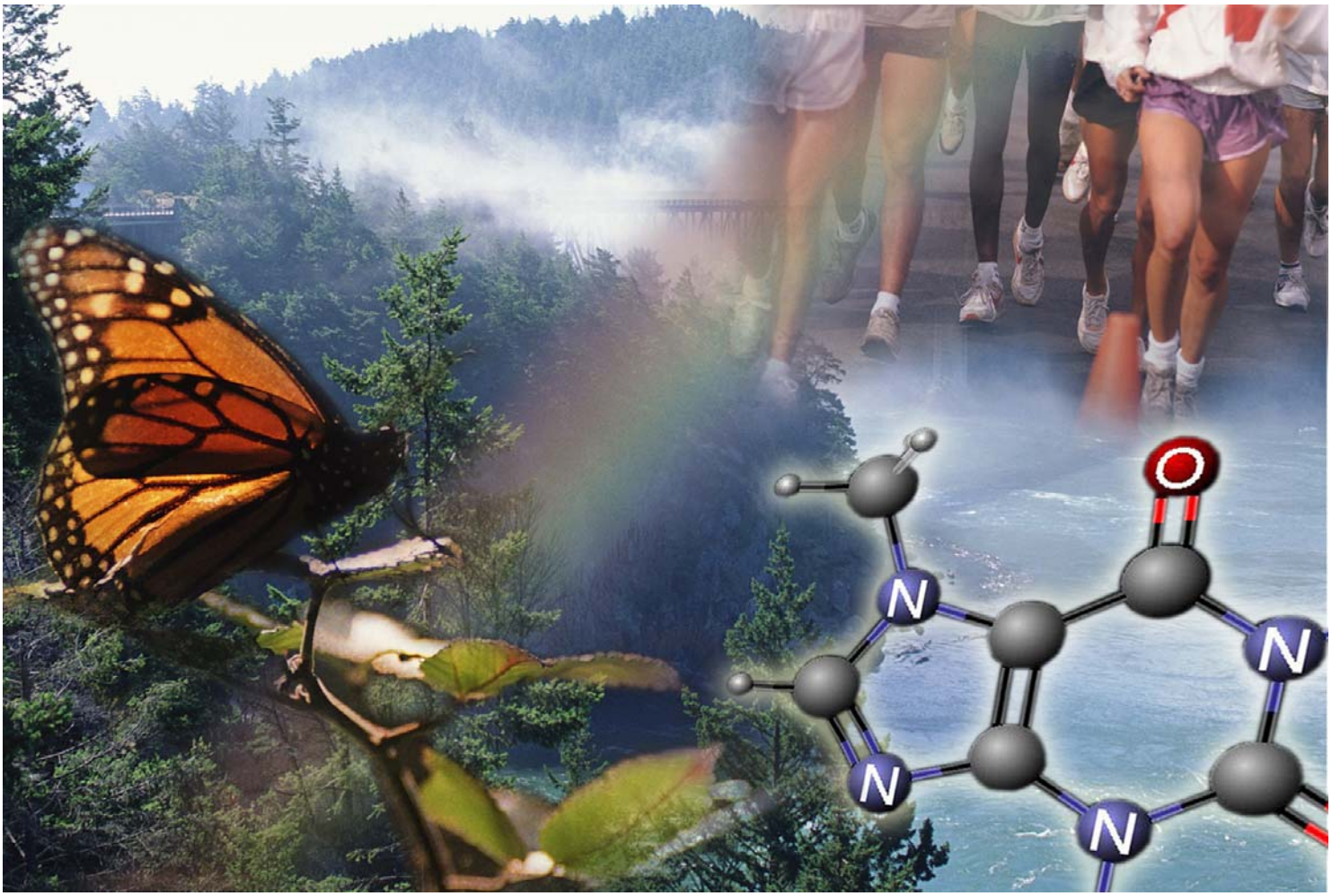
Guidance on priority setting for evaluation



August 2008

Guidance for the implementation of REACH

LEGAL NOTICE

This document contains guidance on REACH explaining the REACH obligations and how to fulfil them. However, users are reminded that the text of the REACH regulation is the only authentic legal reference and that the information in this document does not constitute legal advice. The European Chemicals Agency does not accept any liability with regard to the contents of this document.

PREFACE

This document describes how to prioritise registration dossiers and testing proposals for evaluation under REACH (compliance check of dossiers and evaluation of testing proposals). It is part of a series of guidance documents that are aimed to help all stakeholders with their preparation for fulfilling their obligations under the REACH regulation. These documents cover detailed guidance for a range of essential REACH processes as well as for some specific scientific and/or technical methods that industry or authorities need to make use of under REACH.

The guidance documents were drafted and discussed within the REACH Implementation Projects (RIPs) led by the European Commission services, involving stakeholders from Member States, industry and non-governmental organisations. These guidance documents can be obtained via the website of the European Chemicals Agency (http://echa.europa.eu/reach_en.asp). Further guidance documents will be published on this website when they are finalised or updated.

This document relates to the REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006[1]

1 Corrigendum to Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006); amended by Council Regulation (EC) No 1354/2007 of 15 November 2007 adapting Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) by reason of the accession of Bulgaria and Romania (OJ L 304, 22.11.2007, p. 1).

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List of Abbreviations

AC	Article category
CMR	Carcinogenic substance, mutagenic substance or substance toxic for reproduction
CRAP	Community rolling action plan
CSA	Chemical safety assessment
CSR	Chemical safety report
CWG	Commission Working Group
DU	Downstream user
ECB	European Chemicals Bureau
ECHA	European Chemicals Agency
ERC	Environmental release category
ES	Exposure scenario
GD	Guidance document
IT	Information technology
IUCLID	International uniform chemical information database
M/I	Manufacturer / Importer
OC	Operational conditions
OU	Operational unit
PBT	Persistent, bioaccumulative and toxic substance
PC	Chemical product category
PROC	Process category
QSAR	Quantitative structure activity relationship
REACH	Regulation, evaluation and authorisation of chemicals
RIP	REACH implementation project
RMM	Risk management measures
SELC	Substance giving rise to an equivalent level of concern
SU	Sector of use
SVHC	Substance of very high concern
TGD	Technical guidance document
TP	Testing proposal
vPvB	Very persistent and very bioaccumulative substance

1. General introduction

1.1 About this guidance

This document is intended to provide technical guidance to the European Chemicals Agency on priority setting for the examination of testing proposals and for compliance check of registration dossiers under Regulation (EC) No 1907/2006 of the European Parliament and of the Council, of 18 December 2006, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (the REACH Regulation). Thus, this guidance relates to Title VI, Chapter 1, Articles 40, 41 and 43 of the REACH Regulation.

1.2 Structure of the guidance

The guidance provides an overview of approaches recommended for priority setting in the context of examination of testing proposals and compliance check of registration dossiers and addresses the following topics:

- General outline of the priority setting process for dossier evaluation under REACH;
- Availability, parameterisation and utilisation of information on use and exposure for the purpose of priority setting;
- Outline of the approach recommended for priority setting with regard to examination of testing proposals;
- Outline of the approach recommended for priority setting with regard to compliance check of registration dossiers.

1.3 Who is the guidance for?

This guidance is primarily intended for use by those within the Agency, who are dealing with priority setting in the context of dossier evaluation. It comprises guidance on the activities and workflows required to prioritise dossiers with testing proposals for examination and to prioritise registration dossiers for compliance check.

The guidance will also be useful for registrants and staff of Member State Competent Authorities to get an understanding of the approaches used for priority setting in the context of dossier evaluation.

1.4 Links to other REACH guidance

This guidance is not intended to be used as stand alone guidance and takes into account other REACH guidance and processes, in particular the guidance on evaluation, which describes the evaluation tasks to be performed by the Agency in the context of examination of testing proposals and compliance check of registration dossiers.

The IT system is set up to support the REACH implementation and serves with regard to priority setting as central database for (automated) retrieval of data relevant for prioritisation.

2. Priority setting in the context of REACH and availability of input data

Under REACH, priority setting for evaluation (testing proposals, dossiers or substances) can be regarded as a staged process in which at the lowest stage a larger number of proposals, dossiers or substances is screened, selected and possibly ranked with respect to the different sets of criteria applicable for the different prioritisations. At this initial stage, manual selection of information would hardly be manageable due to the high number of initial candidates. Therefore, the information used to perform the initial step of a prioritisation must be retrievable from the REACH database in an automated manner (i.e. query-able fields in IUCLID5 or REACH-IT).

Where relevant, the output of the initial prioritisation is then in a follow-up step refined by expert judgement, where any relevant information should be considered to finally determine priorities. This might comprise information from not automatically query-able parts of a dossier (e.g. from the CSR). However, it should be clear that manual "information mining" will for practical reasons only be possible for the sub-set of dossiers that has been identified as being of highest priority in the first step.

From the above process description it can be inferred that priority setting for dossier evaluation will be done through processes in which IT-based routines need to be implemented that are capable of automatically retrieving from the dossiers the information required for prioritisation. Whereas substance identity and substance property (hazard) related information required for priority setting is accessible for IT-based automated retrieval from the IUCLID5 part of the dossiers, this is not the case for the information required on uses and exposures. Most of this latter kind of information, in particular use specific, quantitative information on exposure (which would be ideally suitable for priority setting) is provided in the form of a text document (Chemical Safety Report) attached to the IUCLID5 technical dossier and therefore not automatically searchable by respective IT-based queries. Some other, more general and qualitative, information on exposure is however automatically retrievable from the dossiers. A detailed analysis of the exposure information that will be available from the IUCLID5 part of the dossier is provided in Annex 1.

How the problem of limited automatic access to exposure information relevant for priority setting can be overcome is outlined in section 2.1.

2.1 Parameterisation and utilisation of information on use and exposure from registration dossiers for the purpose of priority setting

In order to overcome the problem of limited automatic access to exposure information the Use Descriptor System that has been developed as part of the Guidance on information requirements and chemical safety assessment [1] (Chapter R.12) may be used. A short description of the use descriptor system and guidance on how it may be utilised to provide the exposure information required for priority setting on the basis of automatically retrievable data from IUCLID5 is provided in sections 2.1 and 2.2.

2.1.1 Outline of the use descriptor system

The use descriptor system is described in detail in Chapter R.12 of the Guidance on information requirements and chemical safety assessment [1]. It is based on four elements, leading to a virtual standard phrase:

Substance [xyz] is used by [sector(s) of use] in [product category] through [process category] in order to be processed in/on to an article [article category] (last article related part only if relevant). This is exemplified in Figure 2.1.

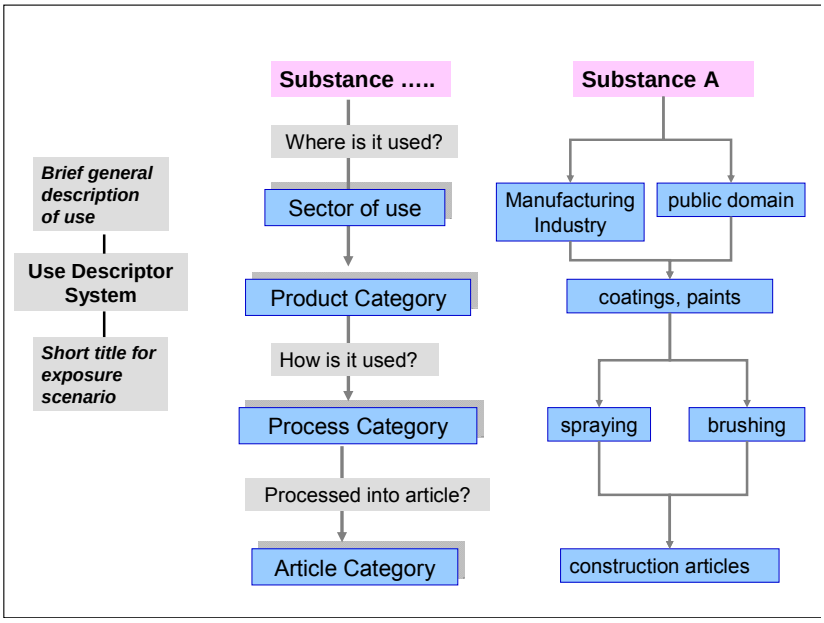


Figure 2.1: Descriptor system for short titles and a brief general description of use

The four elements of the system are based on pick-lists of standard-descriptors in fixed text format. The 4 elements are:

- Sector of use [SU]
- Product category [PC]
- Process Category [PROC]
- Article Category [AC]

The respective lists of the 4 elements and their descriptors can be found in Appendices R.12-1 (SU), R.12-2 (PC), R.12-3 (PROC), R.12-4 (AC - without intended release) and R.12-5 (AC – with intended release). For further information on the four elements and the descriptors see Chapter R.12 [1].

The use descriptor system is implemented in section 3.5 of IUCLID 5 as shown in Figure 2.2 and is currently the only information on uses required by REACH to be submitted in a structured way (i.e. in searchable format in IUCLID 5) and is therefore the only source for automatically retrievable information on the kind of exposure that could be expected from the identified uses.

