

## PRODUCT OVERVIEWS

- **Casamed™ PCMX is the only chloroxylenol API to have received rigorous FDA, USP and GMP accreditations**, giving customers complete confidence in quality and regulatory compliance.
- **Casamed™ PCMX** is a highly-effective, versatile active ingredient, used commonly in a wide range antiseptic formulations as well as in solid, and liquid, medicinal soaps globally.
- **Casamed™ PCMX** is manufactured to meet high-quality specifications, including BP or USP monographs, and can be supplied in a variety of standard, or tailor-made, packaging options.
- **Casamed™** and **Casacide™** products are used extensively in a wide range of anti-microbial, disinfectant and detergent applications marketed outside of the European Union. The chloroxylenol grades are not supported, at present, under BPR (EU Regulation 528/2012) and so are not permitted, currently, for use as components of biocidal formulations for marketing within the European Union.
- **Casamed™ PCMX** may also be formulated together with **Casamed™ Odour Mask**, a highly-effective deodoriser for personal care applications.
- Neither **Casamed™** nor **Casacide™** products are REACH registered: instead the grades are subject to alternative regulatory bodies such as UK MHRA.
- REACH registration or other regulatory support could be considered in future, conditional upon appropriate business justification.
- Selected formulation and regulatory guidance on the use of **Casamed™ PCMX** can be provided to customers (subject to status).

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## 1. CASAMED™ Chloroxylenols - Typical Physical, Chemical Properties and Other Information

| Information:             | Grade:                                                                                                                      | CASAMED™                |                         |                           |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------|---------------------------|
|                          | PCMX and PCMX Packaged<br>- BP grade                                                                                        | PCMX USP<br>- USP grade | PCMX Pure - High Purity | PCMX TECH                 |
| Product code(s)          | PR0435, PR0100                                                                                                              | PR0674                  | PR0274                  | PR1200, PR1250            |
| Chemical name, synonyms  | para chloro meta xylenol; PCMX; 4-chloro-3,5-dimethyl phenol;<br>4-chloro-3,5-xylenol; 4-chloro-meta-xylenol; chloroxylenol |                         |                         |                           |
| CAS number               | 88-04-0                                                                                                                     |                         |                         |                           |
| Pharmacopoeia            | British Pharmacopoeia                                                                                                       | US Pharmacopoeia        | (not applicable)        | (not applicable)          |
| Physical form            | crystals or crystalline powder                                                                                              |                         |                         |                           |
| Label in accordance with | (EC) No. 1272/2008                                                                                                          |                         |                         |                           |
| DG Classification        | Class 9, UN 3077                                                                                                            |                         |                         |                           |
| Crystal appearance       | white / off-white / cream                                                                                                   | white / off-white       | white                   | white / off-white / cream |
| Odour                    | characteristic                                                                                                              |                         |                         |                           |
| Melting Point            | 114-116 °C                                                                                                                  | 114-116 °C              | 114-116 °C              | 114-116 °C                |
| HS Code                  | 2908.9900                                                                                                                   |                         |                         |                           |

## CASAMED™ Chloroxylenols – Formulation Advantages versus Alternative Actives

**Casamed™ PCMX** (BP and USP) can offer formulation cost, handling, foaming and formulation flexibility advantages over quaternary compounds, including:

- The use of anionic surfactants with **Casamed™ PCMX** systems likely lowers total formulation cost;
- The use of anionic surfactants with **Casamed™ PCMX** enhances foaming, particularly in hand dishwashing liquid applications;
- Polymeric or associative thickeners are not needed with **Casamed™ PCMX** formulations;
- The use of 100% active powder **Casamed™ PCMX** is safe to use and easier to store than liquid irritants.

