

## 1 Identification

- **Product identifier**
  - *Product number* PD3/99
  - *Trade name:* **CLEAR SB BINDER**
    - *Application of the substance / the mixture* For professional use
- **Details of the supplier of the safety data sheet**
  - *Manufacturer/Supplier:*  
IVM Chemicals Srl  
Viale della Stazione 3 -27020 Parona (PV)Italy -Tel +39 038425441
  - *Information department:*  
Environmental Health and safety office  
hseoffice@ivmchemicals.com
  - *Emergency telephone number:*  
ChemTel Expert Assistance Hotline/SDS Fax Access by dialing 1-800-255-3924 or for International +1-813-248-0585.

## 2 Hazard(s) identification

- **Classification of the substance or mixture**

Flammable Liquids 3	H226 Flammable liquid and vapor.
Acute Toxicity - Dermal 4	H312 Harmful in contact with skin.
Acute Toxicity - Inhalation 4	H332 Harmful if inhaled.
Skin Irritation 2	H315 Causes skin irritation.
Eye Irritation 2A	H319 Causes serious eye irritation.
Carcinogenicity 2	H351 Suspected of causing cancer.
Specific Target Organ Toxicity - Repeated Exposure 2	H373 May cause damage to the hearing organs through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Aspiration Hazard 1	H304 May be fatal if swallowed and enters airways.

### · Label elements

- *GHS label elements*  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- *Hazard pictograms*



GHS02 GHS07 GHS08

- *Signal word* Danger
- *Hazard-determining components of labeling:*  
2-butoxyethanol  
xylene  
ethylbenzene
- *Hazard statements*

H226	Flammable liquid and vapor.
H312+H332	Harmful in contact with skin or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H373	May cause damage to the hearing organs through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
H304	May be fatal if swallowed and enters airways.

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 1)

**Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P301+P310 If swallowed: Immediately call a poison center/doctor.
- P321 Specific treatment (see on this label).
- P331 Do NOT induce vomiting.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**



**HMIS-ratings (scale 0 - 4)**



**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture: consisting of the following components.

**Dangerous components:**

111-76-2	2-butoxyethanol ⚠ Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Acute Toxicity - Inhalation 4, H332; Skin Irritation 2, H315; Eye Irritation 2A, H319 Flammable Liquids 4, H227	40-49.99%
1330-20-7	xylene ⚠ Flammable Liquids 3, H226 ⚠ Specific Target Organ Toxicity - Repeated Exposure 2, H373; Aspiration Hazard 1, H304 ⚠ Acute Toxicity - Dermal 4, H312; Acute Toxicity - Inhalation 4, H332; Skin Irritation 2, H315; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335 Aquatic Acute 3, H402; Aquatic Chronic 3, H412	15-19.99%
100-41-4	ethylbenzene ⚠ Flammable Liquids 2, H225 ⚠ Carcinogenicity 2, H351; Specific Target Organ Toxicity - Repeated Exposure 2, H373; Aspiration Hazard 1, H304 ⚠ Acute Toxicity - Inhalation 4, H332 Aquatic Chronic 3, H412	2.5-4.99%

US

(Contd. on page 3)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 2)

#### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

personal protective equipment for first aid responders is recommended. (please see section 8)

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Take off immediately all contaminated clothing, include underwear and shoes (if necessary).

Rinse thoroughly with plenty of water for at least 20 minutes and take medical advise. If medical advise is needed have products container or label at hand.

- **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

For symptoms and effects caused by substances, refer to Section 11.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

#### 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

Alcohol resistant foam

Alcohol resistant foam, CO, powder, water spray/mist.

- **For safety reasons unsuitable extinguishing agents:**

Do not use a jet water stream as it may scatter and spread fire.

- **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide (CO)

- **Advice for firefighters**

Cool by spraying with water the containers to prevent product decomposition and the development of substances potentially hazardous for health and also, in the case of closed containers exposed to flames to prevent explosions.

