

Printing date 06/19/2017

Version number 2

Reviewed on 06/19/2017

#### 1 Identification

- · Product identifier
  - · Product number LQA607
  - · Trade name: PU CLEAR INSULATOR
    - · 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



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



### GHS08 Health hazard

Resp. Sens. 1 H334	May cause alleray of	or asthma symptoms	or breathing difficulties if

inhaled.

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated

exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



# GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

#### · 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

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#### · Hazard-determining components of labeling:

toluene

4,4'-methylenediphenyl diisocyanate

Aromatic polyisocyanate

isobutyl acetate

4-isocyanatesulphonyltoluene

m-tolylidene diisocyanate

#### · Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

#### · Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

#### · Classification system:

· NFPA ratings (scale 0 - 4)



Health = 1 Fire = 3

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = \*1

Fire = 3

Reactivity = 0

### 3 Composition/information on ingredients

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

			•			
· Dangerou	s components:					
141-78-6	ethyl acetate					30-49.9%
	🚸 Flam. Liq. 2,	H225				
	Eye Irrit. 2A,	H319; STO	)T SE 3, I	H336		

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108-88-3		Contd. of page 2) 12.5-15%
	<ul> <li>Flam. Liq. 2, H225</li> <li>Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304</li> <li>Skin Irrit. 2, H315; STOT SE 3, H336</li> <li>Aquatic Chronic 3, H412</li> </ul>	
53317-61-6	Aromatic polyisocyanate  © Eye Irrit. 2A, H319; Skin Sens. 1, H317	10-12.49%
110-19-0	isobutyl acetate  Flam. Liq. 2, H225 STOT SE 3, H336	10-12.49%
101-68-8	4,4'-methylenediphenyl diisocyanate  Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	5-9.99%
108-65-6	2-methoxy-1-methylethyl acetate  Flam. Liq. 3, H226	1-2.49%
4083-64-1	4-isocyanatesulphonyltoluene  Resp. Sens. 1, H334  Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	0.1-<0.5%
26471-62-5	m-tolylidene diisocyanate	<0.1%

### 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.

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.

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.



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## 5 Fire-fighting measures

#### · Extinguishing media

- · Suitable extinguishing agents: 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

Formation of toxic gases is possible during heating or in case of fire.

· 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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

- · Environmental precautions: 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.	:	
141-78-6	ethyl acetate	1,200 ppm
108-88-3	toluene	67 ppm
110-19-0	isobutyl acetate	450 ppm
101-68-8	4,4'-methylenediphenyl diisocyanate	0.45 mg/m3
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
· PAC-2	•	
141-78-6	ethyl acetate	1,700 ppn
108-88-3	toluene	560 ppm
110-19-0	isobutyl acetate	1300* ppn
101-68-8	4,4'-methylenediphenyl diisocyanate	5 mg/m3
108-65-6	6 2-methoxy-1-methylethyl acetate	
· PAC-3	•	
141-78-6	ethyl acetate	10000** ppn
108-88-3	toluene	3700* ppm
110-19-0	isobutyl acetate	7500** ppm
101-68-8	4,4'-methylenediphenyl diisocyanate	55 mg/m3
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 108-65-6
 2-methoxy-1-methylethyl acetate
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 5000\* ppm

## 7 Handling and storage

#### · Handling:

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Protect against electrostatic charges.

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.

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

- · Storage:
  - Requirements to be met by storerooms and receptacles:

Store in a cool, well-ventilated area, away from heat and sources of ignition

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.

Store in cool, dry conditions in well sealed receptacles.

· 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:

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.

141-78	141-78-6 ethyl acetate					
PEL	Long-term value: 1400 mg/m³, 400 ppm					
REL	Long-term value: 1400 mg/m³, 400 ppm					
TLV	Long-term value: 1440 mg/m³, 400 ppm					
110-19	9-0 isobutyl acetate					
PEL	Long-term value: 700 mg/m³, 150 ppm					
REL	Long-term value: 700 mg/m³, 150 ppm					
TLV	Short-term value: 172 mg/m³, 150 ppm					
	Long-term value: 238 mg/m³, 50 ppm					
101-68	3-8 4,4'-methylenediphenyl diisocyanate					
PEL	Ceiling limit value: 0.2 mg/m³, 0.02 ppm					
REL	Long-term value: 0.05 mg/m³, 0.005 ppm					
	Ceiling limit value: 0.2* mg/m³, 0.02* ppm					
	*10-min					

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TLV Long-term value: 0.051 mg/m³, 0.005 ppm

108-65-6 2-methoxy-1-methylethyl acetate

WEEL Long-term value: 50 ppm

26471-62-5 m-tolylidene diisocyanate

PEL Ceiling limit value: 0.14 mg/m³, 0.02 ppm

REL LFC

TLV Short-term value: (0.14) NIC-0.021\* mg/m³, (0.02) NIC-0.003\* ppm

Long-term value: (0.036) NIC-0.007\* mg/m³, (0.005) NIC-0.001\* ppm

\*(IFV) SEN; NIC-Skin; A3

#### · Ingredients with biological limit values:

#### 108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

· 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.

