPC 2**

5.1. **Instructions for use**

See use specific instructions for use.

5.2. Risk mitigation measures

Disconnecting the product container manually:

The use of eye protection (chemical goggles) consistent with EN 166 or equivalent during handling of the product is mandatory.

Wear a protective overall [type 3 or type 4] consistent with EN 14605 or equivalent.

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

Use of respiratory protective equipment (RPE) providing a protection factor of 40 is mandatory. Providing at least a powered air purifying respirator with helmet/hood/mask (TH3 (EN 12941 or equivalent)/TM3 (EN 12942 or equivalent)), or a full-face mask (EN 136 or equivalent) with particle filter P3 (EN 12083 or equivalent).

During tank cleaning & maintenance:

Wear a protective overall [type 3 or type 4] consistent with EN 14605 or equivalent.

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

Use of respiratory protective equipment (RPE) providing a protection factor of 10 is mandatory. Providing at least a powered air purifying respirator with helmet/hood/mask (TH1 (EN 12941 or equivalent)/TM1 (EN 12942 or equivalent)), a half/quarter mask (EN 140 or equivalent) or a full-face mask (EN 136 or equivalent) with particle filter P2 (EN 12083 or equivalent) each or a filtering half mask (FFP2, EN 149 or equivalent).

Draining, cleaning and maintenance of closed re-circulating system:

Wear a protective overall [type 3 or type 4] consistent with EN 14605 or equivalent.

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

Loading/unloading slurry tanks:

Wear protective chemical resistant gloves meeting the requirements of European Standard EN 374 or equivalent during product handling phase (glove material to be specified by the authorisation holder within the product information).

The product must be poured using an automated dosing system.

Ensure that application is carried out in well-ventilated areas.

Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.

Use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration.

Regarding the personal protective equipment listed in this section, this is without prejudice to the application by employers of Council Directive 98/24/EC and other Union legislation in the area of health and safety at work.

See section 6 for the full references to this act and the European Standards.

5.3. Particulars of likely direct or indirect effects, first aid instructions and emergency measures to protect the environment

IF INHALED: Move to fresh air and keep at rest in a position comfortable for breathing.

If symptoms: Immediately call 112/ambulance for medical assistance.

IF SWALLOWED: If conscious, immediately rinse mouth. Give something to drink, if exposed person is able to swallow. Do NOT induce vomiting. Call 112/ambulance for medical assistance.

IF ON SKIN: Immediately wash skin with plenty of water. Thereafter take off all contaminated clothing and wash it before reuse. Continue to wash the skin with water for 15 minutes. Call a POISON CENTRE or a doctor. If skin irritation or rash occur: Get medical advice.

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Call 112/ambulance for medical assistance.

Information to Healthcare personnel/doctor:

Immediately initiate life support measures, thereafter call a POISON CENTRE.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Personal precautions, protective equipment and emergency procedures in case of accidental release measures: Evacuate area. Keep upwind of spill. Ventilate area of leak or spill. Only trained and properly protected personnel must be involved in clean-up operations. Use appropriate safety equipment.

Methods and materials for containment and cleaning up: Avoid making contact with spilled material, since glutaraldehyde will be absorbed by most shoes. When cleaning up a spill always wear the appropriate protective equipment, including respiratory protection, gloves, protective clothing and eye protection. A self-contained breathing apparatus or respirator and absorbents may be necessary, depending on the size of the spill and the adequacy of ventilation.

Small spills: Wear the correct protective equipment including gloves and protective clothing and cover the liquid with absorbent material. Collect and seal the material and the dirt that has absorbed the spilled material in polyethylene bags and place in a drum for transit to an approved disposal site. Rinse away the remaining spilled material with water to reduce odour, and discharge the rinsate into a municipal or industrial sewer, not into a natural waterway.

