

## **Document III-A**

# **IPBC**

**CAS No. 55406-53-6**  
**from IPBC Task Force**  
**For use as in-can preservative (Product Type 6)**

All studies evaluated in Doc III-A with the PT 8 dossier and most of the justifications for non-submission presented in the PT 8 dossier are applicable for the present dossier for PT 6. In cases where new studies or other information's have been submitted these will be presented here.

**Section A1****Applicant****Annex Point IIA1**

- |   |   |                      |
|---|---|----------------------|
| 1.1 Applicant                                       | Name: European Union IPBC Task Force (Arch Chemicals, Dow Benelux B.V., ISP Switzerland GmbH, Lanxess Deutschland GmbH, Troy Corp.), c/o SCC GmbH<br>Address: [REDACTED]<br>Telephone: [REDACTED]<br>Fax number: [REDACTED]<br>E-mail address: [REDACTED] | Gelöscht: [REDACTED] |
| 1.2 Manufacturer of Active Substance (if different) | Confidential information: Please refer to the "Confidential Data File"  |                      |
| 1.3 Manufacturer of Product(s) (if different)       | Not applicable: The Product Dossier is based on a model formulation.  |                      |
| 1) Product 1  |   |                      |
| 2) Product n  |   |                      |

Section A2

Identity

[REDACTED]


Please refer to the "Confidential Data File" for information on Identity

[REDACTED]

**Section A3**

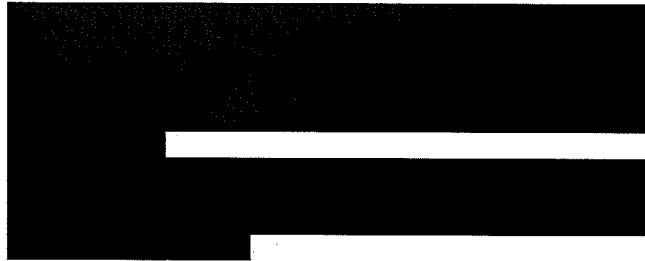
**Physical and Chemical Properties of Active Subst**

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All data was already submitted in the PT 8 dossier (see Doc IIIA reference list). 

**Section A4.1 Analytical Methods for Detection and Identification**

Annex Point IIA4.1/4.2 &  
IIIA-IV.1



Gelöscht: ■

A summary of the analytical method for the determination of the active substance in IPBC technical is provided in Doc IIA, chapter 1.4.1.

Formatiert: Nicht  
Großbuchstaben

**Section A4.2d/01 Analytical Methods for Detection and Identification**  
**Annex Point IIAIV.4.2 (d) of IPBC and PBC in animal and human body fluids and tissues**

|   |                                 | Official<br>use only  |
|---|---------------------------------|---|
| <b>1 REFERENCE</b>                        |                                 |   |
| 1.1                                       | <b>Reference</b>                | Düsterloh, K., (2008). Development and Validation of a Residue Analytical Method for the Determination of IPBC and its metabolite PBC in Body Fluids and Tissue, Itingen, Switzerland: RCC, Study No.: B49443; Doc.-No. 433-002 |
| 1.2                                       | <b>Data protection</b>          | Yes   |
| 1.2.1                                     | Data owner                      | [REDACTED]  |
| 1.2.2                                     | Companies with Letter of Access | [REDACTED]  |
| 1.2.3                                     | Criteria for data protection    | [REDACTED]  |
| <b>2 GUIDELINES AND QUALITY ASSURANCE</b> |                                 |   |
| 2.1                                       | <b>Guideline study</b>          | Yes; European Commission, Guidance Document on Residue Analytical Methods, SANCO/825/00 rev. 7, Jun. 20, 2004   |
| 2.2                                       | <b>GLP</b>                      | Yes   |
| 2.3                                       | <b>Deviations</b>               | No  |
| <b>3 MATERIALS AND METHODS</b>            |                                 |   |
| 3.1                                       | <b>Preliminary treatment</b>    |   |
| 3.1.1                                     | Enrichment                      | No enrichment   |
| 3.1.2                                     | Cleanup                         | IPBC and PBC were extracted from blood and urine with acetonitrile:acetic acid, centrifuged and diluted if appropriate. To extract IPBC and its metabolite from meat acetonitrile:HCl was used as extracting GmbHent.           |
| 3.2                                       | <b>Detection</b>                |   |
| 3.2.1                                     | Separation method               | Reversed phase chromatography on C 18 phase (in confirmatory method a Luna Phenyl-hexyl column used)  |
| 3.2.2                                     | Detector                        | MS/MS detection with positive electrospray ionisation.  |
| 3.2.3                                     | Standard(s)                     | IPBC and PBC standards were prepared in Methanol.   |
| 3.2.4                                     | Interfering substance(s)        | none  |
| 3.3                                       | <b>Linearity</b>                |   |
| 3.3.1                                     | Calibration range               | Please refer to table 1   |
| 3.3.2                                     | Number of measurements          | 7 calibration standard solutions for each substance   |

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**Section A4.2d/01 Analytical Methods for Detection and Identification**  
**Annex Point IIAIV.4.2 (d) of IPBC and PBC in animal and human body fluids and tissues**

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- 3.3.3 Linearity correlation coefficient  $r^2$   
Please refer to table 1
- 3.4 **Specificity: interfering substances** There were no interfering substances seen in the blank chromatograms. The specificity was shown by confirmatory methods.
- 3.5 **Recovery rates at different levels** Please refer to table 3
- 3.5.1 Relative standard deviation Please refer to table 3
- 3.6 **Limit of determination** Limit of Detection (LOD)  
Please refer to table 4  
Limit of Quantification (LOQ)  
Please refer to table 4
- 3.7 **Precision**
- 3.7.1 Repeatability Please refer to table 3
- 3.7.2 Independent laboratory validation Not necessary for a analytical method in body fluids and tissue

**Section A4.2d/01 Analytical Methods for Detection and Identification  
Annex Point IIAIV.4.2 (d) of IPBC and PBC in animal and human body fluids and tissues**

**4 APPLICANT'S SUMMARY AND CONCLUSION**

**4.1 Materials and methods**

IPBC and PBC were extracted from blood and urine with acetonitrile:acetic acid, centrifuged and diluted if appropriate. To extract IPBC and its metabolite from meat acetonitrile:HCl was used as extracting agent.