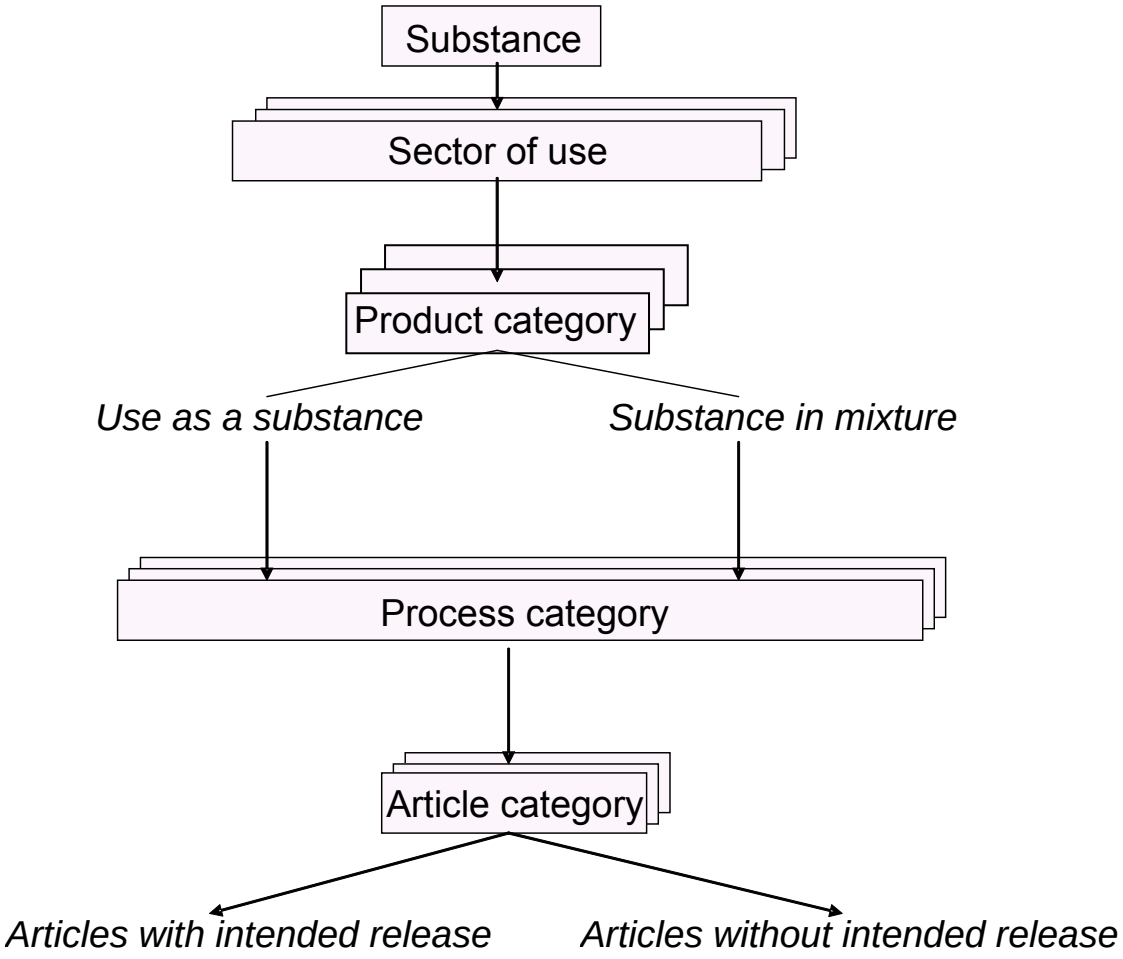


Figure 2.2: Implementation of the use descriptor system in IUCLID to provide a "short description of uses" as required by REACH Annex VI (3.5). A substance can be assigned to more than one use descriptor at each hierarchical level, in order to cover different uses.

2.1.2 Generation of exposure information on the basis of the use descriptor system for the purpose of priority setting

The legal criteria for priority setting do not necessarily require quantitative information on exposure. Rather information on the occurrence of certain use patterns and exposure categories is requested, e.g. information on *"uses resulting in widespread and diffuse exposure"*[2], on *"wide dispersive or diffuse use(s) particularly where such substances are used in consumer preparations or incorporated in consumer articles"*[3] or on *"wide dispersive use"*[4].

It is possible to infer such qualitative information on particular use patterns and exposure categories resulting from a use by means of the use descriptor system. This can be achieved by assigning the descriptors of the process (PROC), product (PC) and article (AC) categories to release patterns that could typically be expected from the processes carried out and products or articles produced or employed during production. In Part D (section D.5.5; Appendix D-3) and Chapter R.16 (Appendix R.16-1) of the Guidance on information requirements and chemical safety assessment [1] 11

[2] Examination of testing proposals, Art. 40(1)

[3] Compliance check of registrations, Art. 41(5) (b), indirect requirement of Annex III and the application of Art. 12

[4] Inclusion of substances in Annex XIV, Art. 58(3)

environmental release categories (ERCs; plus some sub-categories) have been defined, which reflect the extend of containment and the technical fate of a substance in a process, the availability of waste water treatment and the dispersion of emissions sources in the environment (see Annex 2, Table A2.1). Links between the Process Categories and Article Categories and the matching Environmental Release Categories have already been defined and can be used to link an identified use of a substance with assumptions on resulting exposure pathways and dispersion patterns (see examples in Annex 2, Tables A2.2 and A2.3 for linking Article Categories and Process Categories with ERCs). Links between the Product Categories and the ERCs still need to be established.

Hence, all categories of processes, products and articles that are linked to the Environmental Release Categories 8 – 11 (Table A2.1; including the sub-categories) can generally be considered as wide dispersive uses[5]. Because wide dispersive use usually results in wide dispersive exposure, this case can be considered as covered by ERCs 8 – 11 as well.

The use descriptor system can therefore be utilised to identify the uses of a substance that meet exposure related prioritisation criteria like e.g. *widespread and diffuse exposure* or *wide dispersive or diffuse uses.* This identification is however only qualitative as it is not possible to automatically retrieve from a dossier percentages/fractions of the total registered tonnage that go to a particular use, nor is it possible to quantify the degree of exposure resulting from these "wide dispersive" uses, which may be very different.

In practice, this means that a use that can be linked via any of the 3 use descriptor categories PROC, PC or AC with an ERC 8, 9, 10 or 11 should be considered to fulfil the prioritisation criteria referring to *widespread / diffuse exposure* or *wide dispersive / diffuse uses.*

Apart from the use descriptor system, section 3.2 of IUCLID on Estimated Quantities will provide searchable information on the tonnage of a substance that is used as an on-site isolated or a transported intermediate. If the use as intermediate is the only use this information could be used as indicator for low and non-dispersive exposure.

[5] "Wide dispersive use" is defined in Appendix R.16-1 of the TGD [1] as emission form a "large number of small point sources". In the TGD (2003, Chapter 5)[5] it as: "*Wide dispersive use refers to activities which deliver uncontrolled exposure. Examples relevant for occupational exposure: Painting with paints; spraying of pesticides. Examples relevant for environmental/consumer exposure: Use of detergents, cosmetics, disinfectants, household paints".* The ECETOC Report No. 93 on Targeted Risk Assessment[6] (Appendix B) further states: *"A substance marketed for wide dispersive use is likely to reach consumers, and it can be assumed that such a substance will be emitted into the environment for100% during or after use".*

3. Priority setting for the examination of testing proposals

All testing proposals pertaining to information required by Annexes IX and X for a substance need to be evaluated by the Agency. This evaluation work needs to be accomplished in time intervals stipulated by Article 43.

In the case of phase-in substances, these time intervals are:

- by 1 December 2012 for all registrations received by 1 December 2010 containing proposals for testing in order to fulfil the information requirements of Annexes IX and X (i.e. substances in annual volumes ≥ 1000 t, substances with CMR cat. 1 or 2 properties, or substances in annual volumes ≥ 100 t and classified as R50/53)
- by 1 June 2016 for all registrations received by 1 June 2013 containing testing proposals in order to fulfil the information requirements in Annex IX only (i.e. substances in annual volumes ≥ 100 t)
- by 1 June 2022 for any registrations containing testing proposals received by 1 June 2018 (i.e. substances in annual volumes ≥ 1 t - < 100 t)

In the case of non phase-in substances:

- Within 180 days of receiving a registration or downstream user report containing a testing proposal.

Concerning the **prioritisation of the testing proposals for phase-in substances**, the legal text (Article 40(1)) states that:

... Priority shall be given to registrations of substances which have or may have PBT, vPvB, sensitising and/or carcinogenic, mutagenic or toxic for reproduction (CMR) properties, or substances classified as dangerous according to Directive 67/548/EEC above 100 tonnes per year with uses resulting in widespread and diffuse exposure.

With regard to the criteria that should be used for priority setting, it was agreed that the prioritisation criteria mentioned in the legal text (i.e. Art. 40(1)) should in principle be given preference over further criteria proposed. Ideally, the legal criteria should be used for initial selection of the testing proposals that should be examined with priority and the supplementary criteria be used to further rank (i.e. order) the prioritised proposals.

3.1 Parameterisation of the legal criteria

According to the text of Article 40(1) (see section 3 above), priority shall be given to testing proposals which refer to registrations of substances belonging to 5 different criteria groups of properties (Table 3.1).

Table 3.1: Testing proposals to be prioritised for examination according to Article 40(1)

Group	Property of the substance the testing proposal refers to
1	Substance has or may have PBT properties
2	Substance has or may have vPvB properties
3	Substance has or may have sensitising properties
4	Substance has or may have CMR properties
5	Substance is classified as dangerous according to Directive 67/548/EEC and is produced in volumes above 100 t/y with uses resulting in widespread and diffuse exposure (Only relevant for annual tonnages >100 t/y, i.e. testing proposals that must be evaluated before 1 June 2016)

Criteria groups 1 – 4 include substances which have PBT, vPvB, sensitising and/or CMR properties and those which may have these properties. Substances that are known sensitizers or CMRs can be easily identified by means of the respective R-phrases that need to be included in the IUCLID 5 database by the registrants. For PBTs or vPvBs no such classification exists. Therefore there is no searchable field in the IUCLID technical dossier where it can be indicated whether the substance meets the PBT or vPvB criteria. Based on the information that needs to be fed into IUCLID 5 for registration, it will however be possible to check on the basis of the definitive PBT/vPvB criteria (Annex XIII) or the PBT screening criteria elaborated for PBT assessment (Chapter R.11 of the Guidance on information requirements and chemical safety assessment [1]) whether a substance has or may have PBT or vPvB properties. The respective queries are presented in table 3.2 together with those parameters that can be used to identify whether a substance has or may have sensitising properties or CMR properties. For CMR properties the specific testing proposals listed in the table can be used to identify whether a substance "may have" these properties. For sensitisation, the "may have" suspicion can be inferred from the conclusion that the results concerning sensitisation by inhalation or skin contact are "ambiguous". However, there are no further information requirements under Annexes IX and X with regard to sensitisation.

With respect to criterion group 5 the following parameters can be used to identify the respective testing proposals:

- *Substances classified as dangerous according to Directive 67/548/EEC*: Any R-phrases except those for "have" or "may have" sensitising or CMR properties: R1 – R39; R41, R44, R48, R50 – R59, R65-67. This information can be retrieved from the IUCLID5 data base or the Classification and Labelling Inventory (Article 113). AND
- *Manufacture / Import above 100 tonnes per year*: This information can be retrieved from IUCLID (section 3.2). AND;
- *With uses resulting in widespread and diffuse exposure*: This sub-criterion may be implemented via the use descriptor system as explained in section 2.1: If any of the descriptors of the process (PROC), product (PC) or article (AC) categories is assigned to an environmental release category (ERC) indicating "wide dispersive use", i.e. ERCs 8 – 11 including their sub-categories, the condition *"with uses resulting in widespread and diffuse exposure"* is considered to be fulfilled.

With the approach and the combination of parameters described before it will be possible to reflect the criteria of the legal text and to select the relevant testing proposals for prioritisation.

3.2 Supplementary criteria for priority setting and their parameterisation

- *Inclusion of a substance for which a testing proposal has been made in the Community Rolling Action Plan (CRAP).*

  Prioritisation of testing proposals for substances on the CRAP will speed up the process of substance evaluation and the implementation of eventual follow-up measures such the authorisation requirement or restrictions of certain uses. Therefore, it is useful to consider this criterion for priority setting and assign a high relevance to it.

- *Possible consequences of test outcome*

  Test outcomes may have consequences on the possible spectrum of uses of a substance as well as on risk management measures that need to be implemented to assure safe handling and adequate control. The spectrum of measures could reach from improved RMM and OCs to the requirement for authorisation of uses for substances meeting the substance of very

high concern (SVHC) criteria of Art. 57. Further, when there is an unacceptable risk to human health or the environment, restrictions on manufacture, use and placing on the marked could be imposed (Art 68).

The possible consequences of a positive test result (i.e. confirming the property investigated) are dependent on the health or environmental concerns associated with the tested property. With regard to health concerns, tests on CMR properties may therefore get priority over tests on repeated dose toxicity[6]. Similarly, with regard to environmental concerns, tests aimed at investigating PBT or vPvB properties (see Table 3.2, confirmation of (v)P, (v)B or T criteria) may get preference over evaluation of testing proposals that 'only'[7] deal with the investigation of long-term aquatic toxicity, fate and behaviour in the environment or effects on terrestrial organisms.

Table 3.3 gives an overview of the tests that may be proposed in accordance with the stipulations laid down in the lists of information requirements of Annexes VII – X. For a certain tonnage range (respectively Annex) a particular test may be a standard information requirement whereas at a lower tonnage range the respective test may only be required if there is a particular concern regarding the property the test is targeted to. Therefore, it is possible to use "advanced" testing proposals referring to a non-standard information requirement at a certain tonnage level as indicator that there might be a particular concern with regard to the property the testing proposal is aiming to investigate. Similarly, there are information requirements that only need to be addressed if already a concern exists and therefore further investigation is warranted. Testing proposals addressing such information requirements are called "non-standard" TPs and can as well be used as indicators for a particular concern. A testing proposal for a standard information requirement at a certain tonnage level can normally not be used as an indicator for a particular concern, but together with a positive query on possible PBT/vPvB properties (see table 3.2) it can indicate that prioritisation of the proposal could help to clarify a serious concern regarding the properties of the substance as soon as possible.

