ivm Chemicals
coatings & polymers technologies

# Safety Data Sheet
## acc. to OSHA HCS

Printing date 02/14/2024 Version number 1 Reviewed on 02/14/2024

## 1 Identification

· **Product identifier**
· **Product number** HUM5AC43
· **Trade name: CLEAR WB UV TOP-C 30SH**
· **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**

| | |
|---|---|
| Sensitization - Skin 1 | H317 May cause an allergic skin reaction. |
| Aquatic Acute 3 | H402 Harmful to aquatic life. |
| Aquatic Chronic 3 | H412 Harmful to aquatic life with long lasting effects. |

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

GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
2 propenoic acid, reaction products with dipentaerythritol
PHENYL ETHYL PHOSPHATE
· **Hazard statements**
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**

| | |
|---|---|
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P363 | Wash contaminated clothing before reuse. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**


Health = 0
Fire = 1
Reactivity = 0

(Contd. on page 2)

ivm Chemicals
coatings & polymers technologies

# Safety Data Sheet
## acc. to OSHA HCS



**Product number HUM5AC43**
**Trade name: CLEAR WB UV TOP-C 30SH**

(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

| | |
|---|---|
| HEALTH 0 | Health = 0 |
| FIRE 1 | Fire = 1 |
| REACTIVITY 0 | Reactivity = 0 |

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

| | | |
|---|---|---|
| 1384855-91-7 | 2 propenoic acid, reaction products with dipentaerythritol<br>Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1A, H317<br>Aquatic Acute 3, H402; Aquatic Chronic 3, H412 | 2.5-4.99% |
| 112-34-5 | 2-(2-butoxyethoxy)ethanol<br>Eye Irritation 2A, H319 | 1-2.49% |
| 84434-11-7 | PHENYL ETHYL PHOSPHATE<br>Aquatic Chronic 2, H411<br>Sensitization - Skin 1B, H317 | 1-2.49% |
| 5131-66-8 | 3-butoxypropan-2-ol<br>Skin Irritation 2, H315; Eye Irritation 2A, H319<br>Flammable Liquids 4, H227 | 0.5-1% |
| 108-01-0 | 2-dimethylaminoethanol<br>Flammable Liquids 3, H226<br>Acute Toxicity - Inhalation 3, H331<br>Skin Corrosion 1B, H314<br>Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312 | <0.5% |
| 34590-94-8 | (2-methoxymethylethoxy)propanol<br>Flammable Liquids 4, H227 | <1% |
| 68439-49-6 | c16-18 alcohols ethoxylated<br>Acute Toxicity - Oral 3, H301<br>Eye Damage 1, H318 | <0.5% |
| 36443-68-2 | Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl) propionate]<br>Aquatic Chronic 1, H410 (M=10) | ≥0.025-<0.1% |
| 3811-73-2 | pyridine-2-thiol 1-oxide, sodium salt<br>Acute Toxicity - Dermal 3, H311; Acute Toxicity - Inhalation 3, H331<br>Specific Target Organ Toxicity - Repeated Exposure 1, H372<br>Aquatic Acute 1, H400 (M=100); Aquatic Chronic 2, H411<br>Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317 | <0.0025% |

## 4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

(Contd. of page 2)

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

· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
Allergic reactions
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:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **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**
In case of fire, the following can be released:
Nitrogen oxides (NOx)
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**
Ensure adequate ventilation
Keep away from ignition sources
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
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.

(Contd. on page 4)

(Contd. of page 3)

· **Protective Action Criteria for Chemicals**

| · PAC-1: | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 30 ppm |
| 112945-52-5 | Silicon dioxide, chemically prepared | 18 mg/mį |
| 108-01-0 | 2-dimethylaminoethanol | 3.7 ppm |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | 150 ppm |
| 68439-49-6 | c16-18 alcohols ethoxylated | 3.8 mg/mį |
| 68439-49-6 | c16-18 alcohols ethoxylated | 3.8 mg/mį |