Analysis was done by HPLC using reversed-phase liquid chromatography and a water / methanol gradient on a C18-column.

Detection was made with a MS/MS system using positive electrospray ionisation.

**4.2 Conclusion**

Validation data in urine showed recoveries in the range of 67 – 79 % for IPBC and 60 – 87 % for PBC at the concentration levels of 0.05 and 0.5 mg/L.

In blood and muscle IPBC degraded rapidly and it was not possible to determine IPBC residues above 70%. A degradation test was performed and it could be shown that spiked IPBC amounts could be determined as PBC and calculated as IPBC equivalents with mean recoveries of 112 % in blood and 116% in muscle.

These results are in agreement with the toxicological evaluation, where a very rapid degradation of IPBC to PBC was observed (please refer to Section A6.2/01; Annex Point IIA, VI.6.2; Toxicokinetic and metabolism in mammals, Rat, gavage).

For PBC recoveries in the range of 76 – 117 % were obtained in meat and recoveries of 81 – 114 % in blood. This shows that PBC was stable over the period of the experiment.

4.2.1 Reliability

■

4.2.2 Deficiencies

No



**Evaluation by Competent Authorities**

Use separate "evaluation boxes" to provide transparency as to the comments and views submitted

**EVALUATION BY RAPPORTEUR MEMBER STATE**

|                       |            |
|-----------------------|------------|
| Date                  | [REDACTED] |
| Materials and methods | [REDACTED] |
| Conclusion            | [REDACTED] |
| Reliability           | [REDACTED] |
| Acceptability         | [REDACTED] |
| Remarks               | [REDACTED] |

Table 1 Calibration range

| Matrix | Test substance | lower level | upper level |
|--------|----------------|-------------|-------------|
| Blood  | IPBC           | 0.5 ng/mL   | 12.5 ng/mL  |
|        | PBC            | 0.5 ng/mL   | 12.5 ng/mL  |
| Urine  | IPBC           | 0.5 ng/mL   | 12.5 ng/mL  |
|        | PBC            | 0.5 ng/mL   | 12.5 ng/mL  |
| Meat   | IPBC           | 0.5 ng/mL   | 12.5 ng/mL  |
|        | PBC            | 0.5 ng/mL   | 12.5 ng/mL  |

Table 2 Correlation coefficients for linear calibration

| Matrix | Test substance | correlation coefficient<br>$R^2$ |
|--------|----------------|----------------------------------|
| Blood  | IPBC           | 0.9981                           |
|        | PBC            | 0.9994                           |
| Urine  | IPBC           | 0.9981                           |
|        | PBC            | 0.9994                           |
| Meat   | IPBC           | 0.9981                           |
|        | PBC            | 0.9994                           |

Table 3a Validation data for primary methods

| Matrix  | Test substance | Fortification level | Recovery rate (%) |          | RSD (%) | N  |
|---------|----------------|---------------------|-------------------|----------|---------|----|
|         |                |                     | mean              | range    |         |    |
| Blood   | PBC            | 0.05 mg/L           | 93                | 81 – 109 | 13      | 4  |
|         | PBC            | 0.5 mg/L            | 103               | 96 – 114 | 6       | 5  |
| Overall | PBC            |                     | 99                | 81-114   | 10      | 10 |
| Urine   | IPBC           | 0.05 mg/L           | 76                | 72 – 79  | 3       | 5  |
|         | PBC            | 0.05 mg/L           | 63                | 60 – 67  | 4       | 5  |
|         | IPBC           | 0.5 mg/L            | 70                | 67 – 76  | 5       | 5  |
|         | PBC            | 0.5 mg/L            | 77                | 73 – 87  | 7       | 5  |
| Overall | IPBC           |                     | 73                | 67-79    | 5       | 10 |
| Overall | PBC            |                     | 70                | 60-87    | 12      | 10 |
| Meat    | PBC            | 0.1 mg/kg           | 99                | 84 – 117 | 11      | 5  |
|         | PBC            | 1.0 mg/kg           | 86                | 76 – 99  | 10      | 5  |
| Overall | PBC            |                     | 92                | 76-117   | 13      | 10 |

Table 3b Validation data for confirmatory methods

| Matrix  | Test substance | Fortification level | Recovery rate (%) |          | RSD (%) | N |
|---------|----------------|---------------------|-------------------|----------|---------|---|
|         |                |                     | mean              | range    |         |   |
| Blood   | PBC            | 0.05 mg/L           | 93                | 73 – 104 | 15      | 3 |
|         | PBC            | 0.5 mg/L            | 106               | 106, 106 | 0       | 2 |
| Overall | PBC            |                     | 98                | 73-106   | 13      | 5 |
| Urine   | IPBC           | 0.05 mg/L           | 100               | 95-105   | 4       | 3 |
|         | PBC            | 0.05 mg/L           | 83                | 74-88    | 8       | 3 |
|         | IPBC           | 0.5 mg/L            | 101               | 99; 103  | 2       | 2 |
|         | PBC            | 0.5 mg/L            | 80                | 82, 78   | 3       | 2 |
| Overall | IPBC           |                     | 100               | 95-105   | 3       | 5 |
| Overall | PBC            |                     | 82                | 74-88    | 7       | 5 |
| Meat    | PBC            | 0.1 mg/kg           | 87                | 80 – 96  | 8       | 3 |
|         | PBC            | 1.0 mg/kg           | 91                | 95, 88   | 4       | 2 |
| Overall | PBC            |                     | 89                | 80-96    | 7       | 5 |

