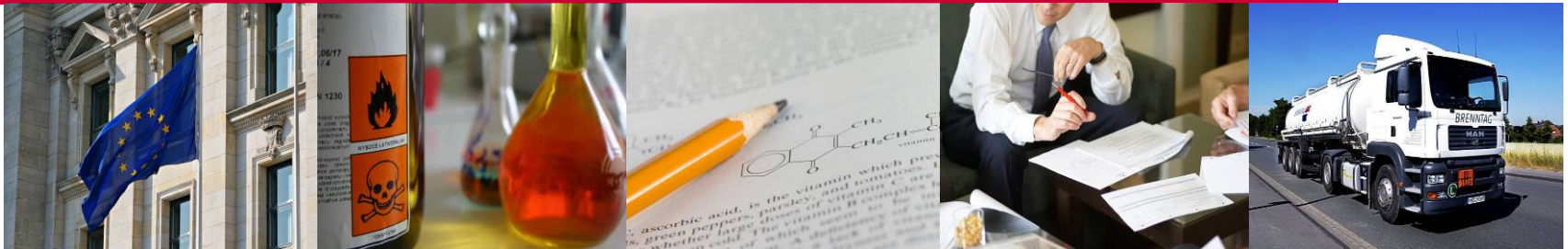


# BRENNTAG

## REACH – Use Alignment Process

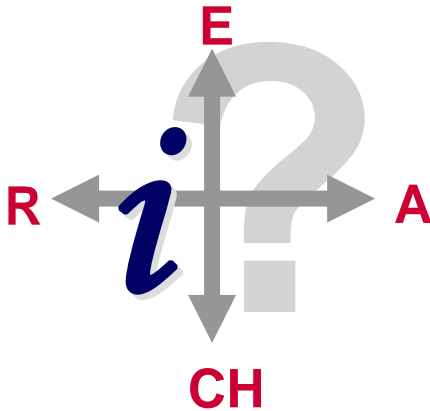


Introduction - Summer 2009

REACH beyond 

## Objectives

## Give answers to



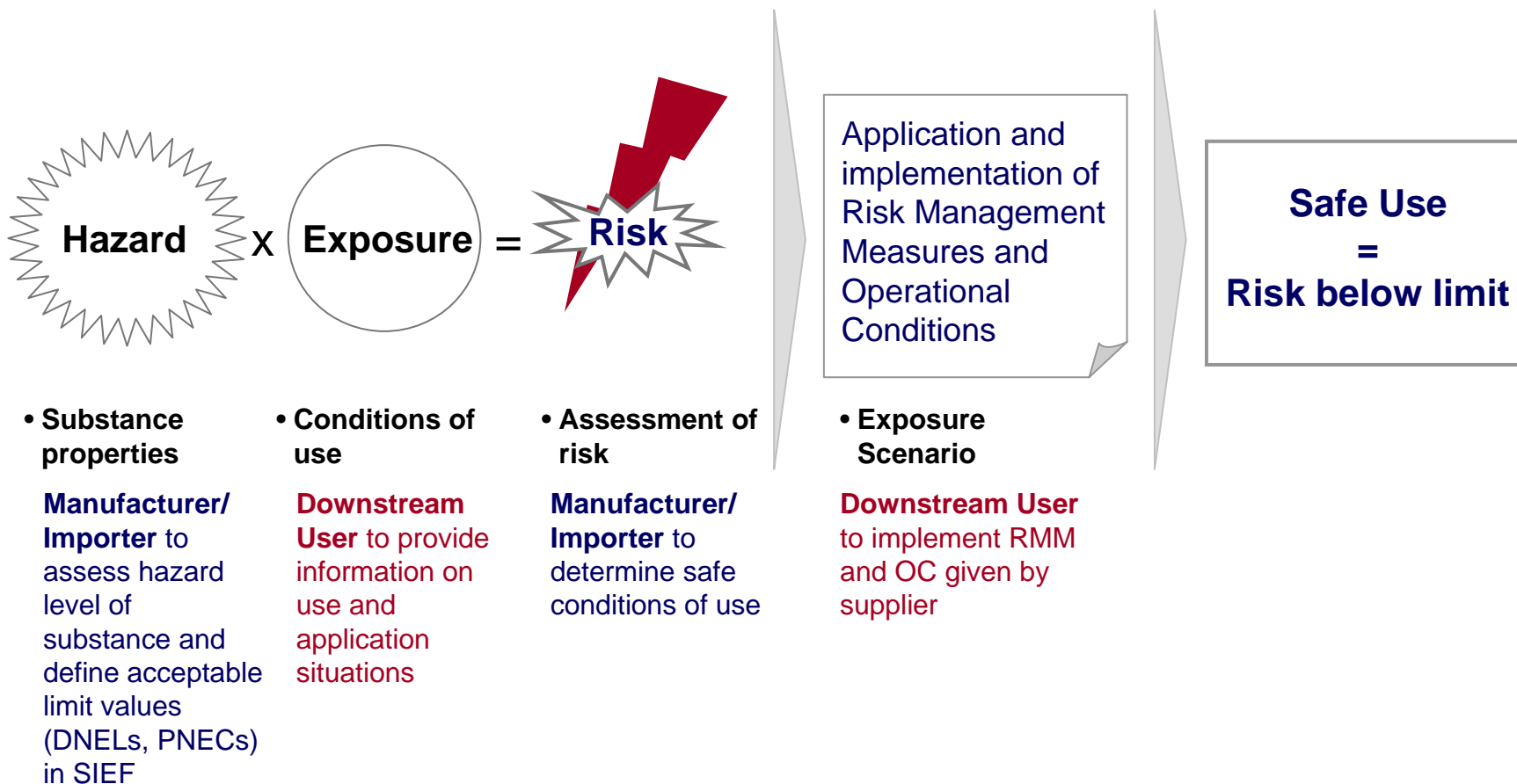
- What is the basic concept of Safe Use?
  - What are the timelines?
- 
- What is the “Use Alignment Process”?
  - How to apply Use Descriptors?
  - What are Brenntag’s Recommendations?

