


## 1 Identification


- **Product identifier**
  - *Product number* TUGLA080
  - *Trade name:* **TOP COAT HIGH RESISTANCE**
    - *Application of the substance / the mixture* For professional use
- **Details of the supplier of the safety data sheet**
  - *Manufacturer/Supplier:*  
IVM Chemicals Srl  
Viale della Stazione 3 -27020 Parona (PV)Italy -Tel +39 038425441
  - *Information department:*  
Environmental Health and safety office  
hseoffice@ivmchemicals.com
  - *Emergency telephone number:*  
ChemTel Expert Assistance Hotline/SDS Fax Access by dialing 1-800-255-3924 or for International +1-813-248-0585.


## 2 Hazard(s) identification

- **Classification of the substance or mixture**

Flammable Liquids 4 H227 Combustible liquid. Flam. Liq. 4  
 Skin Irritation 2 H315 Causes skin irritation.  
 Eye Irritation 2A H319 Causes serious eye irritation.  
 Sensitization - Skin 1 H317 May cause an allergic skin reaction.  
 Carcinogenicity 2 H351 Suspected of causing cancer.  
 Aquatic Acute 2 H401 Toxic to aquatic life.  
 Aquatic Chronic 2 H411 Toxic 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

  
GHS08

  
GHS09
  - *Signal word* Warning
  - *Hazard-determining components of labeling:*  
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid  
2,2-bis(acryloyloxymethyl)butyl acrylate  
Polymer based on: polyether polyol, acrylic ester, modified hexamethylene diacrylate  
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate  
Glycerol, propoxylated, esters with acrylic acid  
2 propenoic acid, reaction products with dipentaerythritol oxybis(methyl-2,1-ethanediyl) diacrylate
  - *Hazard statements*  
H227 Combustible liquid. Flam. Liq. 4  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H401 Toxic to aquatic life.

**Product number** TUGLA080  
**Trade name:** TOP COAT HIGH RESISTANCE

(Contd. of page 1)

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

- P210 Keep away from flames and hot surfaces. . No smoking.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- 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.

· **Additional information:**

14 % of the mixture consists of component(s) of unknown toxicity.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



**3 Composition/information on ingredients**

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

55818-57-0	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid ⚠ Aquatic Chronic 2, H411 ⚠ Sensitization - Skin 1, H317 ⚠ Aquatic Acute 2, H401	25-<50%
173011-06-8	Polymer based on: polyether polyol, acrylic ester, modified ⚠ Sensitization - Skin 1A, H317	12.5-15%
13048-33-4	hexamethylene diacrylate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	≥2.5-<10%
42978-66-5	(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335	5-9.99%
	acrylate resin ⚠ Eye Irritation 2A, H319	5-9.99%

(Contd. on page 3)

**Product number TUGLA080****Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 2)

52408-84-1	Glycerol, propoxylated, esters with acrylic acid ⚠ Eye Irritation 2A, H319; Sensitization - Skin 1, H317	≥1-<10%
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate ⚠ Carcinogenicity 2, H351 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	5-9.99%
7473-98-5	2-hydroxy-2-methylpropiophenone ⚠ Acute Toxicity - Oral 4, H302 Aquatic Acute 3, H402; Aquatic Chronic 3, H412	2.5-<25%
1384855-91-7	2 propenoic acid, reaction products with dipentaerythritol ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1A, H317 Aquatic Acute 3, H402; Aquatic Chronic 3, H412	2.5-4.99%
57472-68-1	oxybis(methyl-2,1-ethanediyl) diacrylate ⚠ Eye Damage 1, H318 ⚠ Skin Irritation 2, H315; Sensitization - Skin 1, H317	1-2.49%
	Polyurethane resin ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319	1-2.49%
123-86-4	n-butyl acetate ⚠ Flammable Liquids 3, H226 ⚠ Specific Target Organ Toxicity - Single Exposure 3, H336	1-2.49%
110-19-0	isobutyl acetate ⚠ Flammable Liquids 2, H225 ⚠ Specific Target Organ Toxicity - Single Exposure 3, H336	<0.5%
141-78-6	ethyl acetate ⚠ Flammable Liquids 2, H225 ⚠ Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H336	<0.5%
107-98-2	1-methoxy-2-propanol ⚠ Flammable Liquids 3, H226 ⚠ Specific Target Organ Toxicity - Single Exposure 3, H336	<0.5%

#### 4 First-aid measures

##### · Description of first aid measures

###### · General information:

Immediately remove any clothing soiled by the product.