- **Protective equipment:**

Hardhat with visor, fireproof clothing, suitable gloves and if necessary respiratory protective device.

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

(Contd. on page 4)

**Product number PD3/99****Trade name: CLEAR SB BINDER**

(Contd. of page 3)

Ensure adequate ventilation

Keep away from ignition sources

· **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· PAC-1:		
111-76-2	2-butoxyethanol	60 ppm
1330-20-7	xylene	130 ppm
100-41-4	ethylbenzene	33 ppm
· PAC-2:		
111-76-2	2-butoxyethanol	120 ppm
1330-20-7	xylene	920* ppm
100-41-4	ethylbenzene	1100* ppm
· PAC-3:		
111-76-2	2-butoxyethanol	700 ppm
1330-20-7	xylene	2500* ppm
100-41-4	ethylbenzene	1800* ppm

## 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Protect against electrostatic charges.

Keep respiratory protective device available.

Use explosion-proof apparatus / fittings and spark-proof tools.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Provide solvent resistant, sealed floor.

Observe the label precautions, the expiration date for the use, if not indicated, is from delivery date of goods.

In cases where there is no reported expiration date, it means that the product must be used within 8 months.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep receptacle tightly sealed.

(Contd. on page 5)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 4)

· **Specific end use(s)** Those typical of the product and the instructions in the data sheet if required.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 111-76-2 2-butoxyethanol

PEL	Long-term value: 240 mg/m , 50 ppm Skin
REL	Long-term value: 24 mg/m , 5 ppm Skin
TLV	Long-term value: 20 ppm BEI, A3

### 1330-20-7 xylene

PEL	Long-term value: 435 mg/m , 100 ppm
REL	Short-term value: 655 mg/m , 150 ppm Long-term value: 435 mg/m , 100 ppm
TLV	Short-term value: (150) ppm Long-term value: (100) NIC-20 ppm BEI, A4

### 100-41-4 ethylbenzene

PEL	Long-term value: 435 mg/m , 100 ppm
REL	Short-term value: 545 mg/m , 125 ppm Long-term value: 435 mg/m , 100 ppm
TLV	Long-term value: 20 NIC-20 ppm BEI, A3, NIC: OTO, BEI, A3

· **Ingredients with biological limit values:**

### 111-76-2 2-butoxyethanol

BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid (BAA) (with hydrolysis)
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### 1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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### 100-41-4 ethylbenzene

BEI	0.15 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific)
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· **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
  - **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

(Contd. on page 6)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 5)

Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.

- **Breathing equipment:**  
Short term filter device:



Suitable respiratory protective device recommended.

Filter A

- **Protection of hands:**



Protective gloves

Due to missing tests no recommendation to the glove material can be given for the product.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The glove material has to be impermeable and resistant to the product .

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

· **Form:**

Fluid

· **Color:**

According to product specification

· **Odor:**

Characteristic

· **Odor threshold:**

Not determined.

· **pH-value:**

Mixture is non-polar/aprotic.

#### · Change in condition

· **Melting point/Melting range:**

Undetermined.

· **Boiling point/Boiling range:**

136 °C (276.8 °F)

· **Flash point:**

27 °C (80.6 °F)

· **Flammability (solid, gaseous):**

Not applicable.

(Contd. on page 7)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 6)