## Safe Use of chemicals is the fundament of REACH

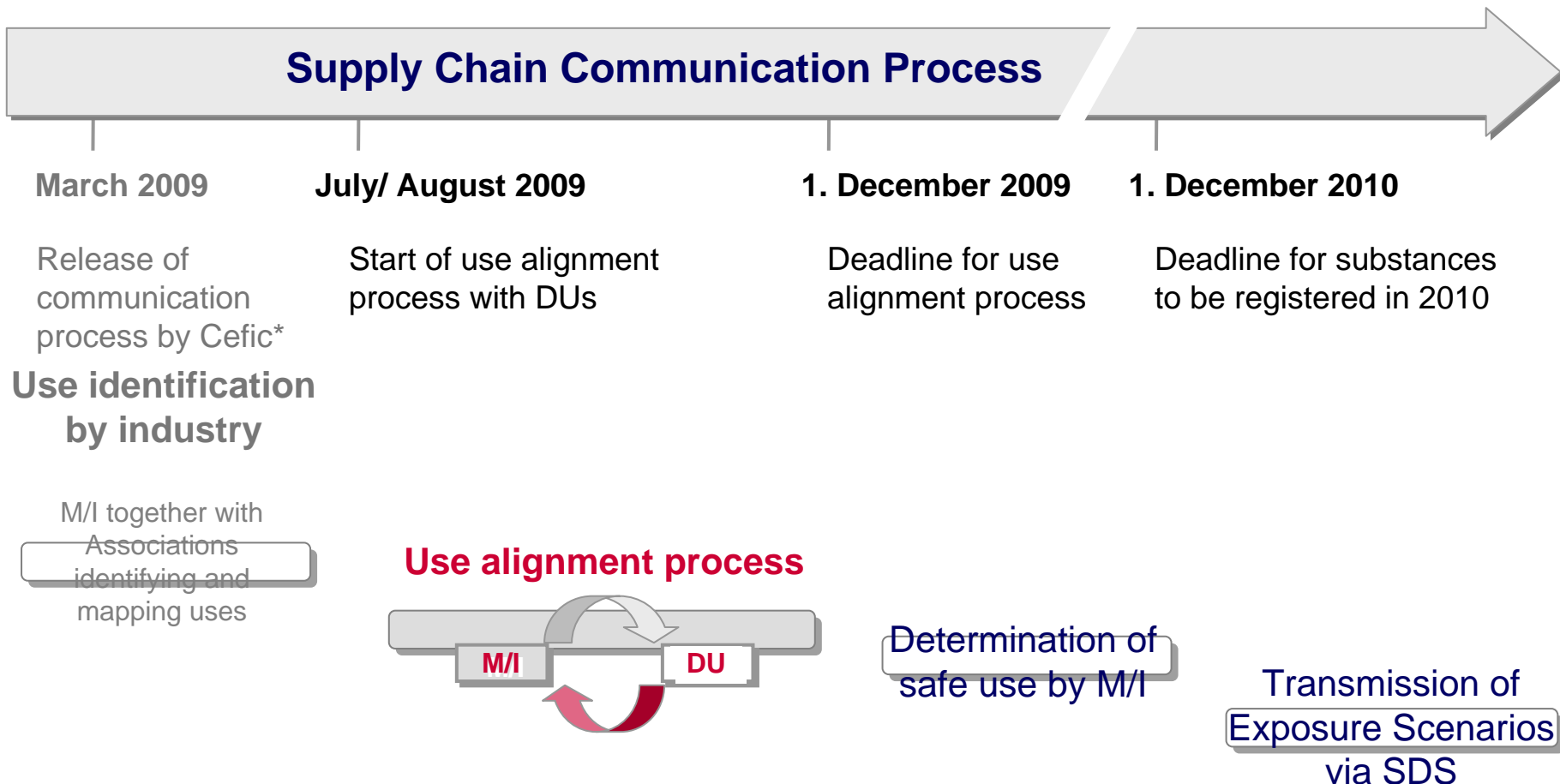
### Safe Use involves both Manufacturers and **Downstream Users**

- Good knowledge on **properties** of substance is best known to Manufacturer/ Importer
- Good knowledge of the **conditions of use** is best known to **Downstream Users**
- Appropriate **risk management measures** are developed by Manufacturer/ Importer
- Risk management measures are **implemented** by **Downstream User**

Demonstrating Safe Use



# Timeline supply chain communication

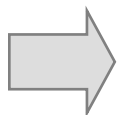


\*) [http://cefic.org/files/Downloads/Guidance\\_Use\\_and\\_ES\\_dvlpt\\_and\\_SCCm.doc](http://cefic.org/files/Downloads/Guidance_Use_and_ES_dvlpt_and_SCCm.doc)

## Use alignment process

**Alignment with respect to uses helps identifying as many uses as are currently present within the supply chain**

- Manufacturers/Importers **map identified uses** and **communicate** this “use information” to their Downstream Users
- Downstream Users should evaluate this and **communicate** “non-identified uses” **to their** suppliers (>12 months before registration deadline)
- Manufacturers/Importers must **assess** whether these **additional uses** can be regarded as **safe**



Communication within the supply chain must be established in a straightforward way with a tool to exchange use information