| · PAC-2: | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 33 ppm |
| 112945-52-5 | Silicon dioxide, chemically prepared | 100 mg/mį |
| 108-01-0 | 2-dimethylaminoethanol | 40 ppm |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | 1700* ppm |
| 68439-49-6 | c16-18 alcohols ethoxylated | 42 mg/mį |
| 68439-49-6 | c16-18 alcohols ethoxylated | 42 mg/mį |

| · PAC-3: | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 200 ppm |
| 112945-52-5 | Silicon dioxide, chemically prepared | 630 mg/mį |
| 108-01-0 | 2-dimethylaminoethanol | 72 ppm |
| 34590-94-8 | (2-methoxymethylethoxy)propanol | 9900** ppm |
| 68439-49-6 | c16-18 alcohols ethoxylated | 250 mg/mį |
| 68439-49-6 | c16-18 alcohols ethoxylated | 250 mg/mį |

* 
## 7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
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.
Take on temperature greater than 5 ° C
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **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 section 7.

(Contd. on page 5)

(Contd. of page 4)

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

| | |
|---|---|
| **112-34-5 2-(2-butoxyethoxy)ethanol** | |
| TLV | Long-term value: 10* ppm<br>*Inhalable fraction and vapor |
| **34590-94-8 (2-methoxymethylethoxy)propanol** | |
| PEL | Long-term value: 600 mg/mį, 100 ppm<br>Skin |
| REL | Short-term value: 900 mg/mį, 150 ppm<br>Long-term value: 600 mg/mį, 100 ppm<br>Skin |
| TLV | Long-term value: 50 ppm |

· **Regulatory information**
TLV: Guide to Occupational Exposure Values (TLV)
PEL: Guide to Occupational Exposure Values (OSHA PELs)
REL: Guide to Occupational Exposure Values (NIOSH RELs)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.

· **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.

(Contd. on page 6)

ivm Chemicals
coatings & polymers technologies

# Safety Data Sheet
## acc. to OSHA HCS



(Contd. of page 5)

· **Eye protection:** Goggles recommended during refilling.

* 

## 9 Physical and chemical properties

| | |
|---|---|
| · **Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Color:** | According to product specification |
| · **Odor:** | Characteristic |
| · **Odor threshold:** | Not determined. |
| · **pH-value:** | Mixture is non-polar/aprotic.<br>Range: 7 - 9 |
| · **Change in condition** | |
| · **Melting point/Melting range:** | Undetermined. |
| · **Boiling point/Boiling range:** | 100 °C (212 °F) |
| · **Flash point:** | 100 °C (212 °F) |
| · **Flammability (solid, gaseous):** | Not applicable. |
| · **Auto igniting:** | 225 °C (437 °F) |
| · **Decomposition temperature:** | Not determined. |
| · **Danger of explosion:** | Product does not present an explosion hazard. |
| · **Explosion limits:** | |
| · **Lower:** | 0.9 Vol % |
| · **Upper:** | 8.4 Vol % |
| · **Vapor pressure at 20 °C (68 °F):** | 1.3 hPa (1 mm Hg) |
| · **Density (+/- 0,03) at 20 °C (68 °F):** | 1.03 g/cmį (8.595 lbs/gal) |
| · **Relative density** | Not determined. |
| · **Vapor density** | Not determined. |
| · **Evaporation rate** | Not determined. |
| · **Solubility in / Miscibility with** | |
| · **Water:** | Fully miscible. |
| · **Partition coefficient (n-octanol/water):** | Not determined. |
| · **Viscosity:** | |
| · **Dynamic:** | Not determined. |
| · **Kinematic at 20 °C (68 °F):** | 60 s (ISO 6 mm) |
| · **Oxidising properties:** | N.A. |
| · **Solvent content:** | |
| · **Water:** | 62.5 % |
| · **VOC content:** | 2.94 %<br>30.3 g/l / 0.25 lb/gal |
| · **Solids content:** | 34.6 % |

· **Other information (HAPS)**

| | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 1-2.49% |
| 121-44-8 | triethylamine | <0.1% |



(Contd. on page 7)

(Contd. of page 6)

