1 Identification

- **Product identifier**
  - **Product number** TR1688
  - **Trade name**: CLEAR DIRECT GLOSS POLYESTER
    - 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

1.3.2 Importer
Name I.C.& S. DISTRIBUTING CO.
Address P.O.BOX 10845
LANCASTER, PA
USA
E-Mail: nelson@ics-company.com

- **Information department**: Environmental Health and safety office
  hseoffice@ivmchemicals.com
- **Emergency telephone number**:
  ChemTel Expert Assistance Hotline/MSDS 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.
  - GHS07 Health hazard
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
  - **GHS label elements**: The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07
    - GHS08

(Contd. on page 2)
Signal word Danger

Hazard-determining components of labeling:
- styrene

Hazard statements:
- H225: Highly flammable liquid and vapor.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H351: Suspected of causing cancer.
- H361: Suspected of damaging fertility or the unborn child.
- H372: Causes damage to the hearing organs through prolonged or repeated exposure.

Precautionary statements:
- P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P241: Use explosion-proof electrical/ventilating/lighting/equipment.
- 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 = 2
  - Fire = 3
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - Health = 2
  - Fire = 3
  - Reactivity = 0

3 Composition/information on ingredients

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

Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
<th>NFPA Health</th>
<th>NFPA Fire</th>
<th>NFPA Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>styrene</td>
<td>30-49.99%</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>n-butyl acetate</td>
<td>5-9.99%</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

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:**
  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.
  No further relevant information available.

- 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**
  During heating or in case of fire poisonous gases are produced.

- **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**
  Mount respiratory protective device.
  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:**
  - 100-42-5 styrene 20 ppm
  - 123-86-4 n-butyl acetate 5 ppm
  - 78-93-3 butanone 200 ppm
  - 57-55-6 propane-1,2-diol 30 mg/m³
  - 110-19-0 isobutyl acetate 450 ppm

- **PAC-2:**
  - 100-42-5 styrene 130 ppm
  - 123-86-4 n-butyl acetate 200 ppm
  - 78-93-3 butanone 2700 ppm
  - 57-55-6 propane-1,2-diol 1300 mg/m³
  - 110-19-0 isobutyl acetate 1300 ppm

- **PAC-3:**
  - 100-42-5 styrene 1100 ppm
  - 123-86-4 n-butyl acetate 3000 ppm
  - 78-93-3 butanone 4000 ppm
  - 57-55-6 propane-1,2-diol 7900 mg/m³
  - 110-19-0 isobutyl acetate 7500 ppm

**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.
    - Protect against electrostatic charges.
    - Keep respiratory protective device available.
    - 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.
    - Keep respiratory protective device available.

- **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 constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
    At this time, the remaining constituent has no known exposure limits.

<table>
<thead>
<tr>
<th>123-86-4 n-butyl acetate</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL (USA)</td>
</tr>
<tr>
<td>REL (USA)</td>
</tr>
<tr>
<td>TLV (USA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients with biological limit values:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-42-5 styrene</td>
</tr>
<tr>
<td>BEI (USA)</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)</td>
</tr>
<tr>
<td>0.2 mg/L</td>
</tr>
<tr>
<td>Medium: venous blood</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Styrene (semi-quantitative)</td>
</tr>
</tbody>
</table>

- 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...
### 9. Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

- **Appearance:** Fluid
- **Form:** According to product specification
- **Color:** Strong
- **Odor:** Not determined.
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.

**Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 79 °C (174.2 °F)

**Flash point:**

- -4 °C (24.8 °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:**

- Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**
  - Lower: 1.2 Vol %
  - Upper: 8.9 Vol %

- **Vapor pressure at 20 °C (68 °F):** 10.7 hPa (8 mm Hg)

- **Density (+/- 0.03) at 20 °C (68 °F):** 1.033 g/cm³ (8.62 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.
10 Stability and reactivity

- Reactivity typical of the product as indicated in the data sheet
  - Chemical stability
    Polymerise spontaneously, if not inhibited, with rapid increase of temperature. In closed containers, has also rapid increase of ressione. Polymerise violently with reaction that can be explosive by the action of light, heat, strong acids or perossidi. Presence of inhibitors reduces - but does not eliminate - the tendency to polymerization.
  - Thermal decomposition / conditions to be avoided:
    No decomposition if used according to specifications.
  - Avoid exposure to direct sunlight or storage or exposure to temperatures higher than 25 °C

- Possibility of hazardous reactions
  Exothermic polymerization.
  Reacts with acids, alkalis and oxidizing agents.
  Vapours may form explosive mixtures with air

- Conditions to avoid
  Avoid exposure to direct sunlight or storage or exposure to temperatures higher than 25 °C
- 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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalative LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-42-5 styrene</td>
<td>5,000 mg/kg (mouse)</td>
<td>2,001 mg/kg (mouse)</td>
<td>11.8 mg/l (mouse)</td>
</tr>
<tr>
<td>123-86-4 n-butyl acetate</td>
<td>10,760 mg/kg (mouse)</td>
<td>14,000 mg/kg (rabbit)</td>
<td>21.1 mg/l (mouse)</td>
</tr>
</tbody>
</table>
49.0.14

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

· Sensitization: No sensitizing effects known.