## Use alignment via distributor/ formulator

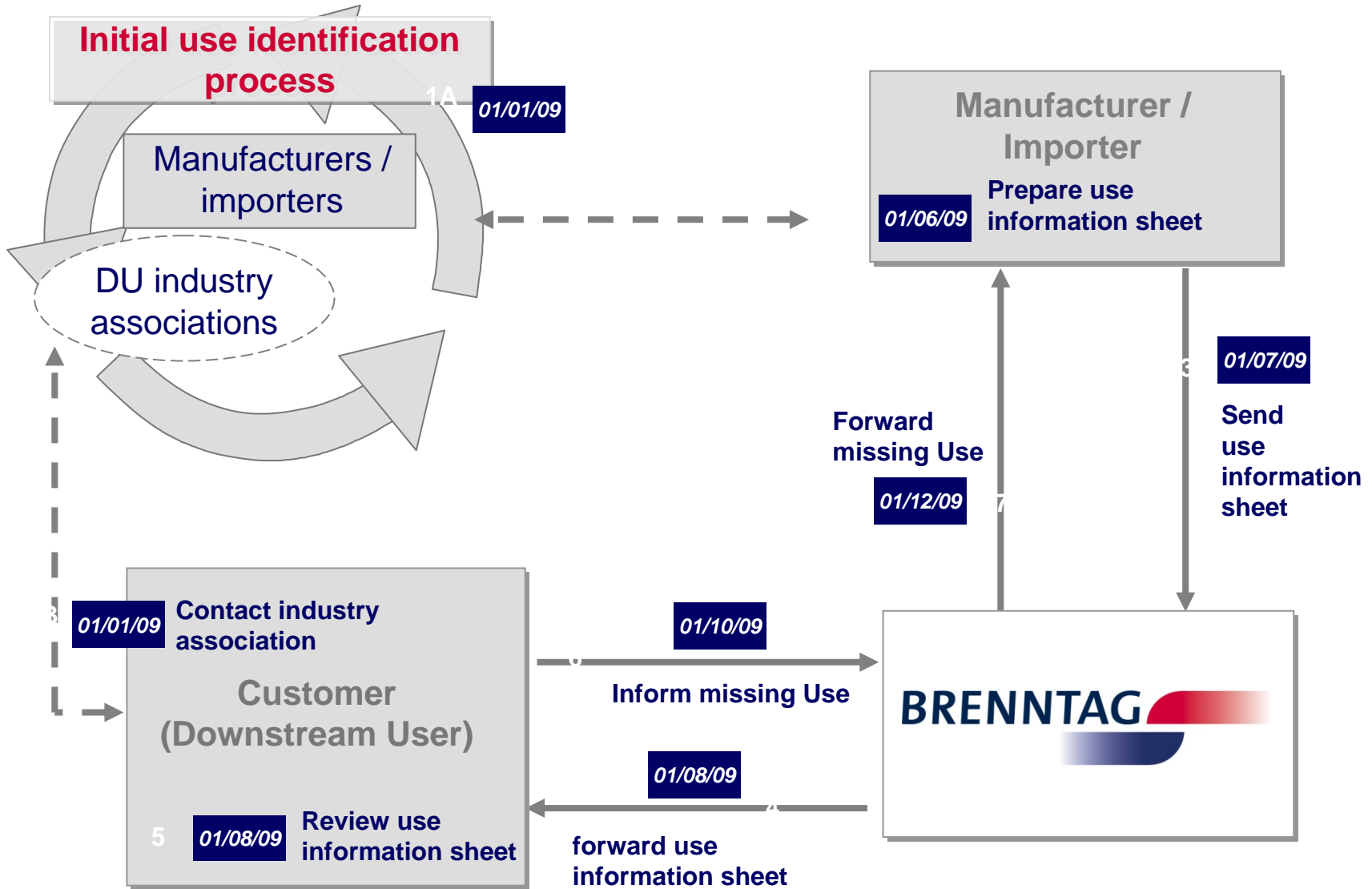


- M/I sends use information to Brenntag – per substance
- Brenntag forwards use information to DU
- In case of mixtures, Brenntag develops own use information and communicates to DU



- When use of DU is covered: no further mapping is needed
- In case use of DU is not covered: DU maps missing use and communicates up the supply chain via Brenntag

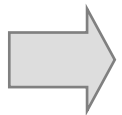
# Overview of use alignment process in 2009





## Efficient communication of uses through “Use Descriptor System”

- Manufacturers and Downstream Users benefit from “**Use Descriptor System**” developed by ECHA
- **Structured** communication between suppliers and customers will be achieved by using Use Descriptor **Codes**



Use descriptor system structures the identified uses and standardizes communication between suppliers and customers

## Use Descriptor System



## Indicator

Where the substances is used

Type of product the substances is used in

How the substances is used

Type of article the substances is used in

How the substances is released in environment

## Rules

Manufacture *or* formulation  
*or* industrial use *or* private use  
*or* professional use

Preparations/mixtures for consumer use (by market sector)

Application techniques or process types for industrial and professional use

Article type in service life and waste life for consumers and workers

Conditions of use from environmental perspective



For further information on use descriptors please refer to ECHA document "Guidance on Information Requirements – Part D-3 and D-4  
Link: [http://reach.jrc.it/docs/guidance\\_document/information\\_requirements\\_r12\\_en.pdf?vers=20\\_08\\_08](http://reach.jrc.it/docs/guidance_document/information_requirements_r12_en.pdf?vers=20_08_08)

## Recommendations for assigning Use Descriptors: step 1

### Select appropriate sector of use

Choose among one of the following 5 descriptors:

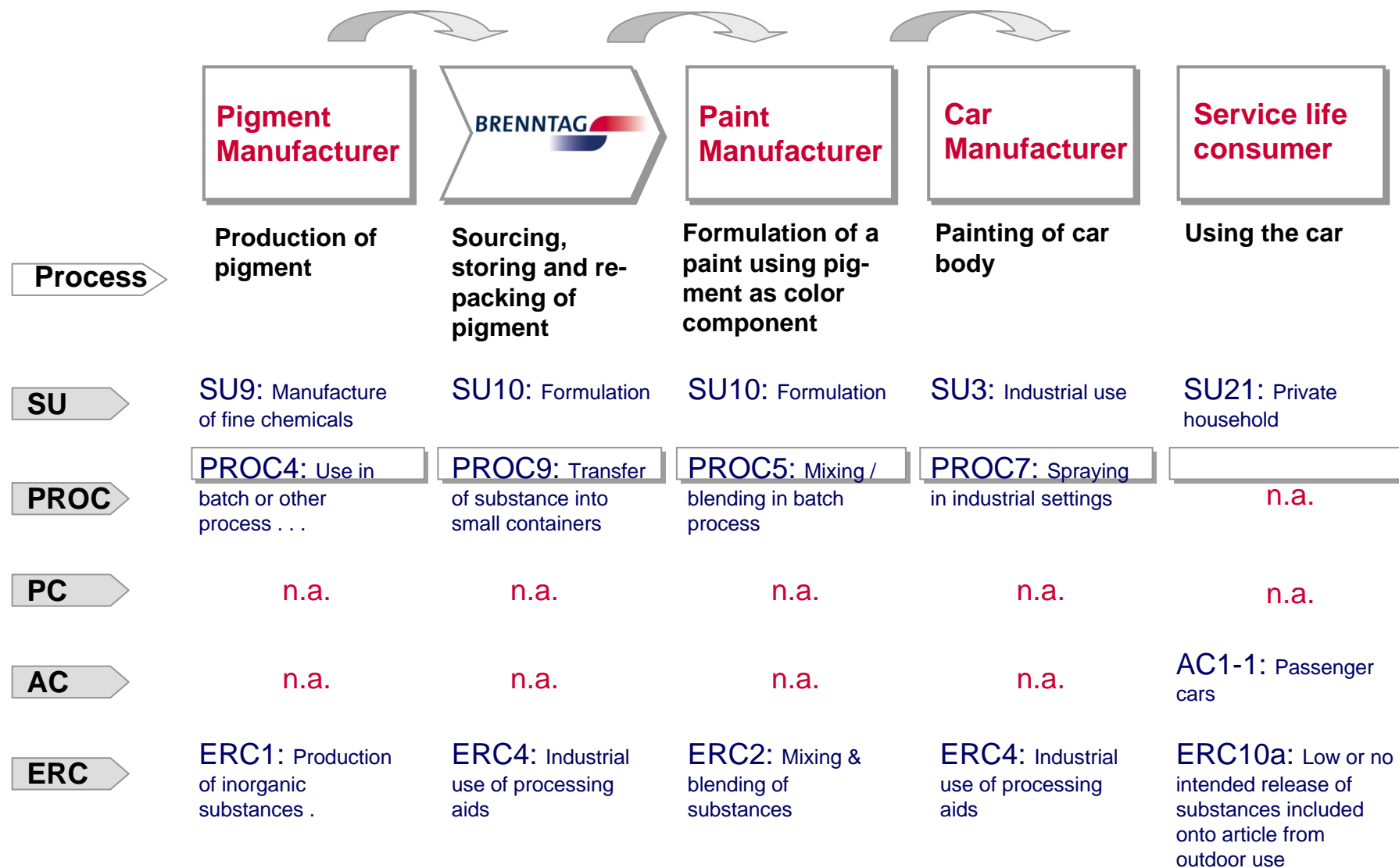
- **SU8/9:** manufacture of substances (SU8 manufacture of bulk chemicals, SU9 manufacture of fine chemicals)
- **SU10:** formulation (e.g. mixing & blending chemicals to make a preparation)
- **SU3:** industrial uses (e.g. bleaching chemical in paper industry)
- **SU21:** private household uses (e.g. painting the wall as a private person)
- **SU22:** professional uses (e.g. painting house on commercial basis)