Based on the considerations above, a prioritisation with regard to the consequences of the test outcome results in different priority levels. The following priority levels and test categories are proposed (testing proposals that can be assigned to these priority levels/categories are listed in table 3.4):

Priority Level 1: Testing proposal (TP) aimed at verification / falsification of C, M, R properties or PBT / vPvB properties.

Priority level 2: "Advanced" or "non-standard" testing proposals (addressing an (eco)toxicological concern less severe than CMR or PBT/vPvB).

Priority Level 3: Proposal for a standard testing requirement on toxicological or ecotoxicological properties (the test is required because a tonnage trigger is exceeded but there is no concrete concern for a property addressed under Priority Levels 1 or 2).

Priority Level 4: Proposal for a standard testing requirement on physicochemical properties.

- *Time required to conduct a test*

Time required for conducting a proposed test, including preparatory activities and reporting (i.e. from finding and contracting a test laboratory to finalising the test report), may range

[6] Under Annexes IX and X there are no testing requirements for other toxicological endpoints

[7] I.e. it is possible to conclude from the available data that the substance even with a positive test result would not fulfil the PBT or vPvB (screening) criteria.

from some weeks for physical-chemical properties or in vitro toxicological tests to ca. 2 years for 2 generation reproductive toxicity studies on mammals. Carcinogenicity studies will require even more time. A prioritisation in classes, e.g.

> 24 months,
≤ 24 months,
≤ 12 months,
≤ 6 months,

with priority to tests with longer duration, is considered suitable (see table 3.3 for a respective provisional assignment of estimated test durations).

- *Annual tonnage manufactured or imported*

  The implementation of this parameter as a supplementary prioritisation criterion is in particular useful for the first lot of testing proposals to be evaluated by 1 December 2012 because of the possible wide spread of tonnages manufactured and/or imported. But even for the tonnage ranges below 1000 t/a, provided the aggregated tonnage of all manufacturers/importers is used, tonnage is considered a useful prioritisation criterion. The tonnage may be used as numerical parameter or e.g. in classes of $< 10^1$, $<10^2$, ….$<10^6$tons per year.

- *Information on uses and exposure*

  Information on wide dispersive uses and exposure could be considered instead of tonnage. This data may be more relevant in terms of potential risk than tonnage but only qualitative information on uses and potential exposure can be retrieved from the dossier in an automated manner (see section 2). It may therefore be tested by the Agency whether tonnage or exposure information is in practice the better criterion.

- *Number of testing proposals*

  The number of testing proposals indicates the lack of knowledge about the properties of a substance. The higher the number is, the higher the priority for examination of the testing proposals for this substance should be.

Table 3.2: List of indicators suitable to parameterise the (eco)toxicological criteria (Sensitisation, CMR and PBT/vPvB)

Indicators marked with "#"in column 2 can, beside indicating "may have" a property, be considered as indicators that the proposed test is intended to verify/falsify the addressed property.

Indicators for "*having*" the property concerned	**Indicators for "*may have*" the property concerned**
Sensitisation *	
R42 May cause sensitisation by inhalation; OR R43 May cause sensitisation by skin contact	Overall conclusion of a registrant in the IUCLID Classification and Labelling section on sensitising properties by inhalation or by skin contact: "ambiguous".
Carcinogenicity	
R45 May cause cancer; OR R49 May cause cancer by inhalation	R40 Limited evidence of a carcinogenic effect; OR # R68 Possible risk of irreversible effects AND any testing proposal under section 8.9 (carcinogenicity) of the list of Standard Information Requirements; OR # Indication of non-neoplastic or neoplastic effects in any repeated dose toxicity study (IUCLID section 7.5) AND any testing proposal under section 8.9 (carcinogenicity) of the list of Standard Information Requirements.
Mutagenicity	
R 46 May cause heritable genetic damage	R68 Possible risk of irreversible effects; OR # Any testing proposal for an *in vivo* mutagenicity study under 8.4 (mutagenicity) of the list of Standard Information Requirements.
Toxic to Reproduction	
R60 May impair fertility; OR R61 May cause harm to the unborn child	R62 Risk of impaired fertility; OR R63 Possible risk of harm to the unborn child; OR R 64 May cause harm to breastfed babies; OR **# At the ≥ 10 t/a level:** Proposal to conduct either a pre-natal developmental toxicity study (Annex IX, 8.7.2) or a two-generation reproductive toxicity study (Annex IX, 8.7.3; tests normally required at the 100 t/a level) **# At the ≥ 100 t/a level:** Proposal to conduct either a second pre-natal developmental toxicity study (Annex IX, 8.7.2) and/or a second two-generation reproductive toxicity study (Annex IX, 8.7.3; tests normally required at the 1000 t/a level) **At the ≥ 1000 t/a level:** here the second pre-natal developmental toxicity study (Annex IX, 8.7.2) and/or the second two-generation reproductive toxicity study (Annex IX, 8.7.3) are standard testing requirements, unless the waiving criteria specified in Annex X (section 8.7) apply.
PBT	
(is P/vP) AND (is B/vB) AND (is T)	(is P/vP) AND (may be OR is B/vB) AND (may be OR is T); (may be OR is P/vP) AND (is B/vB) AND (may be OR is T); (may be OR is P/vP) AND (may be or is B/vB) AND (is T); (may be P/vP) AND (may be B/vB) AND (may be T)
vBvP	
(is vP) AND (is vB)	(is vP) AND (may be B/vB); (may be P/vP) AND (is vB); (may be P/vP) AND (may be B/vB)
Persistence	
(P) *** DT50 in fresh or estuarine water ** >	Not ready biodegradable; AND Hydrolysis (9.2.2.1) at environmentally relevant temperature (10 deg C)

Indicators for "*having*" the property concerned	**Indicators for "*may have*" the property concerned**
40d; OR DT50 in marine water > 60 d; OR DT50 in fresh- or estuarine sediment ** > 120 d; OR DT50 in soil > 120 d; OR DT50 in marine sediment > 180d **(vP)** *** DT50 in fresh, estuarine or marine water > 60 d; OR DT50 in fresh, estuarine or marine sediment > 180 d; OR DT50 in soil > 180 d	and pH (5, 7, 9): no data or > 40 d; AND Simulation tests (9.2.1.2, 9.2.1.3 or 9.2.1.4): no data **Verification/falsification P:** # (May be vP/P) AND (may be vB/B OR is B) AND (may be T OR is T) PLUS any testing proposal on simulation testing on ultimate degradation in surface water, soil or sediment (9.2.1.2, 9.2.1.3 or 9.2.1.4) or identification of degradation products (9.2.3). **Verification/falsification vP:** # (May be vP/P) AND (may be vB/B OR is vB) PLUS any testing proposal on simulation testing on ultimate degradation in surface water, soil or sediment (9.2.1.2, 9.2.1.3 or 9.2.1.4) or identification of degradation products (9.2.3).
Bioaccumulation	
(B) *** 2000 < BCF (or BAF) ≤ 5000; OR BMF > 1 **(vB)** *** BCF (or BAF) > 5000; OR BMF >1	log Kow ≥ 4.5; AND No reliable BCF or BAF data showing that BCF (BAF) is < 2000 (not B) **Verification/falsification B:** # (May be vP/P OR is P) AND (may be T OR is T) AND (may be vB/B) PLUS testing proposal on bioaccumulation in aquatic species (9.3.2) **Verification/falsification vB:** # (May be vP/P OR is vP) AND (may be vB/B) PLUS testing proposal on bioaccumulation in aquatic species (9.3.2)
Toxicity (T)	
Any Classification: R45, R46, R48, R49, R60, R61, R62, R63, R64; OR Any short-term or long-term aquatic toxicity test for invertebrates, aquatic plants or fish < 0.01 mg/l	Any short term aquatic toxicity test for invertebrates, aquatic plants or fish < 0.1 mg/l; AND No full set of long-term aquatic toxicity tests for invertebrates, aquatic plants or fish indicating that long-term aquatic toxicity is ≥ 0.01 mg/l for the mentioned groups. **Verification/falsification T:** # (May be vP/P OR is P) AND (may be vB/B OR is B) AND (may be T) PLUS any testing proposal on long-term aquatic toxicity (invertebrates (9.1.5) or fish (9.1.6.1, 9.1.6.2 or 9.1.6.3) or sediment organisms (9.5.1)

* Evaluation (and eventually testing) is only required under Annex VII and only for potential for skin sensitisation (i.e. there are no further tests required under Annexes IX and X).

** In IUCLID there is apparently no good option implemented to indicate whether test material (water or sediment) from freshwater, estuarine or marine environment has been tested.

*** At the screening level ("may have") it is not possible to distinguish between potential P and vP or B and vB properties of a substance.

Table 3.3: Overview of tests that may be proposed in accordance with the stipulations laid down in the lists of information requirements of Annexes VII – X

* Estimated test duration refers to the time between notification of the registrant to conduct the test and deadline for submission of the final study report. The given figures are estimations and would need further scrutiny/verification if 'test duration' is implemented as prioritisation criterion by ECHA.

Annex	Number	Test	Non-standard test (only required if there is a concern)	Study may be required "advanced" at Annex	Indicator that there is a concern for:	Estimated Duration of Test *
IX	7.1.5	Stability in organic solvents and identity of degradation products				6 months
IX	7.1.6	Dissociation constant				6 months
IX	7.1.7	Viscosity				6 months
IX	8.4	In vivo somatic cell genotoxicity study in case of a positive result from any in vitro study	X	VIII	Mutagenicity	6 months
IX	8.4	Additional investigations about germ cell mutagenicity, if no clear conclusions can be drawn on germ cell mutagenicity from the available data.	X		Mutagenicity	6 months
VIII	8.6.1	Further studies on repeated dose toxicity shall be proposed if (i) failure to identify NOAEL in 28d or 90d study (unless absence of effects); or (ii) toxicity of particular concern; (iii) indication of an effect for which available evidence is inadequate for toxicological and/or risk characterisation; or (iv) particular concern regarding exposure; or (v) inappropriate route of exposure in initial repeated dose study; or (vi) effects shown in structurally related substance that were not detected in the 28d or 90d studies.	X	VIII	Chronic toxicity	? (default 12 months?)
IX	8.6.1	Short-term repeated dose toxicity (28d)	(Only required if not provided under Annex VIII and if no studies under 8.6.2 are proposed)			6 months
IX	8.6.2	Sub-chronic toxicity study (90 d)		VIII	Chronic toxicity	12 months
IX	8.6.2	Further studies on repeated dose toxicity if (i) failure to identify NOAEL in 90d study (unless absence of effects); or (ii) toxicity of particular concern; (iii) indication of an effect for which available evidence is inadequate for	X		Chronic toxicity	? (default 12 months?)

Annex	Number	Test	Non-standard test (only required if there is a concern)	Study may be required "advanced" at Annex	Indicator that there is a concern for:	Estimated Duration of Test *
		toxicological and/or risk characterisation; or (iv) particular concern regarding exposure.				
X	8.6.3	Long-term repeated dose toxicity study (≥ 12 months) if the frequency and duration of human exposure indicates that a longer term study is appropriate and (i) serious or severe toxicity effects were observed in the 28d or 90d study for which the available evidence is inadequate for toxicological evaluation or risk characterisation; or (ii) effects shown in structurally related substances that were not detected in 28d or 90d studies; or (iii) the substance may have a dangerous property that cannot be detected in a 90d study.	X		Chronic toxicity	24 months
X	8.6.4	Further tests on repeated dose toxicity shall be proposed in case of particular concerns	X		Chronic toxicity	? (default 12 months?)
IX	8.7.2	Pre-natal developmental toxicity study	Proposition of one study is a standard requirement at IX	VIII	Reproductive toxicity (if a study is proposed at VIII or a 2nd study is proposed at IX)	12 months
IX/ X	8.7.3	Two generation reproductive toxicity study	X (if proposed at VIII or IX) (standard requirement at X)	VIII	Reproductive toxicity (only required if there is an indication of adverse effects on reproductive organs in the 28d or 90d repeated dose toxicity studies)	24 months
X	8.9.1	Carcinogenicity study	X		Carcinogenicity	> 24 months
IX	9.1.5	Long-term aquatic toxicity on invertebrates		VII	Toxicity (if the substance may have PBT properties)	12 months
IX	9.1.6	Long-term toxicity testing on fish		VIII	Toxicity (if the substance may have PBT properties)	12 months
IX	9.2.1	Simulation testing on ultimate degradation in surface water, sediment or soil		VIII	Persistence (if the substance may have PBT/vPvB properties)	6 months (water) 12 months (soil, sediment)
IX	9.2.3	Identification of degradation products		VIII	Persistence (if the substance may have	12 months

Annex	Number	Test	Non-standard test (only required if there is a concern)	Study may be required "advanced" at Annex	Indicator that there is a concern for:	Estimated Duration of Test *
					PBT/vPvB properties)	
X	9.2	Further biotic degradation tests shall be proposed if the CSA indicates the need to further investigate the degradation of the substance and its degradation products.	X		Persistence	? (default 12 months?)
IX	9.3.2	Bioaccumulation in aquatic species		VIII (for B-assessment if there is a concern for PBT/vPvB)	Bioaccumulation (if the substance may have PBT/vPvB properties)	6 months
IX	9.3.3	Further information on the adsorption/desorption depending on the results of the study required in Annex VIII				6 months
X	9.3.4	Further information on the environmental fate and behaviour of the substance and/or its degradation products. Further testing shall be proposed … if the CSA indicates the need to investigate further the fate and behaviour of the substance	X		Fate / Behaviour (depends on nature of the proposed test)	? (default 12 months?)
IX	9.4.1	Short-term toxicity to (terrestrial) invertebrates				6 months
IX	9.4.2	Effects on soil micro-organisms				6 months
IX	9.4.3	Short-term toxicity to plants				6 months
X	9.4.4	Long-term toxicity testing on (terrestrial) invertebrates	X		Long-term terrestrial toxicity	12 months
X	9.4.6	Long-term testing on plants	X		Long-term terrestrial toxicity	12 months
X	9.5.1	Long-term toxicity to sediment organisms	X	VIII, IX (for T-assessment if there is a concern for PBT)	(Sediment) Toxicity	12 months
X	9.6.1	Long-term or reproductive toxicity to birds	X		Bird toxicity	12 months

Table 3.4: Proposed priority levels and categories of testing proposals including the testing proposals that match the levels/categories at a certain tonnage range.

