

1 Identification

- **Product identifier**
 - *Product number* TO96
 - *Trade name:* **CLEAR 10SH POLYURETHANE**
- **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

Carc. 2 H351 Suspected of causing cancer.

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **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:*

ethylbenzene

toluene

- *Hazard statements*

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

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· **Precautionary statements**

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMS-ratings (scale 0 - 4)**

HEALTH	2	Health = *2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

1330-20-7	xylene	30-49.9%
	Flam. Liq. 3, H226 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	
100-41-4	ethylbenzene	5-9.99%
	Flam. Liq. 2, H225 Carc. 2, H351 Acute Tox. 4, H332	
141-78-6	ethyl acetate	2.5-4.99%
	Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	
108-65-6	2-methoxy-1-methylethyl acetate	1-2.49%
	Flam. Liq. 3, H226	
110-19-0	isobutyl acetate	1-2.49%
	Flam. Liq. 2, H225	
108-88-3	toluene	1-2.49%
	Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	
64-17-5	ethanol	0.5-<1%
	Flam. Liq. 2, H225	
64742-95-6	Solvent naphtha (petroleum), light arom.	0.1-<0.5%
	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 STOT SE 3, H335-H336	

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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.

· **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.

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

· **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, 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**

· **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.

· **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.

Do not flush with water or aqueous cleansing agents

· **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.

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7 Handling and storage

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

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 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:

1330-20-7 xylene

PEL Long-term value: 435 mg/m³, 100 ppm

REL Short-term value: 655 mg/m³, 150 ppm

Long-term value: 435 mg/m³, 100 ppm

TLV Short-term value: 651 mg/m³, 150 ppm

Long-term value: 434 mg/m³, 100 ppm

BEI

100-41-4 ethylbenzene

PEL Long-term value: 435 mg/m³, 100 ppm

REL Short-term value: 545 mg/m³, 125 ppm

Long-term value: 435 mg/m³, 100 ppm

TLV Long-term value: 87 mg/m³, 20 ppm

BEI

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

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

WEEL Long-term value: 50 ppm

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110-19-0 isobutyl acetate

PEL	Long-term value: 700 mg/m ³ , 150 ppm
REL	Long-term value: 700 mg/m ³ , 150 ppm
TLV	Long-term value: 713 mg/m ³ , 150 ppm

108-88-3 toluene

PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	Long-term value: 75 mg/m ³ , 20 ppm BEI

· Ingredients with biological limit values:

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	0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)
-	Medium: end-exhaled air Time: not critical Parameter: Ethyl benzene (semi-quantitative)

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.
Avoid contact with the skin.

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Avoid contact with the eyes and skin.

· **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.

· **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

· **Odour 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 of explosive air/vapor mixtures are possible.

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· Explosion limits:		
· Lower:		1.0 Vol %
· Upper:		11.5 Vol %
· Vapor pressure at 20 °C (68 °F):		97 hPa (73 mm Hg)
· Density at 20 °C (68 °F):		0.977 g/cm³ (8.153 lbs/gal)
· Relative density		Not determined.
· Vapour 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):		55 s (ISO 6 mm)
· Solvent content:		
· Water:		0.2 %
· VOC content:		52.4 %
		511.8 g/l / 4.27 lb/gl
· Solids content:		47.4 %
· Other information (HAPS)		
1330-20-7	xylene	30-49.9%
100-41-4	ethylbenzene	5-9,99%
108-88-3	toluene	1-2,49%

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:**

· LD/LC50 values that are relevant for classification:		
1330-20-7 xylene		
Oral	LD50	4300 mg/kg (rat/szczur/mouse/souris/Maus/ratón)