## Recommendation for assigning Use Descriptors: step 2

According your SU selection assign additional 2 descriptors applying the following rules

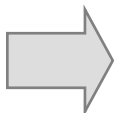
- **[SU8/9] - Manufacture:** assign a process category (PROC) and an environmental release category (ERC)
- **[SU10] - Formulation:** assign a process category (PROC) and an environmental release category (ERC)
- **[SU3] - Industrial end-use:** assign a process category (PROC) and an environmental release category (ERC)
- **[SU21] - Consumer end-use:** assign a product category (PC) and environmental release category (ERC)
- **[SU22] - Professional use (worker's end-use):** assign process category (PROC) and an environmental release category (ERC)
- **Service life and waste:** assign an article category (AC) and an environmental release category (ERC)

A substance in its life cycle: pigment in paint for industrial car painting



Example: communication of uses

**Suppliers provide information on the known uses per substance to all their customers (i.e. Downstream Users and distributors)**



If your application is not included you should communicate it to your supplier.

## Recommendations to our customers

- Contact your industry association to find out which of your uses have already been identified and mapped according the Use Descriptor System (see next page)
- Map your additional own uses with help of Use Descriptor System
- Review identified uses offered by suppliers by comparing with your mapped uses
- Communicate missing uses to your suppliers

## Useful links on Use Alignment: Manufacturer/Downstream User Associations

### **Chemical Manufacturers Association: Cefic**

<http://cefic.org/templates/shwPublications.asp?HID=750>

### **Paints & Coatings Manufacturers: CEPE**

[http://www.cepe.org/EPUB/easnet.dll/ExecReq/Page?eas:template\\_im=100087&eas:dat\\_im=101AED](http://www.cepe.org/EPUB/easnet.dll/ExecReq/Page?eas:template_im=100087&eas:dat_im=101AED)

### **Detergents: A.I.S.E.**

[http://www.aise.eu/reach/exposureass\\_sub2.htm](http://www.aise.eu/reach/exposureass_sub2.htm)

### **Adhesives & Sealants: Feica**

[http://www.feica.com/default\\_home.htm](http://www.feica.com/default_home.htm)

### **Cosmetics: COLIPA**

<http://www.colipa.eu/reach-implementation-in-the-cosmetics-industry.html?sid=48&smid=128>

No Use Descriptor model, but general information on REACH



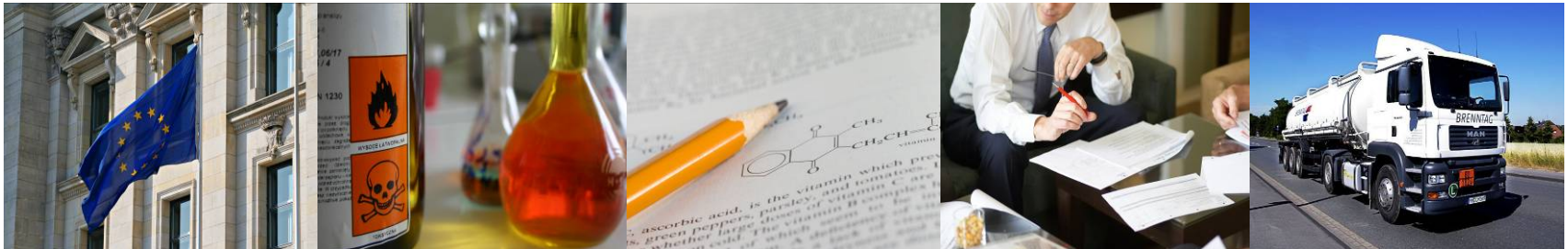
## Disclaimer

This information does not constitute legal advice but is intended for guidance only. While the information is provided in utmost good faith and has been based on the best information currently available, is to be relied upon at the user's own risk. No representations or warranties are made with regard to its completeness or accuracy, and no liability will be incurred for damages of any nature whatsoever resulting from the use of or reliance on the information.

Additional information and sources at ...

<http://www.Brenntag-REACH.com>

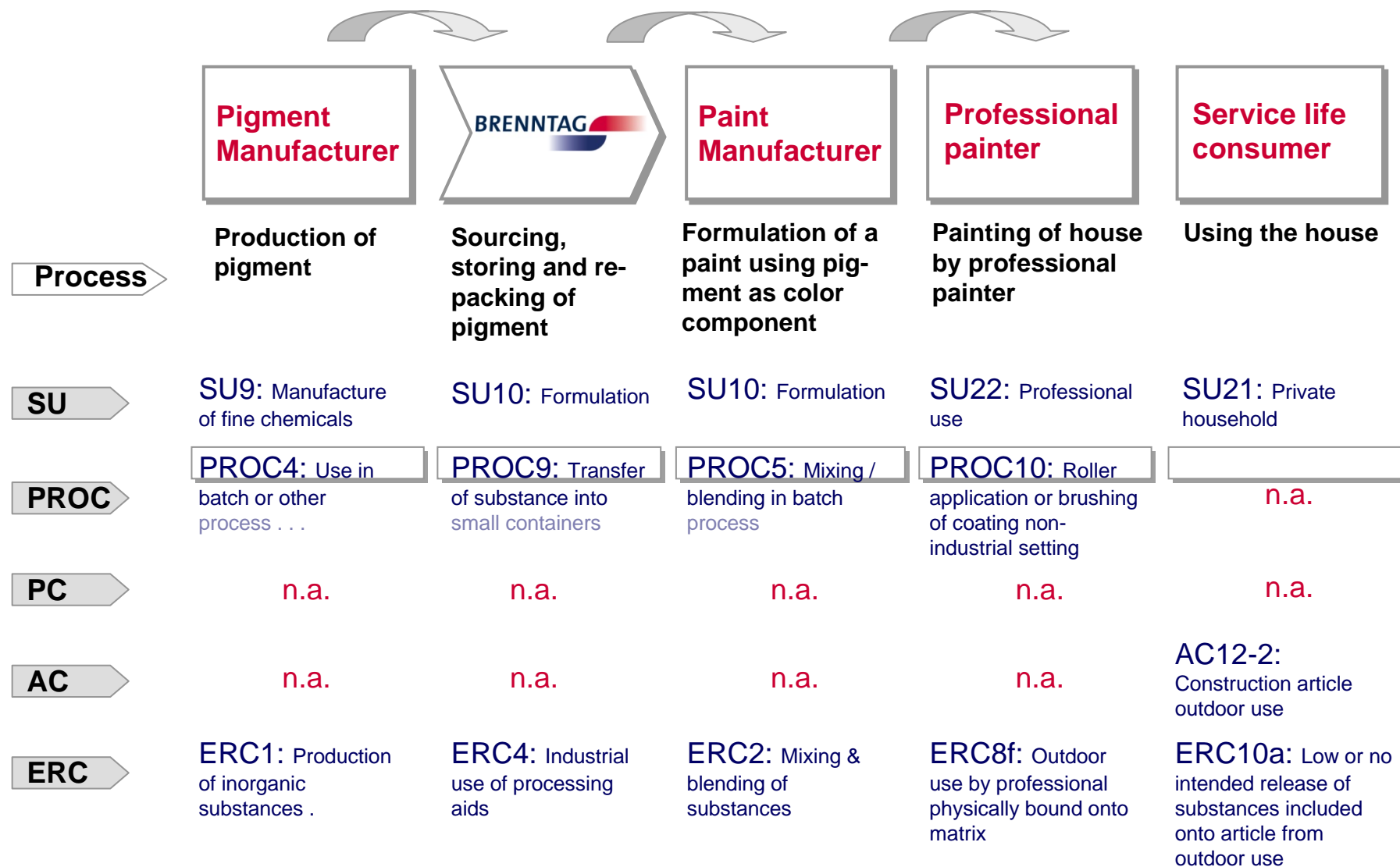
Service, guidance and beyond!