Priority Level 1: *Testing proposal (TP) aimed at verification / falsification of C, M, R properties or PBT / vPvB properties.*
Tonnage range: ≥ 1000 t/a: 8.9.1 Any TP on carcinogenicity 8.4 Any TP on in vivo mutagenicity studies 9.1.5 Long-term toxicity to aquatic invertebrates and indication that substance may have PBT properties 9.1.6 Long-term toxicity to fish and indication that substance may have PBT properties 9.2. Proposal on further biotic degradation testing (other than simulation tests on ultimate gradation (9,.2.1) and identification of degradation products (9.2.3)) and indication that substance may have PBT/vPvB properties 9.2.1 Simulation testing on ultimate degradation and indication that substance may have PBT/vPvB properties 9.2.3 Identification of degradation products and indication that substance may have PBT/vPvB properties 9.3.2 Bioaccumulation in aquatic species and indication that substance may have PBT/vPvB properties 9.3.4 TP on bioaccumulation (other than 9.3.2, e.g. dietary bioaccumulation) and indication that substance may have PBT/vPvB properties 9.5.1 Long-term toxicity to sediment organisms and indication that substance may have PBT properties
Tonnage range: ≥100 t/a - > 1000 t/a: 8.4 Any TP on in vivo mutagenicity studies 8.7.2 Proposal for a second pre-natal development study 8.7.3 Two generation reprotox study 9.1.5 Long-term toxicity to aquatic invertebrates and indication that substance may have PBT properties 9.1.6 Long-term toxicity to fish and indication that substance may have PBT properties 9.5.1 Long-term toxicity to sediment organisms and indication that substance may have PBT properties 9.2.1 Simulation testing on ultimate degradation and indication that substance may have PBT/vPvB properties 9.2.3 Identification of degradation products and indication that substance may have PBT/vPvB properties 9.3.2 Bioaccumulation in aquatic species and indication that substance may have PBT/vPvB properties 9.3.4 TP on bioaccumulation (other than 9.3.2, e.g. dietary bioaccumulation) and indication that substance may have PBT/vPvB properties
Tonnage range: ≥10 t/a - > 100 t/a: 8.4 Any TP on in vivo mutagenicity studies 8.7.2 Toxic to reproduction (pre-natal development study) 8.7.3 Two generation reprotox study 9.1.5 Long-term toxicity to aquatic invertebrates and indication that substance may have PBT properties 9.1.6 Long-term toxicity to fish and indication that substance may have PBT properties 9.5.1 Long-term toxicity to sediment organisms and indication that substance may have PBT properties 9.2.1 Simulation testing on ultimate degradation and indication that substance may have PBT/vPvB properties 9.2.3 Identification of degradation products and indication that substance may have PBT/vPvB properties 9.3.2 Bioaccumulation in aquatic species and indication that substance may have PBT/vPvB properties 9.3.4 TP on bioaccumulation (other than 9.3.2, e.g. dietary bioaccumulation) and indication that substance may have PBT/vPvB properties
Priority Level 2: *"Advanced" or "non-standard" testing proposal*
Tonnage range: ≥1000 t/a: 8.6.3 Long term repeated toxicity study in case of particular concerns 8.6.4 Further repeated dose studies in case of particular concerns 9.5.1 Long term toxicity to sediment organisms (without indication that the substance may have PBT properties)

9.2 TP on further biotic degradation testing (other than covered by Annexes VII-IX) in case of particular concerns
9.3.4 TP on further information on the environmental fate and behaviour (other than covered by Annexes VII-IX)
9.4.4 Long term toxicity on terrestrial invertebrates
9.4.6 Long term testing on plants
9.6.1 Long term or reproductive toxicity to birds

Tonnage range: ≥100 t/a - > 1000 t/a:

8.6.2 Further (i.e. other than 28 or 90d) repeated dose toxicity study in case of particular concerns
8.7.2 Pre-natal developmental toxicity study (proposal for a second study)
8.7.3 Two generation toxicity study at annex IX (1 or 2 studies, if the 28d or 90d repeated dose toxicity study indicates adverse effects on reproductive organs or tissues

Tonnage range: ≥10 t/a - > 100 t/a:

8.6.1 Sub-chronic (90d) repeated dose toxicity study (8.6.2)
8.6.1 Further repeated dose studies in case of particular concerns
9.1.5 Long term aquatic toxicity on invertebrates (without indication that the substance may have PBT properties)
9.1.6 Long term aquatic toxicity on fish (without indication that the substance may have PBT properties)
9.2 TP on any degradation test (without indication that the substance may have PBT/vPvB properties)

Tonnage range: ≥1 t/a - > 10 t/a:

9.1.5 Long term aquatic toxicity on invertebrates

Priority Level 3:
Proposal for a standard testing requirement on toxicological or ecotoxicological properties

Tonnage range: ≥1000 t/a:

8.7.3 Two generation reproductive toxicity study

Tonnage range: ≥100 t/a - > 1000 t/a:

8.6.1 Short term (28d) repeated dose toxicity
8.6.2 Sub-chronic (90d) repeated dose toxicity study
8.7.2 Pre-natal developmental toxicity study (and no such study available yet, i.e. the proposed study is the first one)
9.1.5 Long term aquatic toxicity on invertebrates
9.1.6 Long term aquatic toxicity on fish
9.2.1 Simulation testing on ultimate degradation
9.2.3 Identification of degradation products
9.3.2 Bioaccumulation in aquatic species
9.3.3 Adsorption desorption study
9.4.1 Short term toxicity to (terrestrial) invertebrates
9.4.2 Effects on soil micro-organisms
9.4.3 Short term toxicity to plants

Priority Level 4:
Proposal for a standard testing requirement on physicochemical properties

Tonnage range: ≥100 t/a - > 1000 t/a:

7.1.5 Stability in organic solvents and identity of degradation products
7.1.6 Dissociation constant
7.1.7 Viscosity

3.3. Pertinence of tonnage-band tailored prioritisation approaches

As the "indicator value" of a test proposed by a registrant can depend on the tonnage level in which a substance is produced (i.e. 'advanced' testing proposal or standard information requirement at a certain tonnage level; see Tables 3.3 and 3.4), it is important to know to which tonnage level a testing proposal is related to. Prioritisations across different tonnage levels are not possible[8]. However, as the prioritisation criteria and the parameters will be for all tonnage bands in principle the same, one universal approach to priority setting is sufficient as long as the different "indicator values" of testing proposals at different tonnage levels are correctly assigned by the system. This is easy to implement in a computer program.

As can be seen from Tables 3.3 and 3.4, quite a lot of "advanced" testing proposals could be made for the ≥ 10 - < 100 t/a tonnage class. The priority setting system should therefore also be capable to prioritise advanced testing proposals made in this tonnage range. This is the case for the approach described in section 3.4.

3.4 Priority setting approach

It needs to be kept in mind that all testing proposals (TP) referring to Annexes IX and X must be evaluated by the Agency. Priority setting and ranking for testing proposal evaluation aims at fulfilling the information requirements for substances associated with the highest potential risk (i.e. high intrinsic hazard potential and potential extent of exposure) first.

Priority setting is not required for testing proposals referring to **non phase-in substances**. Due to the relatively short deadline of 6 months for the Agency to examine testing proposals for these substances, it is recommended to normally **assess the testing proposals for non phase-in substances in the order they are received by the Agency**.

Priority setting for examination of testing proposals referring to phase-in substances starts with applying the legal prioritisation criteria (Table 3.1) in the first step. This will result in two groups of registration dossiers with testing proposals, one group with proposals for substances that fulfil one or more of the legal criteria and one group with proposals for substances that do not fulfil any of the criteria.

Group 1	Proposals for substances that fulfil 1, 2, 3, 4 or 5	**Priority for evaluation**
Group 2	Proposals for substances that fulfil neither 1, 2, 3, 4 nor 5.	No priority for evaluation

The substances in the prioritised Group 1 have a higher hazard/risk potential than the non-prioritised group. Therefore closing information gaps for these substances is of higher priority than for the others. However, division in only two groups will not provide sufficient differentiation of the dossiers with testing proposals. Therefore, the supplementary criteria described in section 3.2 are subsequently applied in a stepwise approach in order to further rank the testing proposals prioritised on the basis of the legal criteria (i.e. the proposals falling under Group 1; Figure 3.1).

[8] Prioritisation across different tonnage bands is normally not necessary because the testing proposals referring to different tonnage bands will be examined at different times. However, for substances with CMR properties of Cat. 1 or 2 and substances classified as very toxic to aquatic organisms which may cause long term adverse effects in the aquatic environment (R 50/53), registration dossiers (and where necessary testing proposals) need to be submitted by 1 December 2010, along with the registration dossiers / testing proposals of the ≥ 1000 t/a substances. In this case the CMR and the R50/53 substances need to be prioritised separately by tonnage band if their annual volume manufactured or imported is < 1000 t/a.

In the second step the testing proposals are further ranked by grouping them into 4 priority levels (PrioL 1-4) in accordance with the significance of the concern they address and the potential consequences of the test outcome (see section 3.2 and table 3.3 for further explanations). This ranking is based on the most critical testing proposal in case more than one TP is made for a substance[9]:

PrioL 1: TP to confirm/ disprove the C, M, R or PBT / vPvB properties

PrioL 2: "Advanced" or "non-standard" testing proposal

PrioL 3: TP for a standard testing requirement on toxicological or ecotoxicological properties

PrioL 4: TP for a testing requirement on physicochemical properties

For dossiers with testing proposals only belonging to **PrioL 4,** a simplified approval procedure may be considered. However, as tests of physicochemical properties may pose problems for some types of substances (e.g. complex multi-constituent substances), and depending on the specific endpoint, the test results may also have significant consequences for the environment assessment, it might be more appropriate for a competent person to check whether further scrutiny would be needed, rather than leaving every proposal of a physicochemical test be accepted by default.

The test proposals assigned to **PL 1- 3** may be further differentiated and ranked by further criteria described in section 3.2:

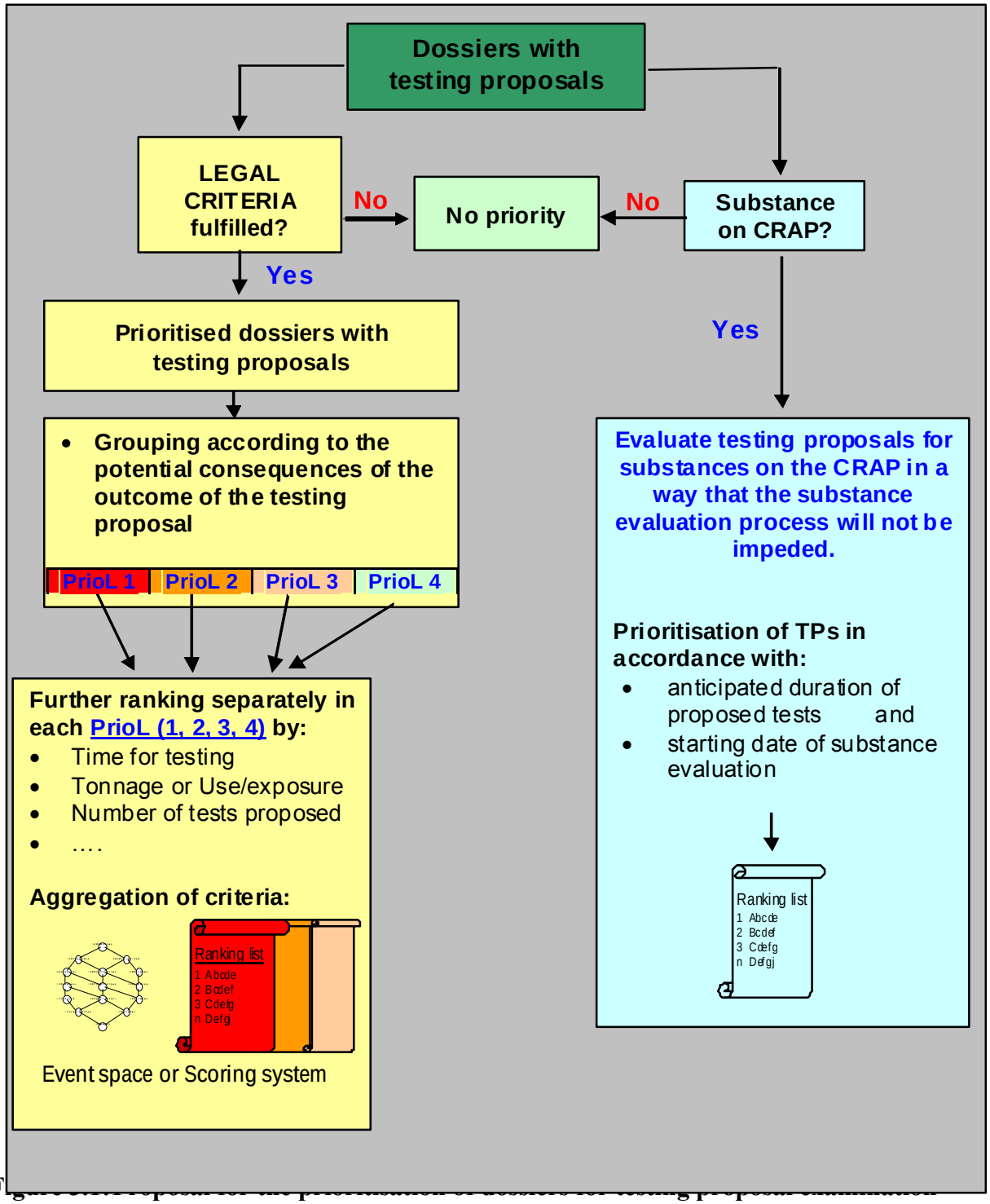
- The time required to conduct a proposed test
- The (aggregated) tonnage/ information on exposure
- The number of tests proposed in a substance dossier as an indicator of lack of existence of data

Beside potential consequences of the test outcome, the time required to produce the required information is a critical parameter. For testing proposals with comparable potential consequences of test outcome (e.g. classification as CMR or as PBT), priority should be given to the evaluation of TPs that require the longest time to obtain results. Similarly, tonnage as a rough indicator for potential exposure could be used to further differentiate and rank the TPs in a third step. (Tonnage may be replaced by information on uses, e.g. information on wide dispersive uses.). If further differentiation by the two criteria ‘time required for testing’ and ‘tonnage’ or ‘information on uses and exposure’ is not sufficient to order the testing proposals, the number of testing proposals for a substance may be considered as further criterion. (See section 3.2 for further details on the implementation of these criteria.)