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

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

###### · After inhalation:

Supply fresh air 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.

(Contd. on page 4)

**Product number TUGLA080**
**Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 3)

- *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:*

CO<sub>2</sub>, 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 (NO<sub>x</sub>)

Carbon monoxide (CO)

### · **Advice for firefighters**

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

#### · *Protective equipment:*

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

## 6 Accidental release measures

### · **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

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.

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-I:**

13048-33-4	hexamethylene diacrylate	3 mg/m
123-86-4	n-butyl acetate	5 ppm
110-19-0	isobutyl acetate	450 ppm
141-78-6	ethyl acetate	1,200 ppm

(Contd. on page 5)

**Product number TUGLA080**
**Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 4)

107-98-2	1-methoxy-2-propanol	100 ppm
<b>· PAC-2:</b>		
13048-33-4	hexamethylene diacrylate	170 mg/m
123-86-4	n-butyl acetate	200 ppm
110-19-0	isobutyl acetate	1300* ppm
141-78-6	ethyl acetate	1,700 ppm
107-98-2	1-methoxy-2-propanol	160 ppm
<b>· PAC-3:</b>		
13048-33-4	hexamethylene diacrylate	990 mg/m
123-86-4	n-butyl acetate	3000* ppm
110-19-0	isobutyl acetate	7500** ppm
141-78-6	ethyl acetate	10000** ppm
107-98-2	1-methoxy-2-propanol	660 ppm

## 7 Handling and storage

### · Handling:

#### · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Keep respiratory protective device available.

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

Keep ignition sources away - Do not smoke.

Keep respiratory protective device available.

### · 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.

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

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

### · 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.

#### 13048-33-4 hexamethylene diacrylate

WEEL	Long-term value: 1 mg/m
DSEN	

(Contd. on page 6)

**Product number TUGLA080**
**Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 5)

**15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate**

 WEEL Long-term value: 1 mg/m  
 Skin

**123-86-4 n-butyl acetate**

 PEL Long-term value: 710 mg/m , 150 ppm  
 REL Short-term value: 950 mg/m , 200 ppm  
 Long-term value: 710 mg/m , 150 ppm  
 TLV Short-term value: 150 ppm  
 Long-term value: 50 ppm

**110-19-0 isobutyl acetate**

 PEL Long-term value: 700 mg/m , 150 ppm  
 REL Long-term value: 700 mg/m , 150 ppm  
 TLV Short-term value: 150 ppm  
 Long-term value: 50 ppm

**141-78-6 ethyl acetate**

 PEL Long-term value: 1400 mg/m , 400 ppm  
 REL Long-term value: 1400 mg/m , 400 ppm  
 TLV Long-term value: 400 ppm

**107-98-2 1-methoxy-2-propanol**

 REL Short-term value: 540 mg/m , 150 ppm  
 Long-term value: 360 mg/m , 100 ppm  
 TLV Short-term value: 100 ppm  
 Long-term value: 50 ppm  
 A4

· *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.

**· 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 .

(Contd. on page 7)



**Product number TUGLA080**
**Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 6)

- **Material of gloves**

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

- **Penetration time of glove material**

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

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:**

Fluid

- **Color:**

According to product specification

- **Odor:**

Characteristic

- **Odor threshold:**

Not determined.

- **pH-value:**

Mixture is non-polar/aprotic.

- **Change in condition**

- **Melting point/Melting range:**

Undetermined.

- **Boiling point/Boiling range:**

101 °C (213.8 °F)

- **Flash point:**

76 °C (168.8 °F)

- **Flammability (solid, gaseous):**

Not applicable.