Table 4 Limit of Detection (LOD) and Limit of Quantification (LOQ)

| Matrix | Test substance | LOD         | LOQ       |
|--------|----------------|-------------|-----------|
| Blood  | IPBC           | 0.026 mg/mL | 0.05 mg/L |
|        | PBC            | 0.026 mg/mL | 0.05 mg/L |
| Urine  | IPBC           | 0.026 mg/mL | 0.05 mg/L |
|        | PBC            | 0.026 mg/mL | 0.05 mg/L |
| Meat   | IPBC           | 0.050 mg/kg | 0.1 mg/kg |
|        | PBC            | 0.050 mg/kg | 0.1 mg/kg |

|   |  |
|---|--|
| <b>Section A4.3</b><br>Annex Point IIA,IV.4.2 (e)   | <b>Analytical Methods for Detection and Identification of IPBC in food and feeding stuffs and other products where relevant</b>  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
| Official use only   |  |
| Other existing data <input type="checkbox"/>  | Technically not feasible <input type="checkbox"/> Scientifically unjustified <input type="checkbox"/>  |
| Limited exposure <input type="checkbox"/>   | Other justification <input checked="" type="checkbox"/>  |
| <b>Detailed justification:</b>  | Products (e.g. paints or washing fluids) containing IPBC as an in-can preservative may be applied on materials which may come in contact with food or feedstuff.<br><div style="background-color: black; width: 100%; height: 20px; margin-top: 5px;"></div> |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |  |
| Date  | <div style="background-color: black; width: 100%; height: 15px;"></div>  |
| Evaluation of applicant's justification   | <div style="background-color: black; width: 100%; height: 15px;"></div>  |
| Conclusion  | <div style="background-color: black; width: 100%; height: 15px;"></div>  |
| Remarks   |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| Date  | <i>Give date of comments submitted</i>   |
| Evaluation of applicant's justification   | <i>Discuss if deviating from view of rapporteur member state</i>   |
| Conclusion  | <i>Discuss if deviating from view of rapporteur member state</i>   |
| Remarks   |  |

Gelöscht: 1

Gelöscht: 1

**Section A5 Effectiveness against target organisms and intended uses: Active substance IPBC**

**Subsection (Annex Point)**

Official use only

5.1 Function (IIA5.1) Fungicide

5.2 Organism(s) to be controlled and products, organisms or objects to be protected (IIA5.2) -

5.2.1 Organism(s) to be controlled (IIA5.2) Fungi including yeasts.

X



5.2.2 Products, organisms or objects to be protected (IIA5.2) PT6: IPBC is a fungicide for in-can preservation. It is used in a variety of products, e.g. in washing and cleaning fluids, detergents, paints etc.

5.3 Effects on target organisms, and likely concentration at which the active substance will be used (IIA5.3) -

5.3.1 Effects on target organisms (IIA5.3) IPBC is toxic to fungi.

X

Data on the efficacy of IPBC against [redacted] are provided in the confidential part [redacted]

The lowest tested concentration covers the below cited likely lowest concentration at which IPBC is used in the end-product of 0.01%.

5.3.2 Likely concentrations at which the A.S. will be used (IIA5.3)

IPBC is added as an in-can preservative to a variety of products (e.g. paints and detergents). Based on the categorisation used in the ESD for PT6 the following relevant applications (sub-groups) were chosen for the environmental and human risk assessments to cover the worst case situation:

- 6.1 Washing and cleaning fluids
  - Concentrate: 15% - 30% IPBC
  - End-product: 0.1% IPBC

6.1 Detergents

## Section A5

## Effectiveness against target organisms and intended uses: Active substance IPBC

Concentrate: 15% - 30% IPBC

End-product: 0.1% IPBC

## 6.2. Paints and coatings

Concentrate: 30% IPBC

End-product: 0.01% - 0.1% IPBC

Gelöscht: 3

## 6.3. Fluids used in paper-, textile and leather production

Concentrate: 30% IPBC

End-product: 0.1% IPBC

Gelöscht: 4

## 6.6. Glues and Adhesives

Concentrate: 10% - 30% IPBC

End-product: 1% IPBC

Gelöscht: 7

This list is not claimed to be all-inclusive. Additional uses may exist and/or concentrations may be used which are not covered by the exposure and risk assessments provided in this dossier. In this case such uses or differing concentrations would need to be evaluated on the national level after Annex I inclusion.

The in-can preservation product is only industrial/professional used. The end-product can be used by industrials, professionals and amateurs.