## CASAMED™ Chloroxylenols - Standard Packaging Information

| Product Type                                                                                                                                         | Standard packaging options                                                                                |                                                                                      |                                                                                                |                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Casamed™ grades:<br>- PR0100 (BP grade)<br>- PR0274<br>- PR0435 (BP grade)<br>- PR0674 (USP grade)<br>- PR1200 (TECH grade)<br>- PR1250 (TECH grade) | <b>25 kg UN boxes:</b><br>24 packs per pallet = 600 kg nett;<br>20 pallets max. = 12,000 kg max. per TEU. |                                                                                      | <b>650 kg UN FIBCs:</b><br>1 pack per pallet;<br>20 pallets max. =<br>13,000 kg max. per TEU;  | <b>1000 kg UN FIBCs:</b><br>1 pack per pallet;<br>10 pallets max. =<br>10,000 kg max. per TEU; |
|                                                                                                                                                      | Shrink-wrapped on 110 cm plastic pallets;<br>Volume = 1.27 m <sup>3</sup> .                               | Shrink-wrapped on 114 cm CP9 heat-treated pallets;<br>Volume = 1.36 m <sup>3</sup> . | 114 cm CP9 heat-treated pallets;<br>Volume = 1.38 m <sup>3</sup> .                             | 120 cm heavy-duty wooden pallets;<br>Volume = 2.30 m <sup>3</sup> .                            |
|                                                                                                                                                      |                                                                                                           |                                                                                      | <b>1228 kg UN FIBCs:</b><br>1 pack per pallet;<br>10 pallets max. =<br>12,280 kg max. per TEU; | 120 cm heavy-duty wooden pallets;<br>Volume = 2.30 m <sup>3</sup> .                            |

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## 2. CASAMED Odour Mask – Summary Information

Product	Standard product information				
Casamed™ Odour Mask	Property	Casamed™ Odour Mask	Packaging	Typical Usage Levels	Shelf life, Storage
	Description	Liquid	Standard packaging is 25 lb nett drums.	1.0 parts Casamed Odour Mask per 8.5 parts Casamed PCMX	12-month shelf life under prescribed storage conditions: store in tightly sealed container in a cool, dry place away from direct sunlight; a storage temperature between 10 - 21 °C; maximum 70% relative humidity.
	Color	Colourless to pale yellow			
	Aroma	Floral, aldehydic	Other packaging options could also be made available.		
	Refractive Index	1.4575-1.4675 at 22 °C			
	Specific Gravity	0.9860-1.0260 at 22 °C			
Flash Point	> 200 °F				

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## 3. CASACIDE Mixed Chloroxylenols - Typical Physical, Chemical Properties and Other Information

| Information:             | Grade: | CASACIDE                                |                                                        |                   |                    |
|--------------------------|--------|-----------------------------------------|--------------------------------------------------------|-------------------|--------------------|
|                          |        | 296                                     | 140                                                    | PXR-70            | 40WS               |
| Product code(s)          |        | PR0296                                  | PR1139                                                 | PR1094            | PR1143             |
| Chemical name            |        | Mixed chloroxylenols (OCMX, DCMX, PCMX) | Mixed chloroxylenols (OCMX, DCMX, PCMX) in isopropanol |                   |                    |
| Physical form            |        | viscous liquid                          | mobile liquid                                          |                   |                    |
| Isopropanol content w/w  |        | 0%                                      | 47-49%                                                 | 27-32%            | 40%                |
| Label in accordance with |        | (EC) No. 1272/2008                      |                                                        |                   |                    |
| DG Classification        |        | Class 9, UN 3082                        | Class 3, UN 1993                                       | Class 3, UN 1993  | Class 3, UN 1993   |
| Appearance               |        | Brown liquid                            | Amber-brown liquid                                     | Dark brown liquid | Amber-brown liquid |
| Odour                    |        | Phenolic                                |                                                        |                   |                    |
| HS Code                  |        | 2908.9900                               |                                                        |                   |                    |

## Standard Casacide™ Mixed Chloroxylenols Packaging Information

| Product Type     | Standard packaging options                                                                                                        |                                                                                                                                    |                                                                                   |                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Casacide grades: | <b>Casacide 296</b><br>250 kg nett UN poly drums:<br>4 x drums per pallet,<br>strapped, with a volume of<br>1.40 m <sup>3</sup> . | <b>Casacide 140</b><br>180 kg nett UN steel drums:<br>4 x drums per pallet,<br>strapped, with a volume of<br>1.40 m <sup>3</sup> . | <b>Casacide PXR-70</b><br>1000 kg nett UN IBCs:<br>Volume = 1.40 m <sup>3</sup> . | <b>Casacide 40WS</b><br>180 kg nett UN steel drums:<br>4 x drums per pallet,<br>strapped, with a volume of<br>1.40 m <sup>3</sup> . |