- **Ignition temperature:**

370 °C (698 °F)

- **Decomposition temperature:**

Not determined.

- **Auto igniting:**

Product is not selfigniting.

- **Danger of explosion:**

Not determined.

- **Explosion limits:**

- **Lower:**

1.2 Vol %

- **Upper:**

7.5 Vol %

- **Vapor pressure at 20 °C (68 °F):**

10.7 hPa (8 mm Hg)

- **Density (+/- 0,03) at 20 °C (68 °F):**

1.094 g/cm (9.129 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.

(Contd. on page 8)

**Product number TUGLA080****Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 7)

· <b>Kinematic at 20 °C (68 °F):</b>	40 s (ISO 4 mm)	
· <b>Oxidising properties:</b>	N.A.	
· <b>Solvent content:</b>		
· <b>VOC content:</b>	3.82 %	
	41.8 g/l / 0.35 lb/gal	
· <b>Solids content:</b>	96.2 %	
· <b>Other information (HAPS)</b>		
79-10-7	acrylic acid	<0.1%
123-31-9	1,4-dihydroxybenzene	<0.01%
· <b>Other information</b>		No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

### · Information on toxicological effects

#### · Acute toxicity:

· **LD/LC50 values that are relevant for classification:**

#### **ATE (Acute Toxicity Estimate)**

Oral	LD50	29,138 mg/kg (mouse)
------	------	----------------------

#### **55818-57-0 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid**

Oral	LD50	2,001 mg/kg (mouse)
------	------	---------------------

Dermal	LD50	2,001 mg/kg (rabbit)
--------	------	----------------------

#### **173011-06-8 Polymer based on: polyether polyol, acrylicester, modified**

Oral	LD50	5,001 mg/kg (mouse)
------	------	---------------------

Dermal	LD50	5,001 mg/kg (mouse)
--------	------	---------------------

#### **13048-33-4 hexamethylene diacrylate**

Oral	LD50	5,001 mg/kg (mouse)
------	------	---------------------

Dermal	LD50	3,601 mg/kg (rab)
--------	------	-------------------

#### **42978-66-5 (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate**

Oral	LD50	2,001 mg/kg (mouse)
------	------	---------------------

Dermal	LD50	2,001 mg/kg (rabbit)
--------	------	----------------------

#### **15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate**

Oral	LD50	5,001 mg/kg (mouse)
------	------	---------------------

Dermal	LD50	5,001 mg/kg (mouse)
--------	------	---------------------

(Contd. on page 9)



**Product number TUGLA080****Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 8)

**7473-98-5 2-hydroxy-2-methylpropiophenone**

Oral	LD50	1,694 mg/kg (mouse)
Dermal	LD50	6,929 mg/kg (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)

**57472-68-1 oxybis(methyl-2,1-ethanediyl) diacrylate**

Oral	LD50	3,530 mg/kg (mouse)
Dermal	LD50	2,001 mg/kg (rabbit)

**123-86-4 n-butyl acetate**

Oral	LD50	10,760 mg/kg (mouse)
Dermal	LD50	14,000 mg/kg (rabbit)
Inhalative	LC50/4 h	21.1 mg/l (mouse)

**64742-95-6 Solvent naphtha (petroleum), light arom.**

Oral	LD50	6,801 mg/kg (mouse)
Dermal	LD50	3,401 mg/kg (rab)
Inhalative	LC50/4 h	20.1 mg/l (mouse)

**110-19-0 isobutyl acetate**

Oral	LD50	13,400 mg/kg (mouse)
Dermal	LD50	17,401 mg/kg (rabbit)
Inhalative	LC50/4 h	31 mg/l (mouse)

**141-78-6 ethyl acetate**

Oral	LD50	4,934 mg/kg (rabbit)
Dermal	LD50	20,001 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 mg/l (mouse)
	LC0	22.6 ppm (mouse)