The ranking system should however be kept as simple (and transparent) as possible. Therefore, if the application of the criteria ‘time required for testing’ and ‘tonnage’ (or ‘uses and exposure’) is sufficient to order the testing proposals with regard to their priority, supplementary criteria should not be applied.

The two, probably three, supplementary criteria used to further differentiate and rank the testing proposals after grouping them according to the potential consequences of the most severe test proposed may be aggregated by an ‘event space’ approach or by a scoring approach. The Agency may give priority to the approach, which in practice will prove to be more practical for combining the two or three supplementary criteria and introduces the least arbitrariness in the priority setting procedure.

[9] Although the TP addressing the most severe concern should be the basis for ranking, the examination of the testing proposals by the Agency should be performed dossier-wise, i.e. all testing proposals for a substance should be evaluated together.



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As regards the substances on the CRAP it would be preferable to differentiate them from a formal prioritisation/ranking system with priority to the legal criteria. From the point of working practice at the Agency, it is important to assure smooth processes and continuous work flows. Hence, in practice TPs for substances on the CRAP need to be assessed in a way that the substance evaluation process is not impeded (see Figure 3.1). This means that the CRAP substances with testing proposals need to be fed into the overall TP evaluation process in accordance with the timing of the substance evaluation process and the time requirements of the necessary tests. Ideally, firm test results/reports should be available by the time they are needed in the substance evaluation process.

As testing proposals for non-prioritised substances also need to be assessed, it could be considered to use the proposed priority setting approach also for ranking of the testing proposals of the no-priority group.

4. Priority setting for compliance check of registration dossiers

The Agency may examine any registration in order to verify any of the following (Art. 41 (1):

a) that the information in the technical dossier(s) submitted pursuant to Article 10 complies with the requirements of Articles 10, 12, and 13 and with Annexes III and VI to X;

b) that the adaptations of the standard information requirements and the related justifications submitted in the technical dossier(s) comply with the rules governing such adaptations set out in Annexes VII to X and with the general rules set out in Annex XI;

c) that any required chemical safety assessment and chemical safety report comply with the requirements of Annex I and that the proposed risk management measures are adequate;

d) that any explanation(s) submitted in accordance with Article 11(3) or Article 19(2) have an objective basis.

Guidance on the scope and purpose of compliance check and how to practically carry it out in order to fulfil its objectives is given in the Guidance on evaluation [2]. The present document is focussing on the approach to prioritise dossiers for compliance check.

4.1 Prioritisation criteria according to the legal text and their parameterisation

The following prioritisation criteria for compliance check are set out in Article 41(5):

> *The Agency shall select a percentage of dossiers, no lower than 5% of the total received by the Agency for each tonnage band, for compliance checking. The Agency shall give priority, but not exclusively, to dossiers meeting at least one of the following criteria:*
>
> *(a) the dossier contains information in Article 10(a)(iv), (vi) and/or (vii) submitted separately as per Article 11(3); or*
>
> *(b) the dossier is for a substance manufactured or imported in quantities of 1 tonne or more per year and does not meet the requirements of Annex VII applying under either Article 12(1)(a) or (b), as the case may be; or*
>
> *(c) the dossier is for a substance listed in the Community rolling action plan referred to in Article 44(2).*

When selecting dossiers the Agency shall consider (Article 41(6)):

- *information submitted by a third party for the list of pre-registered phase-in substances referred to in Article 28(4);*
- *information submitted according to Article 124 which states that competent authorities shall submit any available information on registered substances whose dossiers do not contain the full information from Annex VII (in particular whether enforcement or monitoring activities have identified suspicions of risk).*

It is recommended to parameterise the above mentioned criteria as follows:

- *Art. 41(5) (a): The dossier contains information in Article 10(a)(iv), (vi) and/or (vii) submitted separately as per Article 11(3).*

  This means that information on classification and labelling, study summaries or robust study summaries has been submitted separately. According to Article 11(3) (a-c) this is only possible and compliant with REACH if (a) it would be disproportionately costly for a registrant to submit this information jointly, (b) submitting this information jointly would lead to disclosure

of information which the registrant considers to be commercially sensitive and is likely to cause him substantial commercial detriment, or (c) the registrant disagrees with the lead registrant on the selection of this information.

The REACH IT module will allow querying whether separate submissions to a joint submission on classification and labelling, study summaries and/or robust study summaries were made. This is indicated in the so-called dossier-header which has to be filled by the registrant when creating a dossier. Thus, this criterion can be easily implemented.

- *Art. 41(5) (b): The dossier is for a substance manufactured or imported in quantities of 1 tonne or more per year and does not meet the requirements of Annex VII applying under either Article 12(1)(a) or (b), as the case may be.*

  For phase-in substances that are manufactured or imported in volumes between 1 and 10 tonnes per year, not meeting the criteria of Annex III, the registrant is not obliged to fulfil all the requirements of Annex VII and is allowed to submit only the physicochemical properties mentioned in Annex VII. For volumes of 10 or more tonnes the full information requested by Annex VII is required.

  There is a searchable field where a respective waiving statement on the Annex VII information requirements can be given. A complex query is however necessary to check the criterion:

  1. Check whether the dossier belongs to a phase-in substance (waiving only possible for phase-in substance);
  2. Check tonnage range (only 1 - >10 t/a);
  3. Check violation of Annex III criteria:
     a) The substance is classified as CMR cat. 1 or 2 (information from C&L inventory R45, 46, 49, 60 or 61) or is a known PBT/vPvB (information from list of PBTs/vPvBs);
     b) The substance is classified with regard to any human health or a environmental effect related endpoint (i.e. R20-R29, R31-R44, R47, R48, R50-R59, R62-R68) and there are wide dispersive or diffuse uses.

  The query steps 1-3 can be done automatically. The information regarding wide dispersive or diffuse uses required for step 3b can be drawn from the use descriptor system as further described in section 2 (all descriptors assigned to ERCs 8 – 11 indicate this type of use).

  The legal conditions that permit to refrain from providing the full Annex VII information require further

  - that it is *not predicted* (i.e. by the application of (Q)SARs or other evidence) that a substance is likely to meet the criteria for category 1 or 2 classification for carcinogenicity, mutagenicity or reproductive toxicity or the criteria in Annex XIII (Annex III (a)); or
  - that for substance with wide or dispersive use(s) particularly where such substances are used in consumer preparations or incorporated in consumer articles it is *not predicted* (i.e. by application of (Q)SARs or other evidence) that they are likely to meet the classification criteria for any human health or environmental effects endpoints under Directive 67/548/EEC (Article III (b)).

  A pragmatic approach to address the "non prediction" of adverse health or environmental effects/endpoints by e.g. QSARs may foresee a manual check by trained experts of the Agency as to whether the conditions of Annex III are met. In effect, this would however mean that any dossier passing the automatic query steps 1-3 above would be subjected to a compliance check targeted to QSAR predictions for the relevant endpoints. A proposal how this could be tackled

if the Agency wishes to conduct this evaluation is provided in Annex 4. The Agency should however consider not to check every case but only a random sample of the respective cases.

- *Art. 41(5 c): The dossier is for a substance listed in the Community rolling action plan referred to in Article 44(2).*

  It will be easy to parameterise this criterion by querying the REACH IT database and to flag dossiers of substances on the Community rolling action plan (CRAP).

  Prioritisation of registration dossiers for substances on the CRAP would speed up the process of substance evaluation and the implementation of eventual follow-up measures such as the authorisation requirement or restriction for certain uses. It is therefore deemed useful to give this criterion a relatively high relevance.

  Ideally the results of the compliance check(s) should be available prior to or in the first stage of substance evaluation. As the CRAP is normally set up for a period of three years, timing of the anticipated commencement of the substance evaluation procedure for the substance concerned needs to be considered as well.

- *Art. 41(6): When selecting dossiers the Agency shall consider information submitted by a third party for the list of pre-registered phase-in substances referred to in Article 28(4).*

  The prioritisation criteria in this case are:
  - the information submitted by third parties is contradictory to information in the dossier but may influence the outcome of the chemical safety assessment;
    or
  - the third party information addresses issues not yet considered in the dossiers(s) but may influence the outcome of the chemical safety assessment.

  In any case, the adequacy (i.e. reliability and relevance) of the information received from third parties needs to be checked for the purpose of comparison with the dossier. As the kind of information provided by third parties could be any information pertaining to inherent properties, uses, worker, consumer and/or environmental exposure (incl. monitoring data) or fate, this criterion is hardly to parameterise for computer based selection.

  Once such third party information is available and considered of potential relevance, it should be manually compared with the information provided in the respective sections of the registration dossier(s). If contradictions between the third party information and the information given in the dossier(s) are detected, or if the third party information addresses issues not yet considered in the dossiers(s) but could influence the outcome of the chemical safety assessment, the respective third party information should be evaluated for reliability (if not yet done). If the third party information turns out to be reliable, the dossier should be flagged for inconsistencies with regard to the submitted third party information. This flag can then be used to consider the criterion in the prioritisation process.

- *Art. 41(6): When selecting dossiers the Agency shall consider information submitted according to Article 124.*

  Article 124 states that Competent Authorities shall submit electronically to the Agency any available information on substances registered in accordance with Article 12(1) whose dossiers do not contain the full information referred to in Annex VII, in particular whether enforcement or monitoring activities have identified suspicions of risk.

  The same procedure may be used to parameterise the information submitted by the Member States in accordance with Article 124 than to parameterise the information submitted by third

parties for pre-registered substances referred to in Article 28(4). A different flag should however be used to be able to distinguish the cases.

4.2 Supplementary prioritisation criteria and their parameterisation

With the exception of random selection, no supplementary criteria beside the legal ones should be used in the first years after entry into force of the Regulation for prioritisation of registration dossiers for compliance check. Rationale for this recommendation is that random selection is considered the best means to render the selection of a registration dossier for compliance check unpredictable for a registrant and thus will help to ensure that the quality of the submitted dossiers increases over time.

- Random selection is easy to implement and to parameterise. Parameters needed are information on the tonnage band to which the dossier belongs to and the total number of dossiers in this tonnage band. Both figures are automatically available from IUCLID 5 (tonnage band to which the dossier belongs to) or REACH IT (total number of dossiers in this tonnage band). With these both figures the number of dossiers can be calculated that is equivalent to any desired percentage of dossiers that shall be selected randomly. Random selection itself may then be based on the dossier number and a random selection routine.

Random selection will further allow for gathering experience on typical reasons for non-compliance, which then could be used to set targeted criteria for the selection of problematic dossiers. After some time the number of dossiers randomly selected may be reduced and the number of dossiers selected by criteria increased. Based on the experience gained with randomly selected dossiers, the Agency may develop new criteria to select certain kinds of problematic dossiers. It is highly recommended to have enough flexibility to vary the selection criteria from time to time, so that particular problems can be focused on for short, intensive periods.

The supplementary criteria elaborated, e.g. by RIP 4.1/4.2 (Guidance on evaluation) as one of the sub-tasks of this project, are reported in Annex 3 for consideration by the Agency at a later stage, if needed.

Annex 3 also documents proposals on how to identify potential violation of the joint submission requirement for registration of substances that are produced or imported by several manufacturers/importers in the European Union (Art. 11) and wrong substance identification in a registration dossier. These proposals have been developed in the context of finalisation of the Guidance on substance identification [7] in order to check/assure compliance of the registration dossiers with the Regulation.

4.3 Priority setting approach

For the first years after entry into force of the Regulation, priority setting based exclusively on the legal criteria and on random selection is considered the best approach. The share of dossiers selected by criteria or at random is flexible and at the disposal of the Agency. However, the portion of dossiers selected at random should in any case be significant so that the major reasons for non compliance can be quickly identified and addressed with targeted criteria, which may be included in the priority setting process in combination with the legal ones. It could however be argued that a system based on random selection alone would give equal incentives to all registrants to set up their dossiers in line with REACH.