Large spills: In case of nasal and respiratory irritation, vacate the room immediately. Personnel cleaning up shall be trained and equipped with a self-contained breathing apparatus, or an officially approved or certified full-face respirator equipped with an organic vapor cartridge, glove, and clothing impervious to glutaraldehyde, including rubber boots or shoe protection. Deactivate with sodium bisulfite (2-3 parts (by weight) per part of glutaraldehyde), collect the neutralized liquid and place in a drum for transit to an approved disposal site.

5.4. Instructions for safe disposal of the product and its packaging

The biocidal product, when being disposed of in its unused and uncontaminated state shall be treated as a hazardous waste according to EC Directive 2008/98/EC.

Deactivate with sodium bisulfite (2-3 parts (by weight) per part of glutaraldehyde), collect the neutralized liquid and place in a drum for transit to an approved disposal site. If the concentration of glutaraldehyde is up to 2 %, deactivate by the addition of aqueous sodium hydroxide solution in an amount sufficient to maintain a pH of 12 for 8 h, followed by neutralization (i.e. neutral pH) with the careful addition of an inorganic acid e.g. hydrochloric acid, before disposal by appropriate means. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. Do not dump into any sewers, on the ground, or into any body of water. Avoid release to the environment. High-temperature incineration is an acceptable practice glutaraldehyde burns cleanly to carbon dioxide and water.

Containers used to store glutaraldehyde solutions are non refillable. Do not reuse or refill the containers. Containers shall be triple or pressure rinsed with water promptly after they are emptied. They can then be offered for recycling or reconditioning for biocidal products, or they can be punctured and disposed of in a sanitary landfill or by other procedures approved by national and local authorities. Send waste liquid from rinsing of used containers to an approved waste handling facility.

5.5. Conditions of storage and shelf-life of the product under normal conditions of storage

Do not store in and avoid contact with aluminum, carbon steel, copper, mild steel, iron. Avoid contact with amines, ammonia, strong acids, strong bases, strong oxidizers.

Store at temperatures <40 °C

Shelf life:

meta SPC GA 24: 24 months in HDPE and 12 months in stainless steel

6. OTHER INFORMATION

The full titles of the EN standards referenced in the Risk mitigation measures are:

EN ISO 374 – Protective gloves against dangerous chemicals and micro-organisms

EN 166 – Eye protection against chemicals.

EN 14605 – Protective clothing against liquid chemicals – Performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4]).

EN 12941 - Respiratory protective devices - Powered filtering devices incorporating a loose fitting respiratory interface - Requirements, testing, marking

EN 12942 – Respiratory protective devices - Powered filtering devices incorporating full face masks, half masks or quarter masks - Requirements, testing, marking

EN 136 - Respiratory protective devices. Full face masks. Requirements, testing, marking

EN 140 - Respiratory protective devices - Half masks and quarter masks - Requirements, testing, marking

EN 149 - Respiratory protective devices - Filtering half masks to protect against particles - Requirements, testing, marking

EN 12083 - Respiratory protective devices – Filters with breathing hoses, (Non-mask mounted filters) – Particle filters, gas filters, and combined filters – Requirements, testing, marking

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (OJ L 131, 5.5.1998, p. 11, ELI: <http://data.europa.eu/eli/dir/1998/24/oj>).

With respect to the 'Category (ies) of users' note: 'Professionals users (including industrial users)' means trained professionals if this is required by national legislation

7. THIRD INFORMATION LEVEL: INDIVIDUAL PRODUCTS IN THE META SPC 2

7.1. Trade name(s), authorisation number and specific composition of each individual product

Trade name(s)	Biosperse™ 2545 MICROBIOCIDES		Market area: EU		
	Solenis™ IS2545 MICROBIOCIDES		Market area: EU		
	Spectrum™ PR2400 PRESERVATIVE		Market area: EU		
	Spectrum™ RX9724 MICROBIOCIDES		Market area: EU		
Authorisation number		EU-0034830-0002 1-2			
Common name	IUPAC name	Function	CAS number	EC number	Content (%)
Glutaraldehyde	1,5-pentanedial	Active substance	111-30-8	203-856-5	24,2 % (w/w)