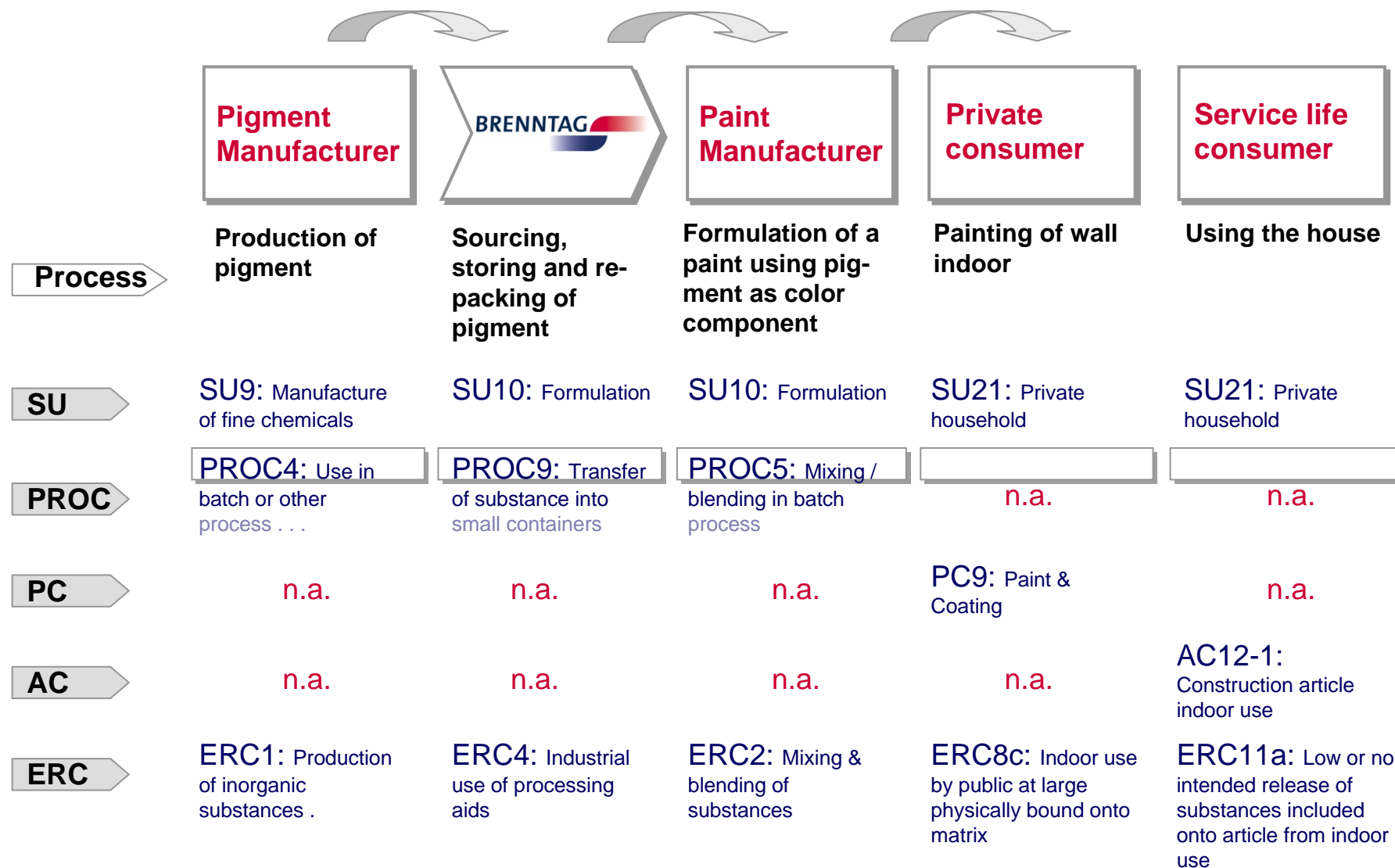
REACH beyond 

# EXAMPLES

# A substance in its life cycle: pigment in paint for house painting outdoor

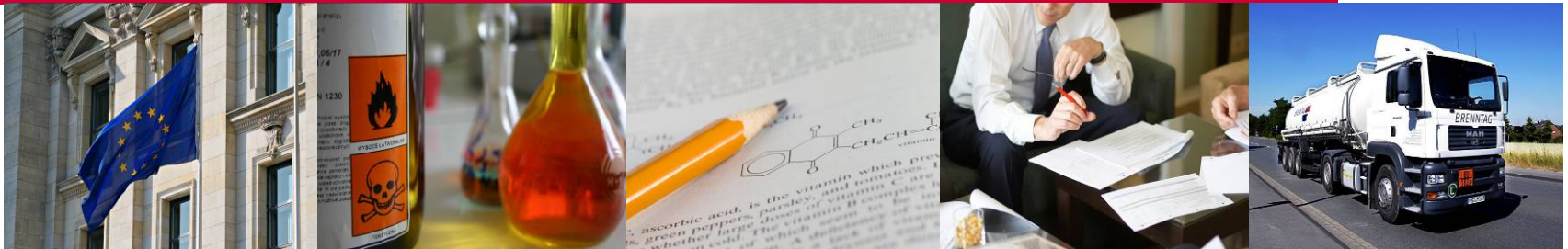


# A substance in its life cycle: pigment in paint for house painting indoor



# BRENNTAG

## REACH – Use Alignment Process



## Use Descriptor - General

REACH beyond 

## Key roles under REACH

### Manufacturer/ Importer

Any natural or legal person established within the Community who

- **manufactures** a substance within the Community
- is responsible for the **physical introduction** into the customs territory of the Community

### Distributor<sup>1</sup>

Any natural or legal person established within the Community,

including a **retailer**, who only stores and places on the market a substance, on its own or in preparation, for third parties.

### Downstream User

Any natural or legal person established within the Community,

other than the manufacturer or importer, who **uses** a substance either on its own or in a preparation, in the course of his industrial or professional activities. This could be a formulator, an industrial user or a professional user.