As the 5 % share of dossiers per tonnage band that as a minimum shall be checked does not need to be evaluated in a defined order or preset time period, a subsequent ranking of the dossiers selected for compliance check is not necessary.

Based on the above considerations the priority setting scheme detailed in Figure 4.1 is recommended for initial use by the Agency. Parameterisation of the prioritisation criteria is described in section 4.1 and 4.2.

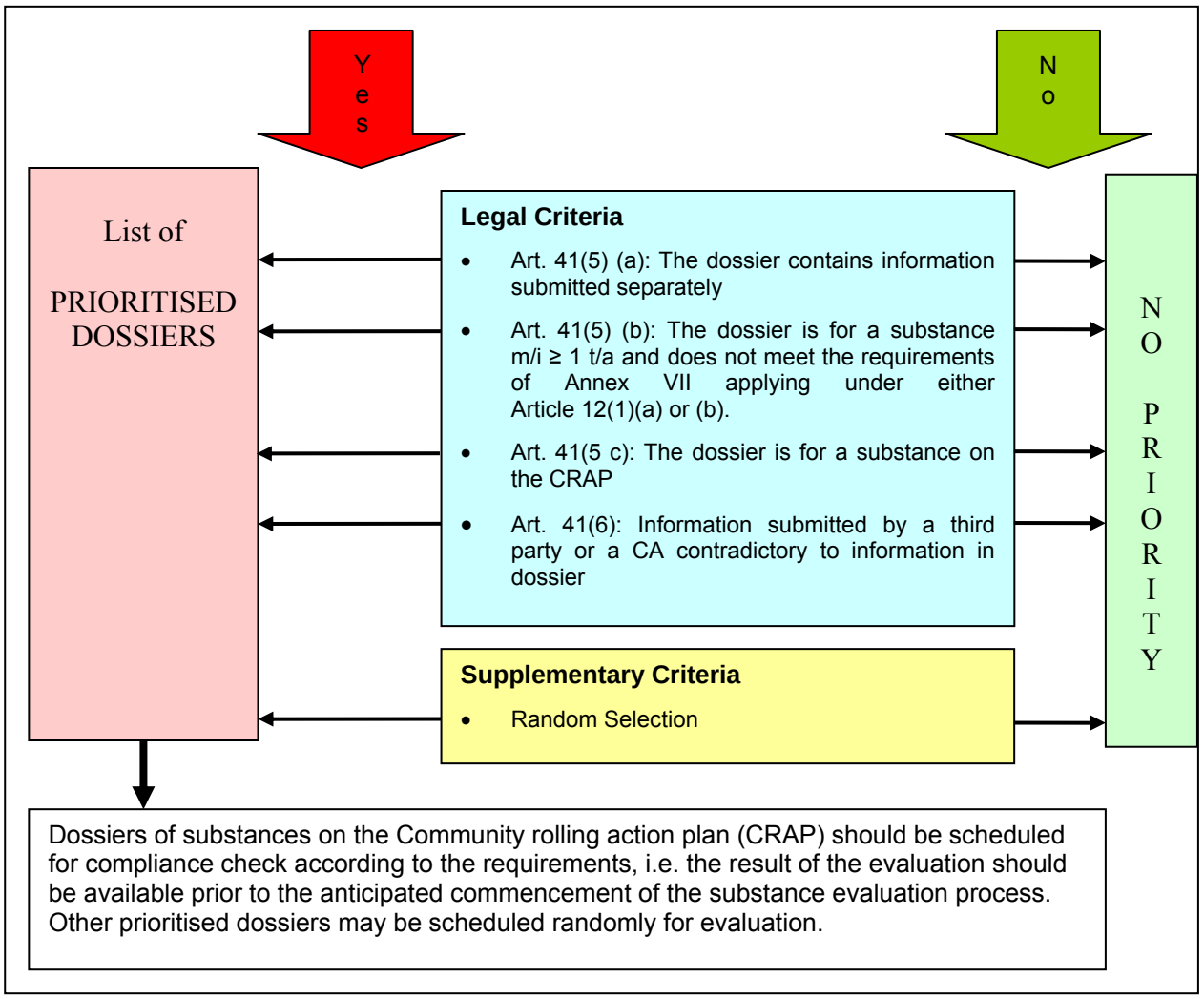

Figure 4.1: **Prioritisation for compliance check of registrations**

5. References

[1] Guidance on Information Requirements and Chemical Safety Assessment. European Chemicals Agency, 2008.

[2] Guidance on Dossier and Substance Evaluation. European Chemicals Agency, 2007

[3] Guidance on Socio-Economic Analysis – Restrictions. European Chemicals Agency, 2008

[4] Guidance for the preparation of an Annex XV dossier on the identification of substances of very high concern. Guidance for the implementation of REACH, June 2007.

[5] TGD (2003): Technical Guidance Document in support of Commission Directive 93/67/EEC on Risk Assessment for new notified substances, Commission Regulation (EC) No 1488/94 on Risk Assessment for existing substances and Directive 98/8/EC of the European Parliament and of the Council concerning the placing of biocidal products on the market.

[6] ECETOC. Targeted Risk Assessment, Technical Report No. 93. Brussels, December 2004.

[7] Guidance for identification and naming of substances under REACH. European Chemicals Agency, June 2007

ANNEX 1

Use and exposure related information to be provided with a REACH registration

According to Article 10 a registrant has to provide in his registration dossier:

a (iii) *information on the manufacture and use(s) of the substance as specified in section 3 of Annex VI; this information shall represent all the registrant's identified use(s). This information may include, if the registrant deems appropriate, the relevant use and exposure categories;*

a (vi) *study summaries of the information derived from the application of Annexes VII to XI (a (vii) robust study summaries of the information derived from the application of Annexes VII to XI, if required under Annex I);*

a (x) *for substances in quantities of 1 to 10 tonnes, exposure information as specified in section 6 of Annex VI;*

b *a chemical safety report when required under Article 14, in the format specified in Annex I. The relevant sections of this report may include, if the registrant considers appropriate, the relevant use and exposure categories.*

The Chemical Safety Report is a text document that will be attached to the IUCLID file of the substance. It contains non-query-able fields and therefore information cannot be extracted automatically from such a report. Moreover, a CSR in accordance with Article 14(1) is not required if a substance is manufactured or imported in amounts of less than 10 tonnes per year per registrant or if it is present in preparations below the lowest of the threshold levels given in Article 14(2). Furthermore, exposure related information and an exposure assessment in the CSA is only required if the registrant concludes that the substance meets the criteria for classification as dangerous in accordance with Directive 67/548/EEC or is assessed to be a PBT or vPvB.

The information requested by Article 10(a) will however to a certain extent be searchable and retrievable from the IUCLID database and therefore may provide a suitable basis for consideration of exposure in the first stage of priority setting.

Table A1.1 shows in more detail the kind and structuring of exposure-related information that will be available in the IUCLID dossier in accordance with the requirements of Article 10 (paragraphs a(iii) and a(x)). Further information available from IUCLID 5 in accordance with Article 10 (a (vi) & a (vii)) that could be used for exposure driven prioritisation are the physical-chemical data of the substance and information on environmental fate and behaviour of the substance. The physical-chemical data could be used to model the partitioning of substances and together with the information on fate and behaviour be used to assess (environmental) exposure. A compilation of exposure related parameters that are automatically retrievable from IUCLID and thus could be relevant for priority setting is provided in Table A1.2.

Table A1.1: Information on manufacture and use(s) of the substance(s) as required by REACH for registration and how this information is stored and structured in IUCLID 5

No.	Annex VI (3) information requirements	IUCLID 5 – Section 3: Manufacture, Use and Exposure
3.1.	Overall manufacture, quantities used for production of an article that is subject to registration, and/or imports in tonnes per registrant per year in: The calendar year of the registration (estimated quantity)	**Section 3.2 (Estimated Quantities):** Manufacture/import in t/a (per registrant). (searchable field) Indication whether on-site isolated or transported intermediate. (searchable field) **Section 3.3 (Sites):** Listing of sites where the substance is handled. Repeatable block section. (searchable) Distinction between production and/or use at a specific site is possible
3.2.	In the case of a manufacturer or producer of articles: Brief description of the technological process used in manufacture or production of articles. Precise details of the process, particularly those of a commercially sensitive nature, are not required.	**Section 3.1 (Technological Process):** Repeatable block section, which offers the possiblility to provide several descriptions of the technological process used in the manufacture of the substance or production of articles, as appropriate. (freetext field(s) for description)
3.3.	An indication of the tonnage used for his own use(s)	**Section 3.2 (Estimated Quantities):** Registrant's own use in t/a (searchable field) Indication whether on-site isolated or transported intermediate. (searchable field)
3.4.	Form (substance, preparation or article) and/or physical state under which the substance is made available to downstream users. Concentration or concentration range of the substance in preparations made available to downstream users and quantities of the substance in articles made available to downstream users.	**Section 3.4 (Form in the Supply Chain):** Repeatable block section. Information on form (substance, preparation or article) in which substance is made available in the supply chain can be entered. For substance: indication that substance is used as such (tickbox) For preparation: Indication on name of preparation, type (granulate, paste, solution) can be given in freetext format. Additionally the typical concentration (range). For article(s): Per article: description of the article (purpose, shape, design) in freetext. Further indication of tonnage of substance in article (not searchable).
3.5.	Brief general description of the identified use(s)	**Section 3.5 (Identified Uses and Exposure Scenarios):** **For substances ≥1 - < 10 t/a (Annex 6 (6):** Main use category:

No.	Annex VI (3) information requirements	IUCLID 5 – Section 3: Manufacture, Use and Exposure
		Industrial, professional or consumer use (tickboxes, one ore more options can be selected) Specification for industrial and professional use: Used in closed system, use resulting in inclusion into or onto a matrix, non-dispersive use, dispersive use (tickboxes, one or more options can be selected) Significant routes of exposure: Human exposure: oral, dermal, inhalatory (tickboxes, on ore more options can be selected) Environmental exposure: water, air, soil, solid waste (tickboxes, on ore more options can be selected) Pattern of exposure: Accidental/infrequent, occasional, continous/frequent (tickboxes, on ore more options can be selected) **For substances ≥10 t/a:** The Identified use is structured in a hierarchical way with 4 levels as developed in RIP 3.2-2 to facilitate the indication of 'brief general description of use(s)'. Repeatable block section per identified use, picklists of terms. Level 1: Application technique and/or activity (freetext) Level 2: Use categories for each type of product placed on the marked for formulation or final use by downstream users or consumers (picklist). Further distinction between use of substance as such or in a preparation (checkbox). Level 3: Industry category for each product identified in lelvel 2 (picklist). Level 4:Type of article. If the use described by levels 1-3 results in incorproation of the substance into an article the article picklist should be used to describe the article (picklist, distinction between article types with or without intended release). **Section 3.8 (Exposure Estimates):** Freetext fields to describe the exposure scenario that includes the phsical form in which the substance is manufactured, processed and/or used. Division in 2 sub-sections: 1. Exposure related to production 2. Exposure related to use. Each of the sub-sections 1 and 2 is further sub- divided in the fields - Working environment - Indirect exposure to humans - Environment
3.6.	Information on waste quantities and composition of waste resulting from manufacture of the substance, the use in articles and identified uses	**Section 3.7 (Waste from Production and Use):** Repeatable block section. Fields: Estimated quantities per use (including production) Composition: Freetext on composition of waste resulting from production and identified use.

No.	Annex VI (3) information requirements	IUCLID 5 – Section 3: Manufacture, Use and Exposure
3.7.	Uses advised against (see Safety Data Sheet heading 16)	**Section 3.6 (Uses Advised Against):** Same structure than section 3.5 for uses ≥ 10 t/a. However, information on uses advised against is presumably not relevant for prioritisation.

Table A1.2: Information on physicochemical properties and environmental fate and behaviour required by REACH Annexes VII –X and where it can be found in IUCLID 5

ANNEX	INFORMATION REQUIRED	IUCLID 5 section
	Physicochemical Properties	
VII	State of the substance at 20°C and 101,3 kPa Melting/freezing point Boiling point Relative density Vapour pressure Surface tension Water solubility Partition coefficient n-octanol/water	4.1 4.2 4.3 4.5 4.6 4.10 4.8 4.7
IX	Dissociation constant	4.21
	Environmental Fate and Behaviour	
VII	Ready biodegradability	5.2.1
VIII	Hydrolysis as a function of pH	5.1.2
IX **IX** **X**	Simulation testing on ultimate degradation in: surface water and/or soil and/or sediment Identification of degradation products Further biotic degradation testing shall be proposed if the chemical safety assessment according to Annex I indicates the need to investigate further the degradation of the substance and its degradation products. The choice of the appropriate test(s) depends on the results of the chemical safety assessment and may include simulation testing in appropriate media (e.g. water, sediment or soil)	5.2.2
IX	Bioaccumulation in aquatic species, preferably fish	5.3
VIII **IX**	Adsorption/desorption screening Further information on adsorption/desorption depending on the results of the study required in Annex VIII	5.4.1 5.4.1
X	Further testing shall be proposed by the registrant or may be required by the Agency in accordance with Articles 39 or 40 if the chemical safety assessment according to Annex I indicates the need to investigate further the fate and behaviour of the substance. The choice of the appropriate test(s) depends on the results of the chemical safety assessment.	

