

**SECTION 1: Identification of the substance/mixture and of the company****1.1 Product identification:**

Product name: SPY SPRAY WHITE

Product number: 852-5510

**1.2. Relevant identified use of the substance/mixture**

Relevant identified use: Sanding

**1.3. Contact data of the company issuing the material safety data sheet:**

Kovax Europe B.V.

Bedrijvenpark Twente 49

7602 KC Almelo

The Netherlands

Phone: +31 53 434 31 31

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E-mail: info@kovax.eu

**SECTION 2: Hazard(s) identification****2.1 Classification of the substance or mixture:**

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Eye irritation, category 2	H319	Causes serious eye irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

## 2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

H222

Extremely flammable aerosol.

H229

Pressurized container: may burst if heated.

H319

Causes serious eye irritation.

H336

May cause drowsiness or dizziness.

EUH066

Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P210

Keep away from heat / sparks / open flames / hot surfaces.  
No smoking.

P211

Do not spray on an open flame or other ignition source.

P251

Pressurized container: do not pierce or burn, even after use.

P264

Wash . . . thoroughly after handling.

P280

Wear protective gloves / protective clothing / eye protection / face protection.

P304+P340

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312

Call a POISON CENTER or doctor / physician if you feel unwell.

P410+P412

Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

Contains:

ACETONE

N-BUTYL ACETATE

NAFTA SOLVENTE (PETROLIO), AROMATICA LEGGERA

## 2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**SECTION 3: Composition/information on ingredients**
**3.1 Substances**

Information not relevant.

**3.2 Mixtures**

ACETONE					
CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
67-64-1	200-662-2	606-001-00-8	01-2119471330-49	30 - 50	H225 Flam. Liq. 2  H319 Eye Irrit. 2  EUH066 STOT SE 3 H336,

  

PROPANE					
CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
74-98-6	200-827-9	601-003-00-5		9 - 30	H220 Flam. Gas 1  Note U

  

BUTANE					
CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
106-97-8	203-448-7	601-004-00-0	-	5 - 9	H220 Flam. Gas 1  Note C U

  

ISOBUTANO					
CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
75-28-5	200-857-2	601-004-00-0		1 - 5	H220 Flam. Gas 1  Note C U

**N-BUTYL ACETATE**

CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
123-86-4	204-658-1	607-025-00-1	01-2119485493-29	0,5 - 1	H226 Flam. Liq. 3  H336 STOT SE 3  EUH066

**2-METHOXY-1-METHYLETHYL ACETATE**

CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
108-65-6	203-603-9	607-195-00-7	01-2119475791-29	0 - 0,5	H226 Flam. Liq. 3

**NAFTA SOLVENTE (PETROLIO), AROMATICA LEGGERA**

CAS-number	EC-number	INDEX	Reg. no.	Conc. %	Classification 1272/2008 (CLP)
64742-95-6	265-199-0	649-356-00-4	2119455851-35	0 - 0,5	H226 Flam. Liq. 3,  H304 Asp. Tox. 1  H335 STOT SE 3  H336 STOT SE 3,  H411 Aquatic Chronic 2,  Note P

Note: Upper limit is not included into the range.  
The full wording of hazard (H) phrases is given in section 16 of the sheet.

**SECTION 4: First-aid measures**
**4.1 Description of first aid measures**

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash

contaminated clothing before using it again.

**INHALATION:** Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

#### **4.2 Most important symptoms and effects, both acute and delayed**

For symptoms and effects caused by the contained substances, see chap. 11.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

Information not available.

### **SECTION 5: Fire-fighting measures**

#### **5.1 Extinguishing media**

Suitable extinguishing equipment:

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

Unsuitable extinguishing equipment

None in particular.

#### **5.2 Special hazards arising from the substance or mixture**

Hazards caused by exposure in the event of fire:

If overheated, aerosol cans can deform, explode and be propelled considerable distances.

Put a protective helmet on before approaching the fire. Do not breathe combustion products.

#### **5.3 Advice for fire-fighters**

General information:

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.

Special protective equipment for fire-fighters:

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

### **SECTION 6: Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

### 6.2 Environmental precautions

Do not disperse in the environment.

### 6.3 Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C, away from any combustion sources.

### 7.3 Specific end uses

Information not available.

## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters

Regulatory References:

AUS Österreich	Grenzwerteverordnung 2011 - GKV 2011
BEL Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
CHE Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail 2012. / Grenzwerte am Arbeitsplatz
DEU Deutschland	MAK-und BAT-Werte-Liste 2012
ESP España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102

GRB United Kingdom

IRL Éire

ITA Italia

NLD Nederland

EU OEL EU

TLV-ACGIH

EH40/2005 Workplace exposure limits

Code of Practice Chemical Agent Regulations 2011

Decreto Legislativo 9 Aprile 2008, n.81

Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18

Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

ACGIH 2014

**ACETONE**

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm
MAK	AUS	1200	500	4800	2000
VLEP	BEL	1210	500	2420	1000
VEL	CHE	1200	500	2400	1000
MAK	CHE	1200	500	2400	1000
AGW	DEU	1200	500	2400	1000
MAK	DEU	1200	500	2400	1000
VLA	ESP	1210	500		
VLEP	FRA	1210	500	2420	1000
WEL	GRB	1210	500	3620	1500
OEL	IRL	1210	500		
TLV	ITA	1210	500		
OEL	NLD	1210		2420	
OEL	EU	1210	500		
TLV-ACGIH		1187	500	1781	750

**PROPANE**

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm
MAK	AUS	1900	800	3800	1600
AGW	DEU	1800	1000	7200	4000
MAK	DEU	1800	1000	7200	4000

TLG-ACGIH			1000		
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**BUTANE**

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
MAK	AUS	2900	800	3800	1600	
VLEP	BEL		1000			SKIN.
VEL	CHE	1900	800			
MAK	CHE	1900	800			
AGW	DEU	2400	1000	9600	4000	
MAK	DEU	2400	1000	9600	4000	
VLA	ESPP		800			
VLEP	FRA	1900	800			
WEL	GRB	1450	600	1810	750	
OEL	IRL		1000		750	
OEL	NLD	1430				
TLV-ACGIH				2377	1000	

**N-BUTYL ACETATE**

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
MAK	AUS	480	100	480	100	
VLEP	BEL	723	150	964	200	
VEL	CHE	480	100	960	200	
MAK	CHE	480	100	960	200	
MAK	DEU	480	100	960	200	
VLA	ESP	724	150	965	200	
VLEP	FRA	710	150	940	200	
WEL	GRB	724	150	966	200	
OEL	IRL	710	150	950	200	
OEL	NLD	150				
TLV-ACGIH		713	150	950	200	



**2-METHOXY-1-METHYLETHYL ACETATE**

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
MAK	AUS	275	50	550	100	SKIN.
VLEP	BEL	275	50	550	100	SKIN.
AWG	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
VLA	ESP	275	50	550	100	SKIN.
VLEP	FRA	275	50	550	100	SKIN.
WEL	GRB	274	50	548	100	
OEL	IRL	275	50	550	100	SKIN.
TLV	ITA	275	50	550	100	SKIN.
OEL	NLD	550				
OEL	EU	275	50	550	100	SKIN.

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

**8.2 Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

**HAND PROTECTION**

None required.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387). Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

#### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

#### ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties.

Appearance	aerosol
Colour	white
Odour	characteristic of solvent
Odour threshold.	Not available.
pH.	Not available.
Melting point / freezing point.	Not available.
Initial boiling point.	Not applicable.
Boiling range.	Not available.
Flash point.	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	0,710 Kg/l
Solubility	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.

Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

## 9.2. Other information.

VOC (Directive 2004/42/EC) : 88,71 % - 629,84 g/litre.

VOC (volatile carbon) : 64,31 % - 456,62 g/litre.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

1-METHOXY-2-PROPANOL ACETATE: stable but with the air it may slowly develop peroxides that explode with an increase in temperature. ACETONE: decomposes under the effect of heat.

N-BUTYL ACETATE: decomposes readily with water, especially when warm.

### 10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions.

No hazardous reactions are foreseeable in normal conditions of use and storage.

1-METHOXY-2-PROPANOL ACETATE: may react violently with oxidising agents and strong acids and alkaline metals.

ACETONE: risk of explosion on contact with: bromine trifluoride, difluoro dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate. Can react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl chloride, chromosulphuric acid, fluorine, strong oxidising agents. Develops flammable gases with nitrosyl perchlorate.

N-BUTYL ACETATE: risk of explosion on contact with: strong oxidising agents. Can react dangerously with alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with the air.

### 10.4. Conditions to avoid.

Avoid overheating.

1-METHOXY-2-PROPANOL ACETATE: store in an inert atmosphere, sheltered from moisture because

se it hydrolyses easily.

ACETONE: avoid exposure to sources of heat and naked flames.

N-BUTYL ACETATE: avoid exposure to moisture, sources of heat and naked flames.

#### 10.5. Incompatible materials.

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

1-METHOXY-2-PROPANOL ACETATE: oxidising agents, strong acids and alkaline metals.

ACETONE: acid and oxidising substances.

N-BUTYL ACETATE: water, nitrates, strong oxidising agents, acids and alkalis and potassium tert-butoxide.

#### 10.6. Hazardous decomposition products.

ACETONE: ketenes and other irritating compounds.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.

Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

This product may have a degreasing action on the skin, producing dryness and chapped skin after repeated exposure.

1-METHOXY-2-PROPANOL ACETATE: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic

effects have been reported in man.

N-BUTYL ACETATE:in humans the substance's vapours cause irritation to the eues and nose. In the event of repeated exposure, there is skin irritation, dermatosis (with driness and flaking of the skin) and keratitis.