(1) The REACH notion of a distributor differs from Brenntag's definition. For the EU, splitting pallets is distribution, filling drums and re-labeling is downstream use

## Definition of use descriptors

### Sector of use (SU)

Under REACH, each of the different **industry sectors** which a substance might pass in its life cycle until its final destination **represents** an **identified use**.

Under REACH, each of the different **industry sectors** a substance may pass through during its life cycle to its final destination **constitutes an identified use**.

- The Sector of Use can be described in very general terms, for example when the application applies in various sectors and, consequently, for various products/articles. A typical example is the unloading of bulk supplies into a storage tank or filling of an end product into its commercial packaging.
- Obviously it may be necessary to provide more details for very specific applications, for example when the user conditions in the relevant sector could vary considerably from those in other sectors.

\*) Note: The ERC's need to be selected from PART D – EXPOSURE SCENARIO BUILDING, Appendix D-3: Names and descriptions Environmental Release Categories in the 'Guidance on Information Requirements and CSA'



## Use Descriptor – SU (Sector of Use)

Appendices Appendix R.12-1: Descriptor for sector of use (SU)

	Sectors of use [SU]	NACE <sup>6</sup> codes
SU 0-1	Other activity related to manufacturing of chemical products (NACE Code to be used only; see last row)	
SU 0-2	Other activities related to manufacture and services (NACE Code to be used only; see last row)	
SU1	Agriculture, forestry, fishery	A
SU2	Mining (including offshore industries)	B
SU3	Industrial manufacturing (all)	C
SU4	Manufacture of food products	10, 11
SU5	Manufacture of textiles, leather, fur	13 - 15
SU6	Manufacture of pulp, paper and paper products	17
SU7	Printing and reproduction of recorded media	18
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)	19.2 + 20.1
SU9	Manufacture of fine chemicals	20.2 - 20.6
SU10	Formulation [mixing] of preparations and/or re-packaging	
SU11	Manufacture of rubber products	22.1
SU12	Manufacture of plastics products, including compounding and conversion	22.2
SU13	Manufacture of other non-metallic mineral products, e.g. plasters, cement	23
SU14	Manufacture of basic metals	24
SU15	Manufacture of fabricated metal products, except machinery and equipment	25
SU16	Manufacture of computer, electronic and optical products, electrical equipment	26 - 27
SU17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment	28 - 30, 33
SU18	Manufacture of furniture	31
SU19	Building and construction work	F
SU20	Health services	86
SU21	Private households (= general public = consumers)	T
SU22	Public domain (administration, education, entertainment, services, craftsmen)	
SU23	Recycling	38

## Definitions of use descriptors

### Product category (PC)

Within the context of the ES, it is appropriate to **characterize the use** of a substance by the **type of preparation** (e.g. lubricant, cleaning agent) in which the substance will be used. This is based on the consideration that the **type of preparation** is more **indicative of the potential exposure**.

- Within the context of the ES, it is appropriate to **characterize the use** of a substance by the **type of preparation** (e.g. lubricant, cleaning agent) in which the substance will be used. This is based on the consideration that the **type of preparation** is more **indicative of the potential exposure**.
- This descriptor will enable you to describe your end product for consumer use.
- For industrial and professional use the Process category (rather than the Product category) must be entered.

## Use Descriptor – PC (Product category)

Appendix R.12-2: Descriptor for types of preparations  
[PC = Chemical Product Category]

Type of preparations [PC = Product Category] <sup>7</sup> (I)		
PC0	Other products* (use ConsExpo subcategories or UCN codes: see last row)	
PC1	Adhesives, sealants	2
PC2	Adsorbents	
PC3	Air care products	
PC4	Anti-freeze and de-icing products	
PC5	Artists supply and hobby preparations	2
PC6	Automotive care products***	2
PC7	Base metals and alloys	
PC8	Biocidal products (e.g. disinfectants, pest control)	1
PC9	Coatings and paints, fillers, putties, thinners	1, 2
PC10	Building and construction preparations not covered elsewhere	1
PC11	Explosives	
PC12	Fertilizers	
PC13	Fuels	2
PC14	Metal surface treatment products, including galvanic and electroplating products	
PC15	Non-metal-surface treatment products	
PC16	Heat transfer fluids	
PC17	Hydraulic fluids	
PC18	Ink and toners	
PC19	Intermediate	
PC20	Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific	
PC21	Laboratory chemicals	
PC22	Lawn and garden preparations, including fertilizers	2
PC23	Leather tanning, dye, finishing, impregnation and care products	
PC24	Lubricants, greases and release products	2
PC25	Metal working fluids	
PC26	Paper and board dye, finishing and impregnation products	
PC27	Plant protection products	
PC28	Perfumes, fragrances	
PC29	Pharmaceuticals	
PC30	Photochemicals	
PC31	Polishes and wax blends	2
PC32	Polymer preparations and compounds	

## Use Descriptor – PC (Product category) - II

Type of preparations [PC = Product Category] <sup>1</sup> (II)		
PC33	Semiconductor	
PC34	Textile dyes, finishing and impregnating products	
PC35	Washing and cleaning products (including solvent based products)	1, 2
PC36	Water softeners	
PC37	Water treatment chemicals	
PC38	Welding and soldering products, flux products	
PC39	Cosmetics, personal care products	1
PC40	Extraction agents	
<a href="http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp">http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp</a> <a href="http://195.215.251.229/fmi/xsl/spin/SPIN/guide/menuguide.xsl?db=spinguide&amp;lay=overview&amp;-view#">http://195.215.251.229/fmi/xsl/spin/SPIN/guide/menuguide.xsl?db=spinguide&amp;lay=overview&amp;-view#</a>		

## Definitions of use descriptors

### Process category (PROC)

The Process category groups the **manner in which a substance is used** or processed into a specific product (preparation or article). **Application** techniques or **process** types have a **direct impact** on **exposure** and consequently on the required risk management measures.

- The Process category groups the **manner in which a substance is used** or **processed** into a specific product (preparation or article). **Application** techniques or **process** types have a **direct impact** on **exposure** and consequently on the **required risk management measures**.
- This descriptor describes the way in which the product or substance is used in an industrial or professional manner, i.e. it indicates specifically what the possible exposure risks might be. For instance, paint has a different impact when used in the open air rather than in an enclosed area.
- For consumer use the Product category (rather than the Process category) must be entered.