**107-98-2 1-methoxy-2-propanol**

Oral	LD50	4,016 mg/kg (mouse)
Dermal	LD50	5,001 mg/kg (rabbit)
Inhalative	LC50/4 h	5,001 mg/l (mouse)

· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Irritating effect.· **Sensitization:** Sensitization possible through skin contact.· **Additional toxicological information:**

Irritant

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

14 % of the mixture consists of component(s) of unknown toxicity.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer - Cl. 1 and 2)**

173011-06-8	Polymer based on: polyether polyol, acrylicester, modified	3
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate	2B

(Contd. on page 10)

**Product number** TUGLA080  
**Trade name:** TOP COAT HIGH RESISTANCE

(Contd. of page 9)

· **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** Toxic to aquatic life with long lasting effects.

· **Aquatic toxicity:**

**55818-57-0 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid**

EC50	105 mg/l (algae) (72h)
	101 mg/l (daphnia) (48h)
LC50 (96h)	101 mg/l (Fish)

**173011-06-8 Polymer based on: polyether polyol, acrylicester, modified**

EC50	27 mg/l (algae) (72h)
	101 mg/l (daphnia) (48h)
LC50 (96h)	4.4 mg/l (Fish)

**13048-33-4 hexamethylene diacrylate**

EC50	1.5 mg/l (algae) (72 h)
LC50 48h	2.6 mg/l (daphnia)
LC50 (96h)	10 mg/l (Fish)

**42978-66-5 (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate**

EC50	29 mg/l (algae) (72 h)
	88.7 mg/l (daphnia) (48h)
LC50 (96h)	10 mg/l (Fish)

**52408-84-1 Glycerol, propoxylated, esters with acrylic acid**

EC50	12.2 mg/l (algae) (72 h)
	91.4 mg/l (daphnia) (48 h)
LC50 (96h)	5.74 mg/l (Fish)

**15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate**

EC50	4.9 mg/l (algae) (72 h)
	19.9 mg/l (daphnia) (48 h)
LC50 (96h)	2.1 mg/l (Fish)

**7473-98-5 2-hydroxy-2-methylpropiophenone**

EC50	119 mg/l (daphnia) (48h)
LC50 (96h)	160 mg/l (Fish)

**1384855-91-7 2 propenoic acid, reaction products with dipentaerythritol**

EC50	101 mg/l (algae) (72 h)
	35 mg/l (daphnia) (48 h)
LC50 (96h)	13 mg/l (Fish)

**57472-68-1 oxybis(methyl-2,1-ethanediyl) diacrylate**

EC50	16.7 mg/l (algae) (72 h)
	22.3 mg/l (daphnia) (48 h)

(Contd. on page 11)

**Product number TUGLA080****Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 10)

	2.2 mg/l (Fish) (96 h)
<b>123-86-4 n-butyl acetate</b>	
EC50	397 mg/l (algae) (72 h) 44 mg/l (daphnia) (48 h)
LC50 (96h)	18 mg/l (Fish)
<b>64742-95-6 Solvent naphtha (petroleum), light arom.</b>	
EC50	1 mg/l (algae) (72 h) 1 mg/l (daphnia) (48 h)
LC50 (96h)	1 mg/l (Fish)
<b>110-19-0 isobutyl acetate</b>	
EC50	370 mg/l (algae) (72 h) 25 mg/l (daphnia)
LC50 (96h)	17 mg/l (Fish)
<b>141-78-6 ethyl acetate</b>	
EC50	165 mg/l (daphnia) (48 h)
LC50 (96h)	230 mg/l (Fish)
<b>107-98-2 1-methoxy-2-propanol</b>	
EC50	21,100 mg/l (daphnia) (48 h)
LC50 (96h)	6,812 mg/l (Fish)

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

- **Substances Easily biodegradable**

13048-33-4	hexamethylene diacrylate	.
52408-84-1	Glycerol, propoxylated, esters with acrylic acid	.
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate	.
57472-68-1	oxybis(methyl-2,1-ethanediyl) diacrylate	.
123-86-4	n-butyl acetate	.