ANNEX 2

Linking of the use descriptor system with environmental release categories

Table A2.1: Environmental Release Categories (ERC) – names and description

ERC number	Name	Description
ERC1	Production of chemicals	Production of organic and inorganic substances in chemical, petrochemical, primary metals and minerals industry including intermediates, monomers using continuous processes or batch processes applying dedicated or multi-purpose equipment, either technically controlled or operated by manual interventions
ERC2	Formulation of preparations	mixing and blending of substances in (chemical) preparations in all types of industries such as paints and do-it-yourself products, pigment paste, fuels, household products (cleaning products), lubricants etc.
ERC3	Formulation in materials	mixing or blending of substances, which will be physically or chemically bound into or onto a matrix (material) such as plastics additives in master batches or plastic products. For instance a plasticizers or stabilizers in PVC-master batches or products, crystal growth regulator in photographic films etc.
ERC4	Industrial use of processing aids	Industrial use of processing aids in continuous processes or batch processes applying dedicated or multi-purpose equipment, either technically controlled or operated by manual interventions. For example, solvents used in chemical reactions or the 'use' of solvents during the application of paints, lubricants in metal working fluids, anti-set off agents in polymer moulding/casting
ERC5	Industrial use resulting in inclusion into or onto a matrix	Industrial use of substances (non-processing aids), which will be physically or chemically bound into or onto a matrix (material) such as binding agent in paints and coatings or adhesives, dyeing of textile fabrics and leather products, metal plating and galvanizing.
ERC6a	Industrial use of intermediates	Use of intermediates in primarily the chemical industry using continuous processes or batch processes applying dedicated or multi-purpose equipment, either technically controlled or operated by manual interventions, for the synthesis (manufacture) of other substances. For instance the use of chemical building blocks (feedstock) in the synthesis of agrochemicals, pharmaceuticals, monomers etc.
ERC6b	Industrial use of reactive processing aids	Industrial use of reactive processing aids in continuous processes or batch processes applying dedicated or multi-purpose equipment, either technically controlled or operated by manual interventions. For example the use of bleaching agents in the paper industry.
ERC6c	Production of plastics	Industrial use of monomers in the production of plastics (thermoplastics), polymerization processes. For example the use of vinyl chloride monomer in the production of PVC
ERC6d	Production of resins/rubbers	Industrial use of chemicals (cross-linking agents, curing agents) in the production of thermosets and rubbers, polymerization processes. For instance the use of styrene in polyester production or vulcanization agents in the production of rubbers
ERC 7	Industrial use of substances in closed systems	Industrial use of substances in closed systems. Use in closed equipment, such as the use of liquids in hydraulic systems, cooling liquids in refrigerators and lubricants in engines and dielectric fluids in electric transformers and oil in heat exchangers.
ERC8a	Wide dispersive indoor use of processing aids in open systems	Indoor use of processing aids by the public at large or professional use. Use (usually) results in direct release into the environment, for example, detergents in fabric washing, machine wash liquids and lavatory cleaners, automotive and bicycle care products (polishes, lubricants, de-icers), solvents in paints and adhesives or fragrances and aerosol propellants in air fresheners.
ERC8b	Wide dispersive indoor use of reactive substances in open systems	Indoor use of reactive substances by the public at large or professional use. Use (usually) results in direct release into the environment, for example, sodium hypochlorite in lavatory cleaners, bleaching agents in fabric washing products, hydrogen peroxide in dental care products

ERC number	Name	Description
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix	Indoor use of substances (non-processing aids) by the public at large or professional use, which will be physically or chemically bound into or onto a matrix (material) such as binding agent in paints and coatings or adhesives, dyeing of textile fabrics.
ERC8d	Wide dispersive outdoor use of processing aids in open systems	Outdoor use of processing aids by the public at large or professional use. Use (usually) results in direct release into the environment, for example, automotive and bicycle care products (polishes, lubricants, de-icers, detergents), solvents in paints and adhesives.
ERC8e	Wide dispersive outdoor use of reactive substances in open systems	Outdoor use of reactive substances by the public at large or professional use. Use (usually) results in direct release into the environment, for example, the use of sodium hypochlorite or hydrogen peroxide for surface cleaning (building materials)
ERC8f	Wide dispersive outdoor use resulting in inclusion into or onto a matrix	Outdoor use of substances (non-processing aids) by the public at large or professional use, which will be physically or chemically bound into or onto a matrix (material) such as binding agent in paints and coatings or adhesives.
ERC9a	Wide dispersive indoor use of substances in closed systems	Indoor use of substances by the public at large or professional (small scale) use in closed systems. Use in closed equipment, such as the use of cooling liquids in refrigerators, oil-based electric heaters.
ERC9b	Wide dispersive outdoor use of substances in closed systems	Outdoor use of substances by the public at large or professional (small scale) use in closed systems. Use in closed equipment, such as the use of hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids in automotive brake systems.
ERC10a	Wide dispersive outdoor use of long-life articles and materials with low release	Low (no intended) release of substances included into or onto articles and materials during their service life from outdoor use. Such as metal, wooden and plastic construction and building materials (gutters, drains, frames etc.)
ERC10b	Wide dispersive outdoor use of long-life articles and materials with high or intended release	Substances included into or onto articles and materials with high or intended release during their service life from outdoor use. Such as tires, treated wooden products, treated textile and fabric like sun blinds and parasols and furniture, zinc anodes in commercial shipping and pleasure craft, and brake pads in trucks or cars.
ERC11a	Wide dispersive indoor use of long-life articles and materials with low release	Low (no intended) release of substances included into or onto articles and materials during their service life from indoor use. For example, flooring, furniture, toys, construction materials, curtains, footwear, leather products, paper and cardboard products (magazines, books, news paper and packaging paper), electronic equipment (casing)
ERC11b	Wide dispersive indoor use of long-life articles and materials with high or intended release	Substances included into or onto articles and materials with high or intended release during their service life from indoor use. For example: release from fabrics, textiles (clothing, floor rugs) during washing

Table A2.2: Linking of Process Categories (PC) with Environmental Release Categories (ERC)

	Process categories based on TRA categories for workers	**ERC no**
PROC1	Use in closed process, no likelihood of exposure Industrial ;	1, 6a, 6c
PROC2	Use in closed, continuous process with occasional controlled exposure (e.g. sampling) Industrial;	1, 6a, 6c, 7
PROC3	Use in closed batch process (synthesis or formulation) Industrial;	1, 2, 6a, 6d
PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises Industrial;	1, 6a, 6c, 6d
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) Industrial;	2, 3
PROC6	Calendaring operations Industrial;	5
PROC7	Spraying in industrial settings and applications Industrial;	4, 5
PROC8	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities Industrial/professional ;	Covered in the industrial ERC
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing) Industrial;	Covered in the industrial ERC
PROC10	Roller application or brushing of adhesive and other coating Industrial/professional;	4, 5, 8a, 8c, 8d, 8f
PROC11	Spraying outside industrial settings and/or applications Professional;	8a, 8c, 8d, 8f
PROC12	Use of blow agents in manufacture of foam Industrial;	5
PROC13	Treatment of articles by dipping and pouring Industrial/professional;	4, 5, 6b, 8a, 8b, 8c, 8d, 8f
PROC14	Production of preparations or articles by tabletting, compression, extrusion, pelettisation Industrial	1,2,3
PROC15	Use a laboratory reagent Professional	8a, 8b
PROC16	Using material as fuel sources, limited exposure to unburned product to be expected Industrial/professional	Not applicable

	Process categories based on TRA categories for workers	**ERC no**
PROC17	Lubrication at high energy conditions and in partly open process Industrial/professional	4, 8d
PROC18	Greasing at high energy conditions Industrial/Professional	4, 8d
PROC19	Hand-mixing with intimate contact and only PPE available. Professional	8a to 8f
PROC Xyz	Other Process or activity	
	Heat and pressure transfer fluids in dispersive use but closed systems	9a, 9b
	Low energy manipulation of substances bound in materials and/or articles	Not yet applicable
	Potentially closed processing operations at elevated temperature	Not yet applicable
	Open processing and transfer operations at elevated temperature	Not yet applicable
	High (mechanical) energy work-up of substances bound in materials and/or articles	Not yet applicable
	Hot work operation	Not yet applicable

Table A2.3a: Linking of Article Categories (AC; no intended release) with ERC

	Pick-list for article categories [AC]	ERC No.
AC02	Passenger cars and motor cycles	10a, 10b
	Other vehicles: Railway, aircraft, vessels, boats, trucks, transport equipment	10a, 10b
AC03	Machinery and mechanical appliances thereof	10a, 10b, 11a, 11b
AC04	Electrical and electronic products, e.g. computers, office equipment, video and audio recording, communication equipment	11a
	Electrical batteries and accumulators	11a
	Electrical and electronic products: Household appliances (white ware)	11a
AC05	Glass and ceramic products: dinner ware, pots, pans, food storage containers	10a, 11a
AC06	Fabrics, textiles and apparel: bedding and clothing	11b
	Fabrics, textiles and apparel: curtains, upholstery, carpeting/flooring, rugs,	11a
AC08	Leather products: apparel and upholstery	11a
AC10	Metal products: cutlery, cooking utensils, pots, pans,	11a
	Metal products: toys	10a, 11a
	Metal products: furniture	10a, 11a
AC11	Paper products: tissue, towels, disposable dinnerware, nappies, feminine hygiene products, adult incontinence products, writing paper	11a, 11b
	Paper products: newspaper	11a
AC13	Photographic and reprographic articles: cameras, video cameras, =>AC04 possibly more suitable	11a
	Photographic and reprographic articles: films Printed photographs	11a
AC15	Rubber products: tires	10b
	Rubber products: flooring	11a
	Rubber products: footwear	10a, 10b
	Rubber products: toys	11a
AC17	Wood and wood furniture: flooring	11a, 11b
	Wood and wood furniture: furniture	10a, 11a
	Wood and wood furniture: toys	10a, 11a
C18.1	Constructional articles and building material for indoor use: wall construction, ceramic, metal, plastic and wood construction material, insulating material.	11a
C18.2	Constructional articles and building material for outdoor use: wall construction, road surface, ceramic, metal, plastic and wood material, insulating material.	10a, 10b
C19	Commercial/consumer plastic products like disposable dinner ware, food storage, food packaging, baby bottles	11a
	Plastic products: Flooring	11a
	Plastic products: Toys	10a, 11a
C20	Other [#]:	

[#] to be specified in free-text field if i) the article is not covered in any of the categories or ii) the registrant wishes to describe the use of the substance manufactured into an article more specific; use the TARIC terminology in such cases.

Table A2.3b: Linking of Article Categories (AC; intended release) to ERC

Descriptor based on an indicative list of examples		ERC no
Scented articles		
AC31	Clothes	11b
AC32	Eraser	11b
AC33	Candle	11b
AC34	Toys	11b
AC35	Paper articles	11b
AC36	CD	11b
AC37	Other scented articles; please specify #	
Articles releasing grease and/or corrosion inhibitors		
AC38	Packaging material for metal parts, releasing grease/corrosion inhibitors	11b
AC39	Other articles releasing grease or corrosion inhibitors; please specify #	
Other articles with intend release of substances; please specify		
AC40	Other articles with intend release of substances; please specify #	

to be specified in free-text field if i) the article is not covered in any of the categories or ii) the registrant wishes to describe the use of the substance manufactured into an article more specific; use the TARIC terminology in such cases.

ANNEX 3

Prioritisation criteria proposed for compliance check of registration dossiers in addition to the criteria mentioned in the legal text

1 Criteria proposed in the Guidance on Dossier and Substance Evaluation [2]

The elaboration of priority setting criteria for compliance check was one of the sub-tasks of REACH Implementation Project RIP 4.1/4.2 (development of guidance on dossier and substance evaluation). Beside random selection (see sections 4.2 and 4.4), the following supplementary criteria have been proposed:

- Dossiers containing waiving statements.

  This information is searchable in IUCLID under the respective endpoints for which waiving is possible. This means that it will further be possible to identify the endpoint(s) for which a waiving statement has been made. In addition it is possible to search for the justification (i.e. "study technically not feasible", "study scientifically unjustified", "exposure considerations" or "other justification", which can then be provided in a free-text field).

- If a testing proposal is submitted for a test quoted in Annexes VII or VIII.

  A query format will be developed in REACH IT that will allow identifying to which Annex a testing proposal belongs to. Therefore, this information will be automatically retrievable.

- The information submitted by third parties as suggested in Article 41(6) is contradictory to information in the dossier. In any case, the adequacy of the information received from third parties needs to be checked first.

  This criterion is already covered by the legal criteria.

- Dossiers highlighted by Member States (e.g. during preparation of an Annex XV dossier) or the Agency itself (e.g. during examination of testing proposals or preparation of an Annex XV dossier), identifying poor quality or gaps in registration requirements.

  A list of those dossiers should be maintained by the Agency, along with the reason why the dossier has been highlighted for non-compliance.

- The dossier has been flagged because of non-compliance of data used in a category or read across approach.

  A list of those dossiers should be maintained by the Agency, along with the reason why the dossier has been highlighted for non-compliance.

- Specific physicochemical properties of the substance which make testing difficult may require an in-depth quality check (e.g. substances of low solubility, volatile substances).

  In principle, the respective information is available and automatically retrievable from IUCLID. It should however be discussed whether further properties should be considered that could have an impact on the reliability of testing results and where a threshold value for considering a particular property a problem for testing should be set (e.g. water solubility < 1 mg/l or < 0.1 mg/l ?, etc.).

2 Criteria proposed by members of the stakeholder expert group (SEG) for this Guidance on priority setting

Austria proposed in their written comments to the third SEG meeting some further criteria for documentation and possible consideration by the Agency at a later stage:

- Substances for which significantly differing PNEC-values or DNEL-values for the same protection goal are reported in the chemical safety reports by different registrants.