## 5.4 Mode of action (including time delay) (IIA5.4)

-

## 5.4.1 Mode of action

IPBC has a Carbamate structure. The target sites of Carbamates in fungi are cell membrane permeability and fatty acids (according to the information provided by FRAC (Fungicide Resistance Action Committee) on its website [http://www.frac.info/frac/publication/anhang/FRAC\\_Code\\_List2\\_2006\\_web.pdf](http://www.frac.info/frac/publication/anhang/FRAC_Code_List2_2006_web.pdf)

X

## 5.4.2 Time delay

Not a relevant point for an in-can preservative

## 5.5 Field of use envisaged (IIA5.5)

Include code(s) and term(s)

X

MG02:  
Preservatives

IPBC is used in products of the following Product Types:

PT06: In-can preservatives  
PT07: Film preservatives  
PT08: Wood preservatives

**Section A5 Effectiveness against target organisms and intended uses: Active substance IPBC**

PT09: Fibre, leather, rubber and polymerised materials preservatives  
 PT10: Masonry preservatives  
 PT11: Preservatives for liquid-cooling and processing systems  
 PT13: Metalworking preservatives

In the present dossier, only the use of IPBC for in-can preservation is addressed.

|       |  |   |   |
|-------|--|---|---|
|       | Further specification  |   | X |
| 5.6   | User (IIA5.6)  |   |   |
|       | Industrial   | See above: Doc. IIIA, Section A5.3.2  |   |
|       | Professional   | See above: Doc. IIIA, Section A5.3.2  |   |
|       | General public   | See above: Doc. IIIA, Section A5.3.2  |   |
| 5.7   | Information on the occurrence or possible occurrence of the development of resistance and appropriate management strategies (IIA5.7) |   |   |
| 5.7.1 | Development of resistance  | IPBC has a Carbamate structure. The target sites of Carbamates in fungi are cell membrane permeability and fatty acids (according to the information provided by FRAC (Fungicide Resistance Action Committee) on its website (see above: Section 5.4.1).<br><br>The risk of resistance formation against Carbamate fungicides is regarded to be low to medium by FRAC (Fungicide Resistance Action Committee). This applies to the use of Carbamate fungicides in agriculture, where yearly applications to the same fields are possible (even more than one application per season is possible). |   |
| 5.7.2 | Management strategies  | Based on the unspecific mode of action for IPBC the risk of resistance formation is regarded to be low and therefore no management strategies need to be developed.   | X |
| 5.8   | Likely tonnage to be placed on the market per year (IIA5.8)  | This is a very sensitive requirement. Information on sales volumes will be provided by the TF Members upon request by the RMS.  |   |





| <b>Evaluation by Competent Authorities</b>   |            |
|--|------------|
| Use separate "evaluation boxes" to provide transparency as to the comments and views submitted |            |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>   |            |
| Date   | [REDACTED] |
| Materials and methods  | [REDACTED] |
| Conclusion   | [REDACTED] |
| Reliability  | [REDACTED] |
| Acceptability  | [REDACTED] |
| Remarks  | [REDACTED] |
| <b>COMMENTS FROM THE NOTIFIER</b>  |            |
| Date   | [REDACTED] |
| Results and discussion   |            |
| Conclusion   |            |
| Reliability  |            |
| Acceptability  |            |

Remarks

[REDACTED]

|   |   |  |                   |
|---|---|--|-------------------|
| <b>Section A6.13</b>  |   | <b>Toxic effects on livestock and pets</b> |                   |
| Annex Point IIIA, VI.2  |   |  |                   |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |   |  | Official use only |
| Other existing data [ ]   | Technically not feasible [ ]                            | Scientifically unjustified [ ]             |                   |
| Limited exposure [ ]  | Other justification [ x ]                               |  |                   |
| Detailed justification:   | Not required for Product type 6 (in-can preservatives). |  |                   |
| <b>Evaluation by Competent Authorities</b>  |   |  |                   |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |   |  |                   |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |   |  |                   |
| Date  | [REDACTED]  |  |                   |
| Evaluation of applicant's justification   | [REDACTED]  |  |                   |
| Conclusion  | [REDACTED]  |  |                   |
| Remarks   |   |  |                   |

|   |  |                                |                   |
|---|--|--------------------------------|-------------------|
| <b>Section A6.15</b>  |  | <b>Food and feeding stuffs</b> |                   |
| Annex Point IIIA, VI.4  |  |                                |                   |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |                                | Official use only |
| Other existing data [ ]   | Technically not feasible [ ]   | Scientifically unjustified [ ] |                   |
| Limited exposure [ ]  | Other justification [X]  |                                |                   |
| <b>Detailed justification:</b>  | Products (e.g. paints or washing fluids) containing IPBC as an in-can preservative may be applied on materials which may come in contact with food or feeding stuff. <div style="background-color: black; width: 400px; height: 40px; margin-top: 5px;"></div> |                                |                   |
| <b>Evaluation by Competent Authorities</b>  |  |                                |                   |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |                                |                   |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |  |                                |                   |
| Date  | <div style="background-color: black; width: 100%; height: 15px;"></div>  |                                |                   |
| Evaluation of applicant's justification   | <div style="background-color: black; width: 100%; height: 15px;"></div>  |                                |                   |
| Conclusion  | <div style="background-color: black; width: 100%; height: 15px;"></div>  |                                |                   |
| Remarks   |  |                                |                   |

|   |  |
|---|--|
| <b>Section A7.1.1.2.3 Biodegradation in seawater</b>  |  |
| Annex Point IIIA, XII.2.1   |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
|   | Official use only  |
| <b>Other justification</b>  |  |
| <b>Detailed justification:</b>  | <p>According to the TNSG on data requirements a seawater biodegradation test is not required for product type PT 6 (in-can preservatives).</p> <ul style="list-style-type: none"> <li>Therefore, a study on seawater biodegradation is not regarded to be warranted for IPBC.</li> </ul> |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPporteur MEMBER STATE</b>  |  |
| <b>Date</b>   | ██████████   |
| <b>Evaluation of applicant's justification</b>  | ██   |
| <b>Conclusion</b>   | ██████████   |
| <b>Remarks</b>  |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| <b>Date</b>   | <i>Give date of comments submitted</i>   |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i>   |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i>   |
| <b>Remarks</b>  |  |