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.

Pregnant women should strictly avoid inhalation or skin contact.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· 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.

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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

Physical and chemical properties	
Information on basic physical and chemic	cal properties
· General Information	
· Appearance: · Form:	Fluid
· Color:	According to product specification
· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	77 °C (171 °F)
· Flash point:	-4 °C (25 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	315 °C (599 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation explosive air/vapor mixtures are possible.
· Explosion limits:	
· Lower:	1.2 Vol %
· Upper:	11.5 Vol %
· Vapor pressure at 20 °C (68 °F):	97 hPa (73 mm Hg)
· Density at 20 °C (68 °F):	0.994 g/cm³ (8.295 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
· Kinematic at 20 °C (68 °F):	40 s (ISO 4 mm)
· Oxidising properties:	N.A.



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· Solvent co · VOC o	ontent: content:	66.1 % 656.6 g/l / 5.48 lb/gl	
· Solids content:		33.9 %	
· Other infor	mation (HAPS)		
108-88-3			12,5-15%
101-68-8	4,4'-methylenediphenyl diisocyar	nate	5-9,99%
26471-62-5	m-tolylidene diisocyanate		<0.1%
· Other infor	mation	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 strong acids and oxidizing agents.

Vapours may form explosive mixtures with air

- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- Hazardous decomposition products:

in case of possible formation of combustion:

Carbon monoxide and carbon dioxide

## 11 Toxicological information

- · Information on toxicological effects
  - · Acute toxicity:

• <i>LD</i> /.	LC50 value	s that are relevant for classification:
141-78-6	ethyl aceta	ate
Oral	LD50	4934 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
Dermal	LD50	20001 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
Inhalative	LC50/4 h	1600 mg/l (rat/szczur/mouse/souris/Maus/ratón)
	LC0	22.6 ppm (mouse)
108-88-3	toluene	
Oral	LD50	5000 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
Dermal	LD50	12124 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
Inhalative	LC50/4 h	25.7 mg/l (rat/szczur/mouse/souris/Maus/ratón)
53317-61-	6 Aromati	c polyisocyanate
Oral	LD50	5001 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
110-19-0 i	sobutyl a	cetate
Oral	LD50	13400 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
Dermal	LD50	17401 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
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Inhalative	LC50/4 h	31 mg/l (rat/szczur/mouse/souris/Maus/ratón)		
101-68-8 4	1,4'-methy	lenediphenyl diisocyanate		
Oral	LD50	2001 mg/kg (rat/szczur/mouse/souris/Maus/ratón)		
Dermal	LD50	9401 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)		
108-65-6 2	2-methoxy	v-1-methylethyl acetate		
Oral	LD50	8532 mg/kg (rat/szczur/mouse/souris/Maus/ratón)		
Dermal	LD50	5001 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)		
Inhalative	LC50/4 h	35.7 mg/l (rat/szczur/mouse/souris/Maus/ratón)		
26471-62-	26471-62-5 m-tolylidene diisocyanate			
Oral	LD50	5110 mg/kg (rat/szczur/mouse/souris/Maus/ratón)		
Dermal	LD50	9401 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)		
Inhalative	LC50/4 h	0.107 mg/l (rat/szczur/mouse/souris/Maus/ratón)		

- · Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - · on the eye: Irritating effect.
- · Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· Additional toxicological information:

Harmful

Irritant

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer.

Suspected of damaging the unborn child.

May cause respiratory irritation.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

Contains isocyanates. May produce an allergic reaction.

#### · Carcinogenic categories

· IA	· IARC (International Agency for Research on Cancer - Cl. 1 and 2)				
26471-62-5	m-tolylidene diisocyanate		2B		
98-88-4	benzoyl chloride		2A		
$\cdot NT$	· NTP (National Toxicology Program)				
26471-62-5	m-tolylidene diisocyanate	<0.	.1%		
· OSHA-Ca (Occupational Safety & Health Administration)					
None of the ingredients is listed.					