  Reasoning: PNECs and DNELs will be published by ECHA in accordance with Article 119(1)(f). If different registrants (in line with Article 11(1), last sub-paragraph) would report values which are significantly different, even though they relate to the same protection goal (e.g. chronic or short term, path of exposure), there is a clear need for a closer examination of the dossier.

- Substances for which the relevant hazard information is solely based on QSARs or read-across arguments

  Reasoning: QSARs and read-across arguments can be considered as valuable complementary tools, but there is still quite some uncertainty in those predictive tools. Therefore, such dossiers should be more carefully examined.

- Substances which can be easily respired due to high volatility or high tendency to produce dust (in particular with low particle size)

  Reasoning: Such substances are particularly problematic with respect to occupational health and the dossiers should, therefore, be carefully examined.

3 Criteria proposed by the Commission Services

Potential violation of the joint submission requirement for registration of substances that are produced or imported by several M/I in the European Union (Art. 11) and wrong substance identification in a registration dossier are issues that have been encountered during the development of the Guidance for identification and naming of substances under REACH [7] as possible problems for the compliance of registrations with the legal requirements. Criteria to check the correct identification of substances and correct application of substance identification rules as well as to check for potential violation of the joint submission obligations of Article 11 have been developed and are documented here for possible later consideration by the Agency.

- Check of correct identification of substance / correct application of substance identification rules

  In order to promote/enforce a proper implementation of a systematic and correct way of substance identification by all registrants the proper description of substance ID may be checked as follows by simple queries based on the ID rules laid down in the Guidance on substance identification.

  Check of substance identity:

  ⇒ If the main constituent is present above 80%, are the main constituent (IUCLID chapter 1.2) and the substance identity (IUCLID chapter 1.1) the same?

  ⇒ If it is not the same ⇒ (potential) compliance issue!

- Check of a potential violation of the joint submission obligations of Article 11

  The following queries may be used for checking potential violation of the joint submission obligations.

  Check of compliance with Article 11 (Joint Submission):

  ⇒ Is the new registration a submission for a substance (EC number or EC numbers for multi-constituent substances) that is already registered (submitted)?
  ⇒ If yes, is the previous registration part of a joint submission to which this registration belongs?
  ⇒ If no, is there an opt-out justification?
  ⇒ If there is no opt-out justification ⇒ (potential) compliance issue!

4 Advantages and disadvantages of selecting dossiers at random and/or based on selection criteria

Irrespective of whether criteria or random based selection are used, the overall benefit of a compliance check should be an increase in the quality of the dossiers as well as an increased confidence that industry is meeting its obligations. Applying selection criteria gives the Agency the opportunity to set priorities in its work.

A comparison of the advantages and disadvantages of selecting dossiers at random and/or based on selection criteria as elaborated during the development of the Guidance on dossier evaluation and substance evaluation is given in Table A3.1.

Table A3.1: Advantages and disadvantages of selecting dossiers at random and/or based on selection criteria

Criteria for dossier selection	Advantage	Disadvantage
Random selection		
	All dossiers can be selected (no pre-selection which might hide a certain kind of problematic dossier).	Might select just a few dossiers which are not in compliance.
Based on a criteria		
	May select many dossiers which are not in compliance	Might hide certain kinds of problematic dossiers.
	Possibility of giving priority to certain types of dossiers or substances. E.g.: trigger: IC/UC. Depending on the use of the chemical a high or low priority might be given to the dossier (e.g. an intermediate for synthesis could be considered to be of low priority).	
Dossier for a substance with a production volume above 1 tonne per year which does not follow the requirements of Annex VII, specified under either Article 12(1)(a) or 12(1)(b).		In applying this trigger alone, a huge number of dossiers will be selected for compliance check, exceeding 5%. Therefore this trigger has to be used in combination with other triggers or random selection.
Dossiers containing waiving statements.	Reference to RIP 4.5.	
Dossiers which have not been assessed for quality (Article 10(a)(viii).	Preselection according to quality criteria.	Might be discriminatory for some registrants (due to lower resources probably for SMEs especially).
Information submitted by third parties as suggested in Article 41(6) after being checked for adequacy, if this information is contradictory to other information received.	Might select dossiers which are not in compliance.	
Dossiers highlighted by Member States or Agency identifying poor quality or gaps in registration requirements.	Necessary information might be provided at an early stage of further regulatory action as required under REACH (e.g. substance evaluation).	
If the dossier is “flagged” in case of non-compliance during e.g. category or read-across approach.	Select dossiers which are not in compliance	
Specific physicochemical properties.	Substances with specific physicochemical properties may be difficult to test and may require special testing conditions. Testing data may not be in compliance.	May be linked to a risk based selection (e.g. may select PBT/vPvB more often).

Part of the dossiers are selected randomly, part according to criteria.		
	Effective with regard to the selection of dossiers which are not in compliance; at the same time not excluding any group or type of substances/dossiers from being selected for a compliance check.	

ANNEX 4

Check of compliance of registration dossiers with the provisions of Article 41 (5)(b)

1 Provisions of the legal text

Article 41 (5)(b): To ensure that registration dossiers comply with this Regulation, the Agency shall give priority to dossiers meeting the following criterion:

- the dossier is for a substance manufactured or imported in quantities of 1 tonne or more per year and does not meet the requirements of Annex VII applying under either Article 12(1)(a) or (b), as the case may be.

REACH Annex III: Criteria for substances registered between 1 and 10 tonnes, with reference to Article 12(1)(a) and (b):

(a) **substances for which it is predicted** (i.e. by the application of (Q)SARs or other evidence) that they are likely to meet the criteria for category 1 or 2 classification for carcinogenicity, mutagenicity or reproductive toxicity or the criteria in Annex XIII,

(b) **substances**:

(i) with dispersive or diffuse use(s) particularly where such substances are used in consumer preparations or incorporated into consumer articles; and

(ii) **for which it is predicted** (i.e. by application of (Q)SARs or other evidence) that they are likely to meet the classification criteria for any human health or environmental effects endpoints under Directive 67/548/EEC.

2 Interpretation and problem definition

Criterion (b) of Article 41(5) is referring to the fact that for phase-in substances that are manufactured or imported in volumes between 1 and 10 tonnes per year, not meeting the criteria of Annex III, the registrant is not obliged to fulfil all the requirements of Annex VII and is allowed to submit only the physico-chemical properties mentioned in Annex VII (i.e. the toxicological and ecotoxicological information required by Annex VII does not need to be provided). For volumes of 10 or more tonnes the full information requested by Annex VII is required.

There is a searchable field where a respective waiving statement on the Annex VII information requirements can be given. A complex query is however necessary to check the criterion:

1. Check whether the dossier belongs to a phase-in substance (waiving only possible for phase-in substance);
2. Check tonnage range (only 1 - 10 t/a);
3. Check Annex III criteria based on experimental data:

   a) The substance is classified as CMR cat. 1 or 2 (information from C&L inventory R45, 46, 49, 60 or 61) or is a known PBT/vPvB (information from list of PBTs/vPvBs);
   b) The substance is classified with regard to any human health or a environmental effect related endpoint (i.e. R20-R29, R31-R44, R47, R48, R50-R59, R62-R68) **and** there are wide dispersive or diffuse uses.

4. Check Annex III criteria based on predictions generated by (Q)SARs or other non-testing methods (e.g. read-across):

The query steps 1-3 can be done automatically. If conditions 1 and 2 are satisfied, step 3 can also be checked automatically.

The question arises as to which actor is responsible for checking the Annex III criteria for step 4, i.e. judging whether or not the registered substance triggers concern because it is predicted as a *potential CMR* or *potential PBT* substance, or if in addition to its wide and dispersive use, it is predicted to trigger concern based on the *predicted potential* for any human heath or environmental effect. In this document, it is assumed that the Agency will need to check this, to ensure that all registered substances are checked by using the same approach and tools.

To implement step 4, it is therefore necessary to have a clearly documented approach and tools for predicting, through the application of (Q)SARs and/or other non-testing approaches, whether the substance is:

- likely to meet the criteria for category 1 or 2 classification for carcinogenicity, mutagenicity or reproductive toxicity or the criteria in Annex XIII (Annex III (a)); and
- likely to meet the classification criteria for any human health or environmental effects endpoints under Directive 67/548/EEC (Annex III (b)).

3 Current state-of-the-art and possible approach

A number of considerations need to be borne in mind when implementing the REACH text:

a) A given (Q)SAR model (or read-across argument) may be valid for identifying the presence or the absence of an effect. Some QSAR models and expert systems may be capable of identifying both positives and negatives.

b) The applicability of any (Q)SAR model to the substance needs to be evaluated, taking into account the applicability domain of the model.

c) Relatively few currently available (Q)SAR models and expert systems have been developed specifically with a view to predicting R-phrases. An expert evaluation of the prediction is needed to determine whether the substance has toxic potential according the EU classification criteria. i.e. it is necessary to carry out a “translation” between the modelled endpoint and the regulatory endpoint and hence classification criteria is required in most cases. For the majority of currently available models, guidance needs to be developed on how to interpret the results in this way. Since exert judgement is needed to interpret these results according to the guidance, the Agency will need in house expertise for this.

d) The absence of a predicted effect for a given chemical does not mean that the effect is necessarily absent. It simply means that there is no available model for generating a prediction.

Currently, the best option for implementing Step 4 would be to:

i) look up the substance of interest in the DK QSAR database, which is accessible from the JRC website (http://ecb.jrc.it/qsar/qsar-tools/) and from the OECD QSAR Toolbox (http://www.oecd.org/env/existingchemicals/qsar/).This is a database of predictions for 166,000 chemicals from over 70 models covering physicochemical

parameters and a host of environmental and human health endpoints. The JRC version of the DK database contains predictions for MCase models, EPIWIN models, and other models such as literature-based models (including models in the TGD). It should be noted that while the DK Database can be used to identify possible chemicals of concern, it cannot be used to identify the absence of concern.

ii) apply a suite of existing models, to generate de novo predictions.

iii) apply read-across by comparing the substance of interest with substances on the C&L Inventory and PBT/vPvB list. This will involve the use of computational tools for analogue searching and quantifying similarity. Tools for performing read-across include the OECD QSAR Toolbox (under development) and the JRC similarity tool, Toxmatch.

iv) apply weight-of-evidence considerations based on steps 1-3.

An approach would therefore be based on the automated application of steps i) to iii). However, this should ideally be followed by a manual check and the application of WoE considerations. Thus, the Agency will need to determine whether the conditions of Annex III are met.

4 Further steps needed

The following steps are suggested in the longer term for better implementation:

1. develop a database of QSAR Predictions generated by models that are suitable for REACH purposes and in particular which can be used to predict the likelihood of a substance exhibiting a particular R-phrase. This QSAR Prediction Database (QPDB) should be well documented in the form of QSAR Prediction Reporting Formats (QPRFs) for the individual predictions. This will be an extension to the work already on-going by the ECB in developing a database of QSAR models and their associated QMRFs.
2. develop a computational tool that automatically screens each registered substance against the C&L database and the PBT/vPvB list. This can be readily achieved through exploiting existing “pipeline” tools such as the commercial tool, Pipeline pilot (Scitegic Inc, Accelrys Inc), or open source equivalents (e.g. Taverna, KNIME).

Appendix: (Q)SAR tools

The Danish QSAR Database

In the absence of any other models and non-testing data, the Danish QSAR Database could be used on its own, recognising the limitations of an approach based on the use of a single database.

The DK database has records for the majority of the EINECS chemicals that are amenable to QSAR modelling. It provides information for some environmental and health endpoints (Table 1) that might be related to C&L risk phrases, and provides information on whether the chemical is in the applicability domain. A full list of endpoints for which predictions are available in the DK Database is given in the DK Database user manual (http://ecb.jrc.it/qsar/qsar-tools/qsar_tools_ddb.php).

An example for the relation between DK DB endpoints and risk phrases include:

- acute oral tox (R22);
- sensitization by skin contact (R43);
- mutagenicity (R40);
- carcinogenicity (R40);
- danger to the environment; aquatic hazard (R50, R50-53, R51-53 & R 52-53).

Despite its usefulness, the DK QSAR Database is associated with a number of limitations, such as:

- the reliability of prediction depends on strengths and weakness of the models used;
- there is little information on the characteristics of many models (e.g. information about the goodness of fit, robustness and predictivity; methodology for definition of applicability domains);
- lack of possibility for interpretation.

It should be borne in mind that the DK QSAR Database incorporates predictions done at a fixed moment of time and with a given version of the software used for making each prediction. Thus, many of the predictions in the JRC version of the Danish Database may be outdated.

Some commercial tools

Derek for Windows (Lhasa Ltd) provides a quick access to a large number of endpoints. It is a knowledge based expert system that contains over 360 alerts for a wide array of human health endpoints, the most developed of which are skin & eye irritation, skin sensitisation and mutagenicity and carcinogenicity.

C-QSAR: A regression program written for drug designers (i.e. those without extensive experience in statistics) which handles linear and bi-linear equations with various transformation of variables (raised to powers, fractional, cross-products, etc.), and has 'jack-knifing' capability on all types. Its method of entry and verification of structures and parameters is very user-friendly, and it produces a variety of 2-D graphs as output.

The C-QSAR program is associated with several databases:

a) **BIO/PHYS**: Dual databases of QSAR equations relating bio- and physico-chemical activities to structural parameters. BIO currently contains 12,900+ equations, and

PHYS over 8,900. Users find these valuable for validation of new equations as they are being developed; i.e. to see if the emerging structure-activity relationship bears a resemblance to others with known mechanisms.

b) **SIGMA**: A THOR database of 4300 substituent structures with up to 40 electronic and/or steric parameter types and 20,000 values, fully referenced. Preferred parameters are listed, and automatic loading to QSAR is a time-saving feature of C-QSAR.