|   |   |
|---|---|
| <b>Section A7.1.2.1.2 Anaerobic biodegradation</b>  |   |
| Annex Point IIIA, XII.2.1   |   |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |   |
| Official<br>use only  |   |
| <b>Other justification</b>  |   |
| <b>Detailed justification:</b>  | According to the TNsG on data requirements, an anaerobic biodegradation study is not required for product type PT 6 (in-can preservatives).<br><br>Therefore, a study on anaerobic biodegradation is not regarded to be warranted for IPBC. |
| <b>Evaluation by Competent Authorities</b>  |   |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |   |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |   |
| <b>Date</b>   | ██████████  |
| <b>Evaluation of applicant's justification</b>  | ██  |
| <b>Conclusion</b>   | ██████████  |
| <b>Remarks</b>  |   |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |   |
| <b>Date</b>   | <i>Give date of comments submitted</i>  |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i>  |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i>  |
| <b>Remarks</b>  |   |

## Section A7.3.1/01 Phototransformation in air (estimation method)

## Annex Point IIIA, VII.5

|   |  | Official<br>use only   |
|---|--|--|
| <b>1 REFERENCE</b>                        |  |  |
| 1.1                                       | Reference                                  | Görg, J., Glöckner, Th. (2007): Estimation of photochemical degradation of IPBC using the Atkinson calculation method; Scientific Consulting Company, Chemisch-Wissenschaftliche Beratung GmbH, 55234 Wendelsheim, Germany; Doc. No. 743-002; 08.06.2007; (unpublished)  |
| 1.2                                       | Data protection                            | █  |
| 1.2.1                                     | Data owner                                 | █  |
| 1.2.2                                     | Companies with letter of access            | █  |
| 1.2.3                                     | Criteria for data protection               | █  |
| <b>2 GUIDELINES AND QUALITY ASSURANCE</b> |  |  |
| 2.1                                       | Guideline study                            | Not applicable; model calculation according to the Atkinson calculation method.  |
| 2.2                                       | GLP  | █  |
| 2.3                                       | Deviations                                 | Not applicable.  |
| <b>3 MATERIAL AND METHODS</b>             |  |  |
| 3.1                                       | Test material                              | Not applicable.  |
| 3.2                                       | Reference substance                        | █  |
| 3.3                                       | Test solution                              | █  |
| 3.4                                       | Testing procedure                          | The photochemical and oxidative decomposition of IPBC in air was evaluated based on theoretical grounds by a calculation according to Atkinson. The calculation was performed with the help of the programme AOPWIN, Atmospheric Oxidation Programme v1.92 for Microsoft Windows 3.1, Windows 95/98, Windows NT (© 2000 US Environmental Protection Agency). |
| <b>4 RESULTS</b>                          |  |  |
| 4.1                                       | OH radical reaction rate constant $k_{OH}$ | █  |

Gelöscht: █

Section A7.3.1/01 Phototransformation in air (estimation method)

Annex Point IIIA, VII.5

[Redacted text]

4.2 Ozone reaction rate constant  $k_{\text{Ozone}}$

[Redacted text]

4.3 Atmospheric half-life using  $k_{\text{OH}}$

[Redacted text]

4.4 Atmospheric half-life using  $k_{\text{Ozone}}$

[Redacted text]

5 APPLICANT'S SUMMARY AND CONCLUSION

5.1 Materials and methods The photochemical and oxidative decomposition of IPBC in air was evaluated based on theoretical grounds by a calculation according to Atkinson.

5.2 Results and discussion

5.2.1 Reaction rate  $k_{\text{OH}} = 25.5485 \times 10^{-12} \text{ cm}^3 \text{ molecule}^{-1} \text{ sec}^{-1}$ .





|   |  |   |                   |
|---|--|---|-------------------|
| <b>Section A7.3.2</b>   |  | <b>Fate and behaviour in air, further studies</b> |                   |
| Annex Point IIIA, XII.3   |  |   |                   |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |   | Official use only |
| <b>Other justification</b>  |  |   |                   |
| <b>Detailed justification:</b>  | <p>According to the TNSG on data requirements an experimental estimation of the fate and behaviour in air is only required if the active substance is to be used in preparations form fumigants or causes risk to the atmospheric environment.</p> <div style="background-color: black; width: 400px; height: 20px; margin: 5px 0;"></div> <div style="background-color: black; width: 400px; height: 20px; margin: 5px 0;"></div> |   |                   |
| <b>Evaluation by Competent Authorities</b>  |  |   |                   |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |   |                   |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |  |   |                   |
| <b>Date</b>   | [REDACTED]   |   |                   |
| <b>Evaluation of applicant's justification</b>  | [REDACTED]   |   |                   |
| <b>Conclusion</b>   | [REDACTED]   |   |                   |
| <b>Remarks</b>  |  |   |                   |
| <b>COMMENTS FROM OTHER MEMBER STATE <i>(specify)</i></b>  |  |   |                   |
| <b>Date</b>   | <i>Give date of comments submitted</i>   |   |                   |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i>   |   |                   |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i>   |   |                   |
| <b>Remarks</b>  |  |   |                   |