## 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** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** Acids, alkalis and oxidizing agents
· **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

| · LD/LC50 values that are relevant for classification: | | |
|---|---|---|
| **ATE (Acute Toxicity Estimate)** | | |
| Oral | LD50 | 85,570 mg/kg |
| Inhalative | LC50/4 ore/h/saat | 1,933 mg/l (mouse) |

| **1384855-91-7 2 propenoic acid, reaction products with dipentaerythritol** | | |
|---|---|---|
| Oral | LD50 | 2,001 mg/kg (mouse) |
| Dermal | LD50 | 2,001 mg/kg (rabbit) |
| **112-34-5 2-(2-butoxyethoxy)ethanol** | | |
| Oral | LD50 | 6,600 mg/kg (mouse) |
| Dermal | LD50 | 2,764 mg/kg (rabbit) |
| **5131-66-8 3-butoxypropan-2-ol** | | |
| Oral | LD50 | 3,300 mg/kg (mouse) |
| Dermal | LD50 | 8,001 mg/kg (mouse) |
| **108-01-0 2-dimethylaminoethanol** | | |
| Oral | LD50 | 1,183 mg/kg (mouse) |
| Dermal | LD50 | 1,219 mg/kg (rabbit) |
| Inhalative | LC50/4 ore/h/saat | 6.1 mg/l (mouse) |
| **34590-94-8 (2-methoxymethylethoxy)propanol** | | |
| Oral | LD50 | 5,135 mg/kg (mouse) |
| Dermal | LD50 | 9,510 mg/kg (rabbit) |
| **169117-72-0 2,5,8,11 Tetramethyl 6 dodecyn-Produktname : 5,8 Diol Ethoxylate** | | |
| Oral | LD50 | 2,001 mg/kg (mouse) |
| Dermal | LD50 | 2,001 mg/kg (rabbit) |
| **36443-68-2 Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]** | | |
| Oral | LD50 | 3,001 mg/kg (mouse) |
| Dermal | LD50 | 2,001 mg/kg (mouse) |
| **3811-73-2 pyridine-2-thiol 1-oxide, sodium salt** | | |
| Oral | LD50 | 500 mg/kg (ATE) |
| | | 500 mg/kg (mouse) |
| Dermal | LD50 | 790 mg/kg (ATE) |

(Contd. on page 8)

(Contd. of page 7)

| | | |
|---|---|---|
| Inhalative | LC50/4 ore/h/saat | 790 mg/kg (mouse)<br>0.5 mg/l (ATE)<br>0.51 mg/l (mouse) |

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
Irritant
May cause an allergic skin reaction.

· **Carcinogenic categories**

| · IARC (International Agency for Research on Cancer - Cl. 1 and 2) |
|---|
| None of the ingredients is listed. |

| · NTP (National Toxicology Program) |
|---|
| None of the ingredients is listed. |

| · OSHA-Ca (Occupational Safety & Health Administration) |
|---|
| None of the ingredients is listed. |

## 12 Ecological information

· **Toxicity** Harmful to aquatic life with long lasting effects.

| · Aquatic toxicity: | |
|---|---|
| **1384855-91-7 2 propenoic acid, reaction products with dipentaerythritol** | |
| EC50 | 101 mg/l (algae) (72 h) |
| | 35 mg/l (daphnia) (48 h) |
| LC50 (96 ore/h/saat) | 13 mg/l (Fish) |
| **112-34-5 2-(2-butoxyethoxy)ethanol** | |
| EC50 | 1,001 mg/l (daphnia) (48 h) |
| LC50 (96 ore/h/saat) | 1,300 mg/l (Leuciscus idus melanotus) |
| **5131-66-8 3-butoxypropan-2-ol** | |
| EC50 | 1,001 mg/l (algae) (96 h) |
| | 1,001 mg/l (daphnia) (48 h) |
| LC50 (96 ore/h/saat) | 1,000 mg/l (Fish) |
| **108-01-0 2-dimethylaminoethanol** | |
| EC50 | 66.1 mg/l (algae) (72 h) |
| | 98.4 mg/l (daphnia) (48 h) |
| **34590-94-8 (2-methoxymethylethoxy)propanol** | |
| EC50 | 970 mg/l (algae) (72 h) |
| | 1,919 mg/l (daphnia) (48 h) |
| LC50 (96 ore/h/saat) | 1,001 mg/l (Fish) |
| **36443-68-2 Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]** | |
| EC50 | 100 mg/l (algae) (72h) |
| | 101 mg/l (daphnia) (48h) |
| LC50 (96 ore/h/saat) | 43 mg/l (Fish) |