· <b>Ignition temperature:</b>	430 °C (806 °F)	
· <b>Decomposition temperature:</b>	Not determined.	
· <b>Auto igniting:</b>	Product is not selfigniting.	
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.	
· <b>Explosion limits:</b>		
· <b>Lower:</b>	1 Vol %	
· <b>Upper:</b>	10.6 Vol %	
· <b>Vapor pressure at 20 °C (68 °F):</b>	9.5 hPa (7.1 mm Hg)	
· <b>Density (+/- 0,03) at 20 °C (68 °F):</b>	0.98 g/cm (8.178 lbs/gal)	
· <b>Relative density</b>	Not determined.	
· <b>Vapor density</b>	Not determined.	
· <b>Evaporation rate</b>	Not determined.	
· <b>Solubility in / Miscibility with</b>		
· <b>Water:</b>	Not determined.	
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.	
· <b>Viscosity:</b>		
· <b>Dynamic:</b>	Not determined.	
· <b>Kinematic at 20 °C (68 °F):</b>	30 s (ISO 3 mm)	
· <b>Oxidising properties:</b>	N.A.	
· <b>Solvent content:</b>		
· <b>VOC content:</b>	69.90 % 685.0 g/l / 5.72 lb/gal	
· <b>Solids content:</b>	30.1 %	
· <b>Other information (HAPS)</b>		
1330-20-7	xylene	15-19.99%
100-41-4	ethylbenzene	2.5-4.99%
· <b>Other information</b>	No further relevant information available.	

## 10 Stability and reactivity

- **Reactivity** typical of the product as indicated in the data sheet
- **Chemical stability** The product is stable in normal conditions of storage and use recommended
  - **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**  
Reacts with oxidizing agents.  
Vapours may form explosive mixtures with air
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Acids, alkalis and oxidizing agents
- **Hazardous decomposition products:** No dangerous decomposition products known.

US

(Contd. on page 8)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 7)

## 11 Toxicological information

### · Information on toxicological effects

#### · Acute toxicity:

· LD/LC50 values that are relevant for classification:

#### ATE (Acute Toxicity Estimate)

Oral	LD50	2,581 mg/kg
Dermal	LD50	1,681 mg/kg
Inhalative	LC50/4 h	16.1 mg/l (mouse)

#### 111-76-2 2-butoxyethanol

Oral	LD50	1,200 mg/kg (ATE) 1,480 mg/kg (mouse)
Dermal	LD50	1,100 mg/kg (rab)
Inhalative	LC50/4 h	11 mg/l (mouse)

#### 1330-20-7 xylene

Oral	LD50.	3,523 mg/kg (mouse)
Dermal	LD50	1,100 mg/kg (rabbit) (ATE value)
	LD50.	12,126 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (mouse) (ATE value)
	LC50/4h.	27.571 mg/l (mouse)

#### 100-41-4 ethylbenzene

Oral	LD50	3,500 mg/kg (mouse)
Dermal	LD50	15,486 mg/kg (rabbit)
Inhalative	LC50/4 h	17.2 mg/l (mouse)

#### · Primary irritant effect:

- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.

#### · Sensitization: No sensitizing effects known.

#### · Additional toxicological information:

Harmful

Irritant

Harmful in contact with skin.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

Suspected of causing cancer.

May cause damage to the hearing organs through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

May be fatal if swallowed and enters airways.

#### · Carcinogenic categories

Ethylbenzene

From IARC MONOGRAPHS VOLUME 77/2000

Human carcinogenicity data

Two studies of workers potentially exposed to ethylbenzene in a production plant and a styrene polymerization plant were available. In the first study, no excess of cancer incidence was found but the description of methods was insufficient to allow proper evaluation of this finding. In the second study, no cancer mortality excess was observed during the follow-up of 15 years.

Evaluation

(Contd. on page 9)



**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 8)

There is inadequate evidence in humans for the carcinogenicity of ethylbenzene. There is sufficient evidence in experimental animals for the carcinogenicity of ethylbenzene.

· <b>IARC (International Agency for Research on Cancer - Cl. 1 and 2)</b>	
100-41-4 ethylbenzene	2B
· <b>NTP (National Toxicology Program)</b>	
None of the ingredients is listed.	
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	
None of the ingredients is listed.	