|  |   |
|--|---|
| <p><b>Section A7.5.2.1</b><br/>Annex Point IIIA, XIII.3.2</p>                  | <p><b>Reproduction study with earthworm or other soil non-target organisms</b></p>  |
| <p align="center"><b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b></p>          |   |
| <p align="center">Scientifically unjustified</p>                               |   |
| <p><b>Detailed justification:</b></p>  | <p>According to the BPD 98/8/EC and the TNsG on data requirements, long-term terrestrial tests are required if the risk assessment for the terrestrial compartment still indicates a concern for the terrestrial compartment.</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> |
| <p align="center"><b>Evaluation by Competent Authorities</b></p>               |   |
| <p align="center"><b>EVALUATION BY RAPPORTEUR MEMBER STATE</b></p>             |   |
| <p><b>Date</b></p>   | <p>[REDACTED]</p>   |
| <p><b>Evaluation of applicant's justification</b></p>                          | <p>[REDACTED]</p>   |
| <p><b>Conclusion</b></p>   | <p>[REDACTED]</p>   |
| <p><b>Remarks</b></p>  | <p></p>   |
| <p align="center"><b>COMMENTS FROM OTHER MEMBER STATE <i>(specify)</i></b></p> |   |
| <p><b>Date</b></p>   | <p><i>Give date of comments submitted</i></p>   |
| <p><b>Evaluation of applicant's justification</b></p>                          | <p><i>Discuss if deviating from view of rapporteur member state</i></p>   |
| <p><b>Conclusion</b></p>   | <p><i>Discuss if deviating from view of rapporteur member state</i></p>   |

Gelöscht: [REDACTED]

Gelöscht: [REDACTED]

|  |  |
|--|--|
| <b>Section A7.5.2.2 Long-term test with terrestrial plants</b> |  |
| <b>Annex Point IIIA, XIII.3.2</b>                              |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>                |  |
| <small>Official use only</small>                               |  |
| <b>Detailed justification:</b>                                 | <b>Scientifically unjustified</b>  |
|  | According to the BPD 98/8/EC and the TNsG on data requirements, long-term terrestrial tests are required if the risk assessment for the terrestrial compartment still indicates concern for the terrestrial compartment or if there is long term exposure. |
|  | [REDACTED]   |
|  | [REDACTED]   |
| [REDACTED]   | Gelöscht: [REDACTED]   |
| [REDACTED]   | Gelöscht: [REDACTED]   |
| <b>Evaluation by Competent Authorities</b>                     |  |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>                   |  |
| <b>Date</b>  | [REDACTED]   |
| <b>Evaluation of applicant's justification</b>                 | [REDACTED]   |
| <b>Conclusion</b>  | [REDACTED]   |
| <b>Remarks</b>   |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>              |  |
| <b>Date</b>  | <i>Give date of comments submitted</i>   |
| <b>Evaluation of applicant's justification</b>                 | <i>Discuss if deviating from view of rapporteur member state</i>   |
| <b>Conclusion</b>  | <i>Discuss if deviating from view of rapporteur member state</i>   |

|   |  |
|---|--|
| <b>Section A7.5.3.1.1 Acute oral toxicity to birds</b>  |  |
| Annex Point IIIA, XIII.1.1  |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
|   | Official use only  |
| <b>Other justification</b>  |  |
| <b>Detailed justification:</b>  | Not required for Product type 6 (in-can preservatives).          |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |  |
| <b>Date</b>   | ██████████   |
| <b>Evaluation of applicant's justification</b>  | ██                         |
| <b>Conclusion</b>   | ██████████   |
| <b>Remarks</b>  |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| <b>Date</b>   | <i>Give date of comments submitted</i>                           |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i> |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i> |

|   |  |
|---|--|
| <b>Section A7.5.3.1.2 Short-term toxicity to birds</b>  |  |
| Annex Point IIIA, XIII.1.2  |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
|   | Official<br>use only   |
| <b>Other justification</b>  |  |
| <b>Detailed justification:</b>  | Not required for Product type 6 (in-can preservatives).          |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPPOREUR MEMBER STATE</b>   |  |
| <b>Date</b>   | ██████████   |
| <b>Evaluation of applicant's justification</b>  | ██                         |
| <b>Conclusion</b>   | ██████████   |
| <b>Remarks</b>  |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| <b>Date</b>   | <i>Give date of comments submitted</i>                           |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i> |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i> |

|   |  |
|---|--|
| <b>Section A7.5.3.1.3</b>   | <b>Effects on reproduction of birds</b>  |
| Annex Point IIIA, XIII.1.3  |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
|   | Official<br>use only   |
| <b>Other justification</b>  |  |
| <b>Detailed justification:</b>  | Not required for Product type 6 (in-can preservatives) and Product type 13 (metalworking fluid preservatives). |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |  |
| <b>Date</b>   | ██████████   |
| <b>Evaluation of applicant's justification</b>  | ██   |
| <b>Conclusion</b>   | ██████████   |
| <b>Remarks</b>  |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| <b>Date</b>   | <i>Give date of comments submitted</i>   |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i>   |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i>   |

|   |  |
|---|--|
| <b>Section A7.5.4.1</b><br>Annex Point IIIA, XIII.3.1   | <b>Acute toxicity to honeybees and other beneficial arthropods</b>   |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
| Official use only   |  |
| <b>Other justification</b>  |  |
| <b>Detailed justification:</b>  | Not required for Product type 6 (in-can preservatives) and Product type 13 (metalworking fluid preservatives). |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>  |  |
| <b>Date</b>   | ██████████   |
| <b>Evaluation of applicant's justification</b>  | ██   |
| <b>Conclusion</b>   | ██████████   |
| <b>Remarks</b>  |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| <b>Date</b>   | <i>Give date of comments submitted</i>   |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i>   |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i>   |