## Use Descriptor – PROC (Process category)

Appendix R.12-3: Descriptor for process categories [PROC]

Descriptor for process categories [PROC] (I)		
	Process categories based on TRA categories for workers <sup>9</sup>	Examples and explanations
PROC0	Other process or activity	
PROC1	Use in closed process, no likelihood of exposure Industrial setting	Use of the substances in high integrity contained system where little potential exists for exposures, e.g. any sampling via closed loop systems
PROC2	Use in closed, continuous process with occasional controlled exposure (e.g. sampling) Industrial setting	Continuous process but where the design philosophy is not specifically aimed at minimizing emissions It is not high integrity and occasional exposure will arise e.g. through maintenance, sampling and equipment braking
PROC3	Use in closed batch process (synthesis or formulation) Industrial setting	Batch manufacture of a chemical or formulation where the predominant handling is in a contained manner, e.g. through enclosed transfers, but where some opportunity for contact with chemicals occurs, e.g. through sampling
PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises Industrial setting	Use in batch manufacture of a chemical where significant opportunity for exposure arises, e.g. during the charging, the sampling or discharge of material, and when the nature of the design is likely to result in exposure
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) Industrial setting	Manufacture or formulation of chemical products or articles using technologies related to mixing and blending of solid or liquid materials, and where the process is in stages and provides the opportunity for significant contact at any stage

## Use Descriptor – PROC (Process category) - II

Descriptor for process categories [PROC] (II)		
	Process categories based on TRA categories for workers <sup>9</sup>	Examples and explanations
PROC6	Calendering operations Industrial setting	Processing of product matrix calendering at elevated temperature an large exposed surface
PROC7	Spraying in industrial settings and applications Industrial setting	Air dispersive techniques Spraying for surface coating, adhesives, polishes/cleaners, air care products, sandblasting; Substances can be inhaled as aerosols. The energy of the aerosol particles may require advanced exposure controls in case of coating, overspray may lead waste water and waste
PROC8	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities Industrial or non-industrial setting	Sampling, loading, filling, transfer, dumping, bagging in non dedicated facilities. Exposure related to dust, vapour, aerosols or spillage, and cleaning of equipment to be expected
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing) Industrial setting	Filling lines specifically designed to for both, capturing vapour and aerosol emissions and minimise spillage
PROC10	Roller application or brushing of adhesive and other coating Industrial or non-industrial setting	Low energy spreading Including cleaning surfaces. Substance can be inhaled as vapours, skin contact through droplets, splashes, working with wipes and handling of treated surfaces
PROC11	Spraying outside industrial settings or applications	Air dispersive techniques (OU9) Spraying for surface coating, adhesives, polishes/cleaners, air care products, sandblasting; (also includes manufacture of foam, including blowing operations) Substances can be inhaled as aerosols. The energy of the aerosol particles may require advanced exposure controls in case of coating, overspray may lead waste water and waste

<sup>9</sup> additional some operation units that could not be assigned to a TRA category y of

## Use Descriptor – PROC (Process category) - III

Descriptor for process categories [PROC] (III)		
	Process categories based on TRA categories for workers <sup>9</sup>	Examples and explanations
PROC12	Use of blow agents in manufacture of foam Industrial setting	
PROC13	Treatment of articles by dipping and pouring Industrial or non industrial setting	Immersion operations (OU5) Treatment of articles by dipping, pouring, immersing, soaking, washing out or washing in substances; including cold formation or resin type matrix. Includes handling of treated objects (e.g. after dyeing, plating) Substance is applied to a surface by low energy techniques as dipping the article into a bath or pouring a preparation onto a surface
PROC14	Production of preparations or articles by tableting, compression, extrusion, pelettisation Industrial setting	
PROC15	Use a laboratory reagent Non-industrial setting	Use of substances at small scale laboratory (< 1 l or 1 kg) Larger laboratories and R + D installations should be treated as industrial processes
PROC16	Using material as fuel sources, limited exposure to unburned product to be expected Industrial or non-industrial setting	Covers the use of material as fuel sources (including additives) where limited exposure to the product in its unburned form is expected. Does not cover exposure as a consequence of spillage or combustion.
PROC17	Lubrication at high energy conditions and in partly open process Industrial or non-industrial setting	Lubrication at high energy conditions (temperature, friction) between moving parts and substance; significant part of process is open to workers or to the environment The metal working fluid may form aerosols or fumes due to rapid moving metal parts; exhausted cutting fluids need to be disposed off as waste
PROC18	Greasing at high energy conditions Industrial or non-industrial setting	Use as lubricant where significant energy or temperature is applied between the substance and the moving parts
PROC19	Hand-mixing with intimate contact and only PPE available Non-industrial setting	Addresses occupations where intimate and intentional contact with substances occurs without any specific exposure controls than PPE
PROC20	Heat and pressure transfer fluids in dispersive use but closed systems	Motor and engine oils, brake fluids Also in these applications, the lubricant may be exposed to high energy conditions and chemical reactions may take place during use. Exhausted fluids need to be disposed of as waste. Repair and maintenance may lead to skin contact. Leakage during use may lead to environmental exposure



## Use Descriptor – PROC (Process category) - IV

Descriptor for process categories [PROC] (IV)		
	Process categories based on TRA categories for workers <sup>9</sup>	Examples and explanations
PROC21	Low energy manipulation of substances bound in materials and/or articles	Manual cutting, rolling or assembly of material/article, possibly resulting in the release of fibres or rubber fumes
PROC22	Potentially closed processing operations (with minerals) at elevated temperature	Activities at smelters, furnaces, refineries, coke ovens. Exposure related to dust and fumes to be expected. Emission from direct cooling may be relevant
PROC23	Open processing and transfer operations (with minerals) at elevated temperature	Sand and die casting, tapping and casting melted solids, raking melted solids paving Exposure related to dust and fumes to be expected. Emission from direct cooling may be relevant
PROC24	High (mechanical) energy work-up of substances bound in materials and/or articles	Substantial thermal or kinetic energy applied to substance by grinding, mechanical cutting, drilling or sanding. Release of solids (dust) or fumes to be expected
PROC25	Hot work operations with metals	Welding, soldering, gouging, brazing, flame cutting Exposure due to release of fumes to be expected

## Definitions of use descriptors

### Article category (AC)

When hazardous **substances** are being **processed into articles**, the manufacturer/importer may consider it necessary to specify the **type of article** that is **covered** in the **CSA** and **ES**. Article categories consist of 2 groups: Articles without intended release and Articles with intended release.

- When hazardous **substances are being processed into articles** the manufacturer/importer may consider it necessary to specify the **type of article** that is **covered** in the **CSA** and **ES**. Article categories consist of 2 groups: Articles without intended release and Articles with intended release.