**12 Ecological information**

· **Toxicity**

· <b>Aquatic toxicity:</b>	
<b>111-76-2 2-butoxyethanol</b>	
EC50	101 mg/l (daphnia) (24 h)
LC50 (96h)	101 mg/l (Fish)
<b>1330-20-7 xylene</b>	
EC50	2.2 mg/l (algae)
LC50 48h	1 mg/l (daphnia)
LC50 (96h)	2.6 mg/l (Fish)
<b>100-41-4 ethylbenzene</b>	
EC50	438 mg/l (algae) (72h)
	1.8 mg/l (daphnia) (48 h)
LC50 (96h)	12.1 mg/l (Fish)

· **Persistence and degradability** No further relevant information available.

· <b>Substances Easily biodegradable</b>	
111-76-2	2-butoxyethanol .
1330-20-7	xylene .
100-41-4	ethylbenzene .

· **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

· **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

· **Waste treatment methods**

- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.  
Dispose of contents and container in accordance with local state and federal regulations.

(Contd. on page 10)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 9)


- **Uncleaned packagings:**
  - *Recommendation:* Disposal must be made according to official regulations.
  - *Recommended cleansing agent:* Water, if necessary with cleansing agents.

## 14 Transport information

- **UN-Number**
  - DOT, IMDG, IATA UN1263
  - Note Check viscosity and flash point at section 9

- **UN proper shipping name**
  - DOT Paint
  - IMDG, IATA PAINT

- **Transport hazard class(es)**
  - DOT
 



FLAMMABLE LIQUID  
3

    - Class 3 Flammable liquids
    - Label 3
    - Class 3 Flammable liquids
    - Label 3

- **IMDG, IATA**



FLAMMABLE LIQUID  
3

  - Class 3 Flammable liquids
  - Label 3

- **Packing group**
  - DOT, IMDG, IATA III

- **Environmental hazards:**
  - Marine pollutant: No

- **Special precautions for user** Warning: Flammable liquids
  - Hazard identification number (Kemler code): 30
  - EMS Number: F-E, S-E
  - Stowage Category A

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **Transport/Additional information:**
  - **IMDG**
    - Limited quantities (LQ) 5L

(Contd. on page 11)

**Product number PD3/99**  
**Trade name: CLEAR SB BINDER**

(Contd. of page 10)

· **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 1263 PAINT, 3, III

**15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

Requirements of Federal Register

· **Various regulations**

· SARA

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings) :**

111-76-2	2-butoxyethanol	40-49.99%
1330-20-7	xylene	15-19.99%
100-41-4	ethylbenzene	2.5-4.99%

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

1330-20-7	xylene
100-41-4	ethylbenzene

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-41-4	ethylbenzene	*	2.5-4.99%
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· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

111-76-2	2-butoxyethanol	NL	40-49.99%
1330-20-7	xylene	I	15-19.99%
100-41-4	ethylbenzene	D	2.5-4.99%

· **TLV (Threshold Limit Value)**

111-76-2	2-butoxyethanol	A3
1330-20-7	xylene	A4
112945-52-5	silicon dioxide	A4
100-41-4	ethylbenzene	A3

(Contd. on page 12)

**Product number PD3/99****Trade name: CLEAR SB BINDER**

(Contd. of page 11)

· *NIOSH-Ca (National Institute for Occupational Safety and Health)*

None of the ingredients is listed.

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** IVM Chemicals Srl· **Contact:** See emergency phone· **Date of preparation / last revision** 08/15/2022 / 35· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids . Category 2

Flammable Liquids 3: Flammable liquids . Category 3

Flammable Liquids 4: Flammable liquids . Category 4

Acute Toxicity - Oral 4: Acute toxicity . Category 4

Skin Irritation 2: Skin corrosion/irritation . Category 2

Eye Irritation 2A: Serious eye damage/eye irritation . Category 2A

Carcinogenicity 2: Carcinogenicity . Category 2

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) . Category 3

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) . Category 2

Aspiration Hazard 1: Aspiration hazard . Category 1

Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard . Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard . Category 3

· **Sources**

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL and following amendments

Agency ECHA web site

INRS Fiche Toxicologique

IARC International agency for research on cancer

· **\* Data compared to the previous version altered.**