|   |  |  |                   |
|---|--|--|-------------------|
| <b>Section A7.5.6</b>                             |  | <b>Effects on other terrestrial non-target organisms</b> |                   |
| Annex Point IIIA, XIII.3                          |  |  |                   |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |  | Official use only |
| <b>Other justification</b>                        |  |  |                   |
| <b>Detailed justification:</b>                    | <p>According to the BPD 98/8/EC and the TNsG on data requirements, further tests with other terrestrial non-target organisms may be required if the risk assessment based on long-term terrestrial tests show that there is still a concern for the terrestrial compartment.</p> <div style="background-color: black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100%; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: black; width: 100%; height: 20px;"></div> |  |                   |
| <b>Evaluation by Competent Authorities</b>        |  |  |                   |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>      |  |  |                   |
| <b>Date</b>                                       | [REDACTED]   |  |                   |
| <b>Evaluation of applicant's justification</b>    | [REDACTED]   |  |                   |
| <b>Conclusion</b>                                 | [REDACTED]   |  |                   |
| <b>Remarks</b>                                    |  |  |                   |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b> |  |  |                   |
| <b>Date</b>                                       | <i>Give date of comments submitted</i>   |  |                   |
| <b>Evaluation of applicant's justification</b>    | <i>Discuss if deviating from view of rapporteur member state</i>   |  |                   |
| <b>Conclusion</b>                                 | <i>Discuss if deviating from view of rapporteur member state</i>   |  |                   |

Gelöscht: [REDACTED]

Gelöscht: [REDACTED]

|   |  |
|---|--|
| <b>Section A7.5.7.1.1 Acute oral toxicity to mammals</b>  |  |
| Annex Point IIIA, XIII.3.4  |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |
|   | Official<br>use only   |
| <b>Other justification</b>  |  |
| <b>Detailed justification:</b>  | Not required for Product type 6 (in-can preservatives).          |
| <b>Evaluation by Competent Authorities</b>  |  |
| <i>Use separate "evaluation boxes" to provide transparency as to the comments and views submitted</i> |  |
| <b>EVALUATION BY RAPporteur MEMBER STATE</b>  |  |
| <b>Date</b>   | ██████████   |
| <b>Evaluation of applicant's justification</b>  | ██                         |
| <b>Conclusion</b>   | ██████████   |
| <b>Remarks</b>  |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>   |  |
| <b>Date</b>   | <i>Give date of comments submitted</i>                           |
| <b>Evaluation of applicant's justification</b>  | <i>Discuss if deviating from view of rapporteur member state</i> |
| <b>Conclusion</b>   | <i>Discuss if deviating from view of rapporteur member state</i> |

|  |  |
|--|--|
| <b>Section A7.5.7.1.2 Short-term toxicity to mammals</b> |  |
| Annex Point IIIA, XIII.3.4                               |  |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>          |  |
|  | Official use only  |
| <b>Other justification</b>                               |  |
| <b>Detailed justification:</b>                           | Not required for Product type 6 (in-can preservatives).          |
| <b>Evaluation by Competent Authorities</b>               |  |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>             |  |
| <b>Date</b>  | ██████████   |
| <b>Evaluation of applicant's justification</b>           | ██                         |
| <b>Conclusion</b>  | ██████████   |
| <b>Remarks</b>   |  |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b>        |  |
| <b>Date</b>  | <i>Give date of comments submitted</i>                           |
| <b>Evaluation of applicant's justification</b>           | <i>Discuss if deviating from view of rapporteur member state</i> |
| <b>Conclusion</b>  | <i>Discuss if deviating from view of rapporteur member state</i> |

|   |  |   |                      |
|---|--|---|----------------------|
| <b>Section A7.5.7.1.3</b>                         |  | <b>Effects on reproduction of mammals</b> |                      |
| Annex Point IIIA, XIII.3.4                        |  |   |                      |
| <b>JUSTIFICATION FOR NON-SUBMISSION OF DATA</b>   |  |   | Official<br>use only |
| <b>Other justification</b>                        |  |   |                      |
| <b>Detailed justification:</b>                    | Not required for Product type 6 (in-can preservatives) and Product type 13 (metalworking fluid preservatives). |   |                      |
| <b>Evaluation by Competent Authorities</b>        |  |   |                      |
| <b>EVALUATION BY RAPPORTEUR MEMBER STATE</b>      |  |   |                      |
| <b>Date</b>                                       | ██████████   |   |                      |
| <b>Evaluation of applicant's justification</b>    | ██   |   |                      |
| <b>Conclusion</b>                                 | ██████████   |   |                      |
| <b>Remarks</b>                                    |  |   |                      |
| <b>COMMENTS FROM OTHER MEMBER STATE (specify)</b> |  |   |                      |
| <b>Date</b>                                       | <i>Give date of comments submitted</i>   |   |                      |
| <b>Evaluation of applicant's justification</b>    | <i>Discuss if deviating from view of rapporteur member state</i>   |   |                      |
| <b>Conclusion</b>                                 | <i>Discuss if deviating from view of rapporteur member state</i>   |   |                      |

|                     |   |
|---------------------|---|
| <b>Section A7.6</b> | <b>Summary of ecotoxicological effects and fate and behavior in the environment</b> |
|---------------------|---|

|  |
|--|
| This section number is covered by Document IIA of the dossier. |
|--|

**Section A8.1- A8.7      Measures necessary to protect man, animals and the environment**

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The information provided in the PT 8 dossier is applicable for Product type PT 6 (in-can preservatives) and Product type PT 13 (metalworking fluid preservatives).