· Additional toxicological information:
  Irritant
  Causes skin irritation.
  Causes serious eye irritation.
  Suspected of damaging the unborn child.
  May cause respiratory irritation.
  Causes damage to the hearing organs through prolonged or repeated exposure.
  May be fatal if swallowed and enters airways.

· Carcinogenic categories
  Styrene
  An increased incidence of lung tumors was observed in mice from an inhalation study on styrene. The relevance of this finding to humans is uncertain since data from mode of action investigations of mouse lung tumors coupled with other long-term animal studies and epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic.
  Ethylbenzene
  From IARC MONOGRAPHS VOLUME 77/2000
  Human carcinogenicity data
  Two studies of workers potentially exposed to ethylbenzene in a production plant and a styrene polymerization plant were available. In the first study, no excess of cancer incidence was found but the description of methods was insufficient to allow proper evaluation of this finding. In the second study, no cancer mortality excess was observed during the follow-up of 15 years.
  Evaluation
  There is inadequate evidence in humans for the carcinogenicity of ethylbenzene. There is sufficient evidence in experimental animals for the carcinogenicity of ethylbenzene.

· IARC (International Agency for Research on Cancer - Cl. 1 and 2)
  100-42-5 styrene 2B
  100-41-4 ethylbenzene 2B

· NTP (National Toxicology Program)
  100-42-5 styrene 30-49.99%

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

12 Ecological information

· Toxicity
  · Aquatic toxicity:
  100-42-5 styrene
    EC50 4.9 mg/l (algae) (72 h)
    4.7 mg/l (daphnia) (48 h)
    LC50 (96h) 4.02 mg/l (Fish)
  123-86-4 n-butyl acetate
    EC50 397 mg/l (algae) (72 h)
44 mg/l (daphnia) (48 h)
LC50 (96h) 18 mg/l (Fish)

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

  - Substances Easily biodegradable
    - 100-42-5 styrene
    - 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.

- **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

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT</th>
<th>IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1263</td>
<td>NA1263</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT</th>
<th>IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint</td>
<td>DOT</td>
<td>IMDG, IATA</td>
</tr>
<tr>
<td>Paint</td>
<td>PAINT</td>
<td></td>
</tr>
</tbody>
</table>

- **Transport hazard class(es)**
  - DOT
    - Class 3 Flammable liquids
    - Label 3
    - Class 3 Flammable liquids
Product number TR1688  
Trade name: CLEAR DIRECT GLOSS POLYESTER

· Label 3
  · IMDG, IATA
  · Class 3 Flammable liquids
  · Label 3

· Packing group
  · DOT, IMDG, IATA II

· Environmental hazards:
  · Marine pollutant: No

· Special precautions for user Warning: Flammable liquids
  · Danger code (Kemler): 33
  · EMS Number: F-E,S-E
  · Stowage Category B

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:
  · IMDG
    · Limited quantities (LQ) 5L Code: E2
    · Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 ml
      Maximum net quantity per outer packaging: 500 ml
  · UN "Model Regulation": UN 1263 PAINT, 3, II

15 Regulatory information

· SARA
  · Section 355 (extremely hazardous substances):
    None of the ingredients is listed.
  · Section 313 (Specific toxic chemical listings):
    | CAS Number | Chemical Name           | Concentration |
    |-------------|-------------------------|---------------|
    | 100-42-5    | styrene                 | 30-49.99%     |
    | 78-93-3     | butanone                | 0.5-1%        |
    | 1330-20-7   | xylene                  | <0.1%         |
    | 67-56-1     | methanol                | <0.1%         |
    | 122-99-6    | 2-Phenoxyethanol        | <0.1%         |
    | 100-41-4    | ethylbenzene            | <0.1%         |
    | 108-88-3    | toluene                 | <0.01%        |
    | 1338-02-9   | Naphthenic acids, copper salts | <0.01%      |
    | 142-71-2    | copper di(acetate)      | <0.01%        |
    | 120-80-9    | 1,2-dihydroxybenzene   | <0.01%        |

(Contd. of page 9)
### TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.

### Hazardous Air Pollutants
- 100-42-5 styrene
- 1330-20-7 xylene
- 67-56-1 methanol
- 100-41-4 ethylbenzene
- 108-88-3 toluene

### Proposition 65
- **Chemicals known to cause cancer:**
  - 100-42-5 styrene * 30-49.99%
  - 100-41-4 ethylbenzene * <0.1%

- **Chemicals known to cause reproductive toxicity for females:**
  None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**
  None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**
  - 67-56-1 methanol <0.1%
  - 108-88-3 toluene <0.01%

### Carcinogenic categories

#### EPA (Environmental Protection Agency)
- 78-93-3 butanone I 0.5-1%
- 1330-20-7 xylene I <0.1%
- 100-41-4 ethylbenzene D <0.1%
- 108-88-3 toluene II <0.01%

#### TLV (Threshold Limit Value established by ACGIH)
- 100-42-5 styrene A4
- 1330-20-7 xylene A4
- 100-41-4 ethylbenzene 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.

### 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:** 07/30/2019 / 9
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
Product number TR1688
Trade name: CLEAR DIRECT GLOSS POLYESTER

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. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 2: Carcinogenicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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