#### · Sensitisation

Monomers / polymers isocyanate

Particular characteristics / effects; prolonged exposure may irritate the eyes, nose, throat and respiratory tract.

Isocyanate exposure may result in the delayed appearance of respiratory disorders, cough or asthma. Sensitive individuals may show exposure symptoms to isocyanates below workplace TLV values. Prolonged skin contact may result cause irritation and dehydration.



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## 12 Ecological information

### · Toxicity

· TOXICITY	· TOXICHY						
· Aquatic t	· Aquatic toxicity:						
141-78-6 et	141-78-6 ethyl acetate						
EC50	165 mg/l (daphnia) (48 h)						
LC50 (96h)	230 mg/l (Fish)						
108-88-3 to	luene						
EC50	134 mg/l (algae) (96 h)						
	3.78 mg/l (daphnia) (48 h)						
LC50 (96h)	5.5 mg/l (Fish)						
110-19-0 is	obutyl acetate						
EC50	370 mg/l (algae) (72 h)						
	25 mg/l (daphnia)						
LC50 (96h)	17 mg/l (Fish)						
101-68-8 4,	4'-methylenediphenyl diisocyanate						
EC50	1001 mg/l (daphnia) (24 h)						
LC50 (96h)	1001 mg/l (Fish) (96 h)						
108-65-6 2-	methoxy-1-methylethyl acetate						
EC50	1001 mg/l (algae) (72 h)						
	501 mg/l (daphnia) (48 h)						
LC50 (96h)	134 mg/l (Fish)						
26471-62-5	m-tolylidene diisocyanate						
EC50	12.5 mg/l (daphnia) (48h)						
LC50 (96h)	133 mg/l (Leuciscus idus melanotus)						

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

· Substa	nces Easily biodegradable	
141-78-6	ethyl acetate	
108-88-3	toluene	
110-19-0	isobutyl acetate	
108-65-6	2-methoxy-1-methylethyl acetate	
	_	

#### · 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.

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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.

UN-Number		
· DOT	NA 1263	
· IMDG, IATA	UN1263	
UN proper shipping name		
·DOT	Paint	
· IMDG, IATA	PAINT	
Transport hazard class(es)		
$\cdot$ DOT		
FLAMMARIE LIQUID		
3		
· Class	3 Flammable liquids	
· Label	3 Hammable liquids	
· Class	3 Flammable liquids	
· Label	3	
· IMDG, IATA		
· Class	3 Flammable liquids	
· Label	3	
Packing group		
· DOT, IMDĠ, IATA	II .	
Environmental hazards:		
· Marine pollutant:	No	
Special precautions for user	Warning: Flammable liquids	
· Danger code (Kemler):	33	
· EMS Number:	F-E, <u>S-E</u>	
· Stowage Category	В	
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	
Transport/Additional information:		
· IMDG		
· Limited quantities (LQ)	5L	



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(Contd. of page 11) Code: E2 · Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 Maximum net quantity per outer packaging: 500 ml · UN "Model Regulation": UN 1263 PAINT, SPECIAL PROVISION 640D, 3, II

### 15 Regulatory information

· SARA

· Sectio	n 355 (extremely hazardous substances):	
None of the	ingredients is listed.	
· Sectio	n 313 (Specific toxic chemical listings) :	
108-88-3	toluene	12,5-15%
	4,4'-methylenediphenyl diisocyanate	5-9,99%
26471-62-5	m-tolylidene diisocyanate	<0.1%
98-88-4	benzoyl chloride	<0.01%

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

26471-62-5 m-tolylidene diisocyanate <0.1%

· Chemicals known to cause reproductive toxicity for females:

70657-70-4 2-methoxypropyl acetate < 0.01%

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

108-88-3 toluene 12,5-15%

· EPA	(Environmental Protection Agency)			
108-88-3	oluene	11	12,5	5-15%
101-68-8	1,4'-methylenediphenyl diisocyanate	D, CBD	5-9,	,99%
· TLV	(Threshold Limit Value established by ACGIH)			
108-88-	3 toluene			A4
26471-62-	m-tolylidene diisocyanate			(A4)
98-88-	benzoyl chloride			A4
· NIO	SH-Ca (National Institute for Occupational Safety and Health)			

### · National regulations:

26471-62-5 m-tolylidene diisocyanate

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.

< 0.1%



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### 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 06/19/2017 / 1
  - · Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids - Category 2

Flam. Liq. 3: Flammable liquids – Category 3 Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

Resp. Sens. 1: Respiratory sensitisation - Category 1

Skin Sens. 1: Skin sensitisation - Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

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