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## 9 CLASSIFICATION AND LABELLING

The following classification and labelling for the active substance IPBC is proposed:

|                          |           |   |
|--------------------------|-----------|---|
| Hazard symbol(s):        |           | T, N  |
| - Indications of danger: |           | Toxic, Dangerous for the environment  |
| Risk phrases:            | R22       | Harmful if swallowed  |
|                          | R23       | Toxic by inhalation   |
|                          | R37       | Irritating to the respiratory system  |
|                          | R41       | Risk of serious damage to the eye   |
|                          | R43       | May cause sensitization by skin contact.  |
|                          | R50       | Very toxic to aquatic organisms.  |
| Safety phrases:          | S1        | Keep locked up  |
|                          | S23       | Do not breathe vapour/spray.  |
|                          | S24/25    | Avoid contact to skin and eyes.   |
|                          | S26       | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.               |
|                          | S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection.  |
|                          | S45       | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
|                          | S61       | Avoid release to the environment, refer to special instructions/safety data sheets                          |

## Justifications

The above proposed classification and labelling requirements are in line with the findings presented in the dossier for the relevant physico-chemical, toxicological and ecotoxicological studies with IPBC. The labelling and classification triggering findings are:

The labelling and classification triggering findings are:

### R22

LD<sub>50</sub> (rat, oral): 300 – 500 mg/kg bw

### R23

Highly toxic with an LC<sub>50</sub> of about 0.67 mg/L for dust with respirable particle size (MMAD 4.3 µm) and of about 0.78 mg/L for a liquid aerosol with respirable droplet size (MMAD 2.4 µm); and an LC<sub>50</sub> of about 0.88 mg/L for dust (non-micronised) with 19.2-26.7% of the particles being of a respirable particle size of 6 µm (MMAD of 9.6-14.2 µm) and of about 0.67 mg/L for a combination of micronised and non-micronised dust. Following administration of particles with technical IPBC (particle size not measured in this particular study) claimed by the notifier to be non-respirable an LC<sub>50</sub> > 6.89 mg/L was determined.

RMS proposes classification as toxic with R23: Toxic by inhalation for technical IPBC regardless of the particle size because of several uncertainties.

First of all the particle size of IPBC in the study by ██████ 1985, which is the only study out of three which is not leading to the classification as toxic, was not measured so the actual MMAD and proportion of particle less than 10 µm is uncertain and could be different from the one stated in Flack 2001. In the study (Flack, 2001, Doc. No. 111-001) measuring the particle size of technical IPBC used in the representative products and products on the market ≤ 5% of the particles were smaller than 10 µm<sup>1</sup>. It should be recognised that in the non-key study the MMAD was 9.6-14.2 µm, 19.2-26.7% of the particles being of a particle size of less than 6 µm (and therefore also less than 10 µm) and lead to an LC<sub>50</sub> of about 0.88 mg/L and therefore RMS is reluctant to disregard the fact that the MMAD in this study (Jackson, 1994) is of comparable particle size (10 µm) with 5% of the particles in technical IPBC being used in products on the market.

### R37

The predominant histopathological findings were epithelial hyperplasia in the central region of the larynx, hyperplasia or squamous metaplasia in the ventrolateral region of the larynx, and necrosis of the underlying cartilage of the larynx at concentrations in the air equal to 6.7 mg/m<sup>3</sup> (LOAEC 6.7 mg/m<sup>3</sup> with a NOAEC 1 mg/m<sup>3</sup>). These histopathological changes, which may be associated with the intrinsic irritating properties of IPBC, are considered as being of relevance to humans although realising the difference in morphology of the upper respiratory tract of rodents and humans and that rodents are obligatory nose breathers, factors which both result in a higher exposure of the rats' larynx compared to the larynx in humans. As the effects on larynx are considered as a local and not a systemic effect R37: Irritating to respiratory system is proposed.

### R41

The observed effects persisted throughout the 7 day observation period.

<sup>1</sup> OECD recommends a MMAD of 1-4 µm for acute inhalation studies



**R43**

The skin sensitising potential of IPBC observed in 3 of 4 GPMTs is supported by data from human case reports.

**for R50**

Fish acute:

96 h, acute LC<sub>50</sub> (*Oncorhynchus mykiss*): 67 to 72 µg/L

For algae:

72 h, acute E<sub>b</sub>C<sub>50</sub> (*Scenedesmus subspicatus*): 22 µg/L (E<sub>r</sub>C<sub>50</sub>: 53 µg/L)

For daphnia:

48 h, acute EC<sub>50</sub> (*Daphnia magna*) : 160 µg/L

**The following is proposed in accordance with the latest classification and labelling guidance No 1272/2008:**

| <b>Labelling elements based on the classification</b> |   |
|---|---|
| GHS pictogram   | GHS05, GHS06, GHS09   |
| Signal word   | Danger  |
| Hazard class and category code(s)                     | Acute Tox 3<br>Acute Tox 4<br>Skin Sens. 1<br>Eye Dam. 1<br>STOT SE3<br>Aquatic Acute 1<br>Aquatic Chronic 1*   |
| Hazard statements                                     | H331: Toxic if inhaled<br>H302: Harmful if swallowed<br>H317: May cause an allergic skin reaction<br>H318: Causes serious eye damage<br>H335: May cause respiratory irritation<br>H400: Very toxic to aquatic life<br>H410: Very toxic to aquatic life with long-lasting effects* |
| Environmental M-factor                                | 10, 1*  |

\* According to Commission Regulation (EU) No 286/2011 (2<sup>nd</sup> ATP)

Precautionary statements according to the latest classification and labelling guidance No. 1272/2008 have not been assigned.

The Committee for Risk Assessment (RAC) has in addition recently proposed to classify IPBC with STOT RE 1 based on effects seen on larynx after prolonged exposure by inhalation. This proposal has not yet been adopted by the REACH Committee.

The final classification must when adopted by the REACH Committee be considered during the authorization of biocidal products.

**Section A10 . Summary and Evaluations of Sections 2 to 9**

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Please refer to Doc. IIA.