- **Behavior in environmental systems:**

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

- **Ecotoxicological effects:**

- **Remark:** Toxic for fish

- **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.  
 Also poisonous for fish and plankton in water bodies.  
 Toxic for 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.

(Contd. on page 12)

**Product number** TUGLA080**Trade name:** TOP COAT HIGH RESISTANCE

(Contd. of page 11)

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, IMDG, IATA

UN3082

· Note

Check viscosity and flash point at section 9

**· UN proper shipping name**

· DOT

Environmentally hazardous substance, liquid, n.o.s. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid)

· IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid, hexamethylene diacrylate, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate, 2,2-bis(acryloyloxymethyl) butyl acrylate), MARINE POLLUTANT

· IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid, hexamethylene diacrylate)

**· Transport hazard class(es)**

· DOT, IMDG, IATA



· Class

9 Miscellaneous dangerous substances and articles

· Label

9

· Class

9 Miscellaneous dangerous substances and articles

· Label

9

**· Packing group**

· DOT, IMDG, IATA

III

**· Environmental hazards:**

Product contains environmentally hazardous substances:

· Marine pollutant:

Yes

· Special marking (IATA):

Symbol (fish and tree)

Symbol (fish and tree)

**· Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· Hazard identification number (Kemler code): 90

(Contd. on page 13)

Product number TUGLA080

Trade name: TOP COAT HIGH RESISTANCE

(Contd. of page 12)

· EMS Number:	F-A,S-F
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Remarks:	Special marking with the symbol (fish and tree).
· 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":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4,4'-ISOPROPYLIDENEDIPHENOL, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE, ESTERS WITH ACRYLIC ACID, HEXAMETHYLENE DIACRYLATE), 9, III

## 15 Regulatory information

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

Requirements of Federal Register

#### · Various regulations

##### · SARA

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

123-31-9	1,4-dihydroxybenzene	<0.01%
----------	----------------------	--------

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

79-10-7	acrylic acid	<0.1%
110-82-7	cyclohexane	<0.025%
123-31-9	1,4-dihydroxybenzene	<0.01%

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

All components have the value ACTIVE.

#### · Hazardous Air Pollutants

79-10-7	acrylic acid
123-31-9	1,4-dihydroxybenzene

#### · Proposition 65

#### · Chemicals known to cause cancer:

15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate	* 5-9.99%
------------	--	-----------

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

None of the ingredients is listed.

(Contd. on page 14)

**Product number TUGLA080****Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 13)

· **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)**

110-82-7	cyclohexane	I	<0.025%
----------	-------------	---	---------

· **TLV (Threshold Limit Value)**

79-10-7	acrylic acid	A4
123-31-9	1,4-dihydroxybenzene	A3

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

None of the ingredients is listed.

· **National regulations:**

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

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

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

- **Department issuing SDS:** IVM Chemicals Srl
- **Contact:** See emergency phone
- **Date of preparation / last revision** 09/07/2022 / 23

· **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 2: Flammable liquids . Category 2  
 Flammable Liquids 3: Flammable liquids . Category 3  
 Flammable Liquids 4: Flammable liquids . Category 4  
 Acute Toxicity - Oral 4: Acute toxicity . Category 4  
 Skin Irritation 2: Skin corrosion/irritation . Category 2  
 Eye Damage 1: Serious eye damage/eye irritation . Category 1  
 Eye Irritation 2A: Serious eye damage/eye irritation . Category 2A  
 Sensitization - Skin 1: Skin sensitisation . Category 1  
 Sensitization - Skin 1A: Skin sensitisation . Category 1A  
 Carcinogenicity 2: Carcinogenicity . Category 2  
 Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) . Category 3  
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard . Category 1  
 Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard . Category 2  
 Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard . Category 3  
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard . Category 1  
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard . Category 2

(Contd. on page 15)



**Product number TUGLA080****Trade name: TOP COAT HIGH RESISTANCE**

(Contd. of page 14)

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

· **Sources**

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

*Agency ECHA web site*

*INRS Fiche Toxicologique*

*IARC International agency for research on cancer*

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

US