#### 2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Oral).8530 mg/kg Rat

LD50 (Dermal).> 5000 mg/kg Rat

#### N-BUTYL ACETATE

LD50 (Oral).> 6400 mg/kg Rat

LD50 (Dermal).> 5000 mg/kg Rabbit

LC50 (Inhalation).21,1 mg/l/4h Rat

## SECTION 12: Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil, sewers and waterways. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

### 12.1. Toxicity.

#### 2-METHOXY-1-METHYLETHYL ACETATE

LC50 - for Fish. 134 mg/l/96h Oncorhynchus mykiss

EC50 - for Crustacea. 408 mg/l/48h Daphnia Magna

#### ACETONE

LC50 - for Fish. 4144 mg/l/96h Pesce

EC50 - for Crustacea. 1680 mg/l/48h Daphnia

EC50 - for Algae / Aquatic Plants. 302 mg/l/72h Alga

### 12.2. Persistence and degradability.

#### 2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water. > 10000 mg/l

Rapidly biodegradable.

#### BUTANE

Solubility in water. mg/l 0,1 - 100

Rapidly biodegradable.

#### PROPANE

Solubility in water. mg/l 0,1 - 100

Rapidly biodegradable.

#### ACETONE

Rapidly biodegradable.

#### N-BUTYL ACETATE

Solubility in water. mg/l 1000 - 10000

### 12.3. Bioaccumulative potential.

#### 2-METHOXY-1- METHYLETHYL ACETATE

Partition coefficient: n- octanol/water. 1,2

#### BUTANE

Partition coefficient: n- octanol/water. 1,09

#### PROPANE

Partition coefficient: n- octanol/water. 1,09

#### ACETONE

Partition coefficient: n- octanol/water. -0,23

BCF. 3

#### N-BUTYL ACETATE

Partition coefficient: n- octanol/water. 2,3

BCF. 15,3

### 12.4. Mobility in soil.

#### N-BUTYL ACETATE

Partition coefficient: soil/water. <3

### 12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

**12.6. Other adverse effects.**

Information not available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods.**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. Avoid littering. Do not contaminate soil, sewers and waterways. Waste transportation may be subject to ADR restrictions.

**Contaminated packaging**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14: Transport information****14.1. UN number.**

ADR / RID, IMDG, IATA: 1950

**14.2. UN proper shipping name.**

ADR / RID: AEROSOLS, FLAMMABLE  
IMDG: AEROSOLS  
IATA: AEROSOLS, FLAMMABLE

**14.3. Transport hazard class(es).**

ADR / RID: Class: 2 Label: 2.1



IMDG: Class: 2 Label: 2.1



IATA: Class: 2 Label: 2.1

**14.4. Packing group.**

ADR / RID, IMDG, IATA: -

**14.5. Environmental hazards.**

ADR / RID: NO

#### 14.6. Special precautions for user.

ADR/RID	HIN - Kemler: -- Special Provision: -	Limited Quantities 1 L	Tunnel restriction code (D)
IMDG:	EMS: F-D, S-U	Limited Quantities 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Pass.:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special Instructions:	A145, A167, A802	

#### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.

Information not relevant.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

Seveso category.

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Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

None.

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.



VOC (Directive 2004/42/EC)

Special finishes.

Limit value: 840,00

VOC of product : 629,84

### 15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

## SECTION 16: Other information

### Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1	Flammable gas, category 1
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurized container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

### LEGEND:

ADR: European Agreement concerning the carriage of Dangerous goods by Road

CAS NUMBER: Chemical Abstract Service Number

CE50: Effective concentration (required to induce a 50% effect)

CE NUMBER: Identifier in ESIS (European archive of existing substances)

CLP: EC Regulation 1272/2008

DNEL: Derived No Effect Level

EmS: Emergency Schedule

GHS: Globally Harmonized System of classification and labeling of chemicals  
IATA DGR: International Air Transport Association Dangerous Goods Regulation  
IC50: Immobilization Concentration 50%  
IMDG: International Maritime Code for dangerous goods  
IMO: International Maritime Organization  
INDEX NUMBER: Identifier in Annex VI of CLP  
LC50: Lethal Concentration 50%  
LD50: Lethal dose 50%  
OEL: Occupational Exposure Level  
PBT: Persistent bioaccumulative and toxic as REACH Regulation  
PEC: Predicted environmental Concentration  
PEL: Predicted exposure level  
PNEC: Predicted no effect concentration  
REACH: EC Regulation 1907/2006  
RID: Regulation concerning the international transport of dangerous goods by train  
TLV: Threshold Limit Value  
TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.  
TWA STEL: Short-term exposure limit  
TWA: Time-weighted average exposure limit  
VOC: Volatile organic Compounds  
vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation  
WGK: Water hazard classes (German).

#### GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament - The Merck Index. - 10th Edition
- Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - ECHA website



#### Note for users

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Provide appointed staff with adequate training on how to use chemical products.

#### Changes to previous review:

The following sections were modified:

08 / 09 / 15.