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Dermal	LD50	2000 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
100-41-4 ethylbenzene		
Oral	LD50	3500 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
Dermal	LD50	17800 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
141-78-6 ethyl acetate		
Oral	LD50	4934 mg/kg (rabbit/królik/Kaninchen/conejo/lapin)
Dermal	LD50	>20000 mg/kg (Con)
Inhalative	LC0/6 h	>22.5 ppm (mouse)
	LC50/4 h	1600 mg/l (rat/szczur/mouse/souris/Maus/ratón)
108-65-6 2-methoxy-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	10.8 mg/l (rat/szczur/mouse/souris/Maus/ratón) (6 h)
	LC50/4 h	35.7 mg/l (rat/szczur/mouse/souris/Maus/ratón)
110-19-0 isobutyl acetate		
Oral	LD50	13400 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
Dermal	LD50	17401 mg/kg (Con)
Inhalative	LC50/4 h	31 mg/l (rat/szczur/mouse/souris/Maus/ratón)
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	5320 mg/l (mouse) (4 h)
64-17-5 ethanol		
Oral	LD50	7060 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
Dermal	LD50	20000 mg/kg (Con)
Inhalative	LC50/4 h	20000 mg/l (rat/szczur/mouse/souris/Maus/ratón)
64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	LD50	>6800 mg/kg (rat/szczur/mouse/souris/Maus/ratón)
Dermal	LD50	>3400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat/szczur/mouse/souris/Maus/ratón)

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** No irritating effect.

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

· **Additional toxicological information:**

Causes skin irritation.

Harmful

Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1330-20-7	xylene	3
100-41-4	ethylbenzene	2B
112926-00-8	Precipitated silica (Silica-Amorphous)	3
108-88-3	toluene	3
14808-60-7	Quartz (SiO ₂)	1

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· NTP (National Toxicology Program)		
14808-60-7	Quartz (SiO ₂)	K
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

12 Ecological information

· **Toxicity**

· Aquatic toxicity:	
1330-20-7 xylene	
EC50	1 mg/l (daphnia)
141-78-6 ethyl acetate	
EC50	164 mg/l (daphnia)
LC50 (96h)	(daphnia)
108-65-6 2-methoxy-1-methylethyl acetate	
EC50	408 mg/l (daphnia) (48 h)
110-19-0 isobutyl acetate	
EC50	25 mg/l (daphnia)
108-88-3 toluene	
EC50	134 mg/l (algae)
	3.78 mg/l (invertebrates)

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

· **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.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT**

NA1263

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· IMDG, IATA	UN1263
· UN proper shipping name	
· DOT	Paint
· IMDG, IATA	PAINT
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids
· Label	3
· Class	3 Flammable liquids
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E, S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN1263, Paint, special provision 640H, 3, III

15 Regulatory information

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

Requirements of Federal Register

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· **SARA**

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

None of the ingredients is listed.

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

1330-20-7	xylene
100-41-4	ethylbenzene
108-88-3	toluene
78-93-3	butanone

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

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-41-4	ethylbenzene
14808-60-7	Quartz (SiO ₂)

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

108-88-3	toluene
70657-70-4	2-methoxypropyl acetate

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

None of the ingredients is listed.

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

108-88-3	toluene
64-17-5	ethanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

1330-20-7	xylene	I
100-41-4	ethylbenzene	D
108-88-3	toluene	II

· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3
108-88-3	toluene	A4
64-17-5	ethanol	A3
14808-60-7	Quartz (SiO ₂)	A2

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

14808-60-7	Quartz (SiO ₂)
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· **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

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Safety Data Sheet

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- **Contact:** See emergency phone
- **Date of preparation / last revision** 08/27/2014 / 16
- **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
 - Flam. Liq. 2: Flammable liquids, Hazard Category 2
 - Flam. Liq. 3: Flammable liquids, Hazard Category 3
 - Acute Tox. 4: Acute toxicity, Hazard Category 4
 - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 - Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 - Carc. 2: Carcinogenicity, Hazard Category 2
 - Repr. 2: Reproductive toxicity, Hazard Category 2
 - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 - STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 - Asp. Tox. 1: Aspiration hazard, Hazard Category 1
 - Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
- **Sources**
 - Directive 1999/45/EC and following amendments
 - Directive 67/548/EEC and following amendments and adjustments
 - Agency ECHA web site
 - INRS Fiche Toxicologique
 - IARC International agency for research on cancer
- *** Data compared to the previous version altered.**

USA