## Use Descriptor – AC (Article Category) – without intended release

Appendix R.12-4: Descriptors for substances in articles with no intended release

Use Descriptors for substances in articles with no intended release – Article categories [AC]	
AC 0	Other articles (use TARIC terminology; see last row) <sup>10</sup>
AC 1-1	Passenger cars and motor cycles
AC 1-2	Other vehicles: Railway, aircraft, vessels, boats, trucks, and associated transport equipment
AC 2	Machinery and mechanical appliances thereof
AC 3-1	Electrical and electronic products, e. g. computers, office equipment, video and audio recording; communication equipment
AC 3-2	Electrical batteries and accumulators
AC 3-3	Electrical and electronic products Household appliances (white ware)
AC 3-4	Photographic and reprographic articles: cameras, video cameras
AC 4	Glass and ceramic products: dinner ware, pots, pans, food storage containers
AC 5-1	Fabrics, textiles and apparel: bedding and clothing
AC 5-2	Fabrics, textiles and apparel: curtains, upholstery, carpeting/flooring, rugs
AC 6	Leather products, apparel and upholstery
AC 7-1	Metal products: cutlery, cooking utensils, pots, pans
AC 7-2	Metal products: toys
AC 7-3	Metal products: furniture
AC 8-1	Paper products: tissue, towels, disposable dinnerware, nappies, feminine hygiene products, adult incontinence products, writing paper
AC 8-2	Paper products: Newspaper, packaging
AC 9	Photographic and reprographic articles: films, printed photographs
AC 10-1	Rubber products: tyres
AC 10-2	Rubber products: flooring
AC 10-3	Rubber products: footwear
AC 10-4	Rubber products: toys
AC 10-5	Other general rubber products
AC 11-1	Wood and wood furniture: flooring
AC 11-2	Wood and wood furniture: furniture
AC 11-3	Wood and wood furniture: toys
AC 12-1	Constructional articles and building material for indoor use: wall construction material ceramic, metal, plastic and wood construction material, insulating material
AC 12-2	Constructional articles and building material for outdoor use: wall construction material, road surface material, ceramic, metal, plastic, wood construction material, insulating material
AC 13-1	Commercial/consumer plastic products like disposable dinner ware, food storage, food packaging, baby bottles
AC 13-2	Plastic products: flooring
AC 13-3	Plastic products: toys
	<a href="http://ec.europa.eu/taxation_customs/dts/tarhome_en.htm">http://ec.europa.eu/taxation_customs/dts/tarhome_en.htm</a>

## Use Descriptor – AC (Article Category) – with intended release

## Appendix R.12-5: Substances in articles with intended release

Use descriptor for substances in articles with intended release	
Descriptor based on an indicative list of examples	
AC30	Other articles with intended release of substances, please specify <sup>11</sup>
AC31	Scented clothes
AC32	Scented eraser
AC33	<i>Entry has been removed after the REACH CA meeting in March 2006</i>
AC34	Scented toys
AC35	Scented paper articles
AC36	Scented CD
AC37	Other scented articles; please specify <sup>12</sup>
AC38	Packaging material for metal parts, releasing grease/corrosion inhibitors
AC39	Other articles releasing grease or corrosion inhibitors; please specify <sup>13</sup>

<sup>11</sup> see previous footnote; please note that articles could also be relevant for occupational exposure, in particular abrasive materials. The process category for high (mechanical) energy work-up of substances bound in materials and articles in the list of process categories (PROC) is not yet linked to a pre-set exposure scenario and the corresponding defaults for exposure estimation. Electrodes for welding and soldering are listed under PC 38 as a preparation.

<sup>12</sup> 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 TARIK terminology in such cases.

<sup>13</sup> see previous footnote

## Definitions of use descriptors

### Environmental release cat. (ERC)

The 'Environmental Release Category' **defines activities** for which typical **emissions into the environment** can be assumed. The categories are coded with numbers preceded by 'ERC' (Example: Production of plastics – ERCC6c)\*

- The 'Environmental Release Category' **defines activities** for which typical **emissions into the environment** can be assumed. The categories are coded with numbers preceded by 'ERC' (Example: Production of plastics – ERCC6c)\*
- The ERC is classified on the basis of industrial use versus professional/consumer use and indoor/outdoor use.
- This descriptor indicates the possible impact on the environment and is, therefore, related to the applied Process Category. A list with links between the two descriptors has been provided to facilitate the definition of the ERC category.

\*) Note: The ERCs must be selected from PART D – EXPOSURE SCENARIO BUILDING, Appendix D-3: Names and descriptions Environmental Release Categories in the 'Guidance on Information Requirements and CSA'

## Use Descriptor – ERC (Environmental Release category)

Appendix D-3: Names and Descriptions Environmental Release Categories<sup>1</sup>

Use Descriptors for Environmental Release Categories	
ERC1	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	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	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 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 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	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 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	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	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.
ERC7	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	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.

## Use Descriptor – ERC (Environmental Release category)- II

Use Descriptors for Environmental Release Categories	
ERC8b	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
ERC8c	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	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	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	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	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	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 brake fluids in automotive brake systems.
ERC10a	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	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	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	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.

## Use Descriptor – link between ERC &amp; PROC

Appendix D-4: Linking Process Categories to ERCs<sup>2</sup>

	Process categories based on TRA categories for workers	ERC no
PROC1	Use in closed process, no likelihood of exposure; Industrial setting	1, 6a, 6c
PROC2	Use in closed, continuous process with occasional controlled exposure (e.g. sampling); Industrial setting	1, 6a, 6c, 7
PROC3	Use in closed batch process (synthesis or formulation); Industrial setting	1, 2, 6a, 6d
PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises; Industrial setting	1, 6a, 6c, 6d
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) Industrial setting	2, 3
PROC6	Calendering operations Industrial setting	5
PROC7	Spraying in industrial settings and applications; Industrial setting	4, 5
PROC8	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities; Industrial or non-industrial setting	Covered in the Industrial ERC
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing); Industrial setting	Covered in the industrial ERC
PROC10	Roller application or brushing of adhesive and other coating; Industrial or non-industrial setting	4, 5, 8a, 8c, 8d, 8f
PROC11	Spraying outside; industrial settings or applications	8a, 8c, 8d, 8f
PROC12	Use of blow agents in manufacture of foam; Industrial setting	5



## Use Descriptor – link between ERC &amp; PROC - II

	Process categories based on TRA categories for workers	ERC no
PROC13	Treatment of articles by dipping and pouring; Industrial or non industrial setting	4, 5, 6b, 8a, 8b, 8c, 8d, 8f
PROC14	Production of preparations or articles by tableting, compression, extrusion, pelettisation; Industrial setting	1, 2, 3
PROC15	Use a laboratory reagent; Non-industrial setting	8a, 8b
PROC16	Using material as fuel sources, limited exposure to unburned product to be expected; Industrial or non-industrial setting	Not applicable
PROC17	Lubrication at high energy conditions and in partly open process; Industrial or non-industrial setting	4, 8d
PROC18	Greasing at high energy conditions; Industrial or non-industrial setting	4, 8d
PROC19	Hand-mixing with intimate contact and only PPE available; Non-industrial setting	8a to 8f
PROC20	Heat and pressure transfer fluids in dispersive use but closed systems	9a, 9b
PROC21	Low energy manipulation of substances bound in materials and/or articles	Not yet applicable
PROC22	Potentially closed processing operations (with minerals) at elevated temperature	Not yet applicable
PROC23	Open processing and transfer operations (with minerals) at elevated temperature	Not yet applicable
PROC24	High (mechanical) energy work-up of substances bound in materials and/or articles	Not yet applicable
PROC25	Hot work operations with metals	Not yet applicable