(Contd. on page 9)

(Contd. of page 8)

| 3811-73-2 pyridine-2-thiol 1-oxide, sodium salt | |
|---|---|
| EC50 | 0.46 mg/l (algae) (72 h) |
| | 0.022 mg/l (daphnia) (48 h) |
| LC50 (96 ore/h/saat) | 0.0066 mg/l (Fish) |

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

| · Substances Easily biodegradable | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | . |
| 5131-66-8 | 3-butoxypropan-2-ol | . |

· **Behavior in environmental systems:**

| · Bioaccumulative potential | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | Coefficiente di ripartizione n-ottanolo/acqua (Log Kow): 1 |
| 5131-66-8 | 3-butoxypropan-2-ol | Coefficiente di ripartizione n-ottanolo/acqua (Log Kow): 1,2 |

| · Mobility in soil | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | Il prodotto ha potenziale di mobilità molto alto. |

· **Ecotoxical effects:**
· **Remark:** Harmful to fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
· **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.

· **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** Not applicable
· **Note** Check viscosity and flash point at section 9

· **UN proper shipping name**
· **DOT, IMDG, IATA** Not applicable

· **Transport hazard class(es)**
· **DOT, ADR/RID, ADN, IMDG, IATA**
· **Class** Not applicable

(Contd. on page 10)

(Contd. of page 9)

| | |
|---|---|
| · **Packing group** | |
| · **DOT, IMDG, IATA** | Not applicable |
| · **Environmental hazards:** | |
| · **Marine pollutant:** | No |
| · **Special precautions for user** | Not applicable. |
| · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |
| · **UN "Model Regulation":** | Not applicable |

## 15 Regulatory information

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

· **Various regulations**

· **SARA**

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

None of the ingredients is listed.

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

| | | |
|---|---|---|
| 112-34-5 | 2-(2-butoxyethoxy)ethanol | 1-2.49% |
| 121-44-8 | triethylamine | <0.1% |

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

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

| | |
|---|---|
| 121-44-8 | triethylamine |

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

| | | |
|---|---|---|
| 1589-47-5 | 2-methoxypropanol | <0.01% |

· **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)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

| | | |
|---|---|---|
| 112945-52-5 | Silicon dioxide, chemically prepared | A4 |
| 121-44-8 | triethylamine | A4 |

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

None of the ingredients is listed.

(Contd. on page 11)

ivm Chemicals
coatings & polymers technologies

# Safety Data Sheet
## acc. to OSHA HCS



**Product number HUM5AC43**
**Trade name: CLEAR WB UV TOP-C 30SH**

(Contd. of page 10)

· ***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*** *02/14/2024*
· ***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 & Health*
*TLV: Threshold Limit Value*
*PEL: Permissible Exposure Limit*
*REL: Recommended Exposure Limit*
*Flammable Liquids 3: Flammable liquids ï Category 3*
*Flammable Liquids 4: Flammable liquids ï Category 4*
*Acute Toxicity - Oral 4: Acute toxicity ï Category 4*
*Acute Toxicity - Inhalation 3: Acute toxicity ï Category 3*
*Skin Corrosion 1B: Skin corrosion/irritation ï Category 1B*
*Skin Irritation 2: Skin corrosion/irritation ï Category 2*
*Eye Damage 1: Serious eye damage/eye irritation ï Category 1*
*Eye Irritation 2A: Serious eye damage/eye irritation ï Category 2A*
*Sensitization - Skin 1: Skin sensitisation ï Category 1*
*Sensitization - Skin 1A: Skin sensitisation ï Category 1A*
*Sensitization - Skin 1B: Skin sensitisation ï Category 1B*
*Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) ï Category 1*
*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard ï Category 1*
*Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard ï Category 3*
*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard ï Category 1*
*Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard ï Category 2*
*Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard ï 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.***