1 Identification

· Product identifier
  · Trade name: 39101 & 39104 TPO-Direct Bumper Coaters
  · Article number: 39101, 39104
  · Application of the substance / the mixture Coating

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier: SEM Products Inc.
    1685 Overview Drive
    Rock Hill, SC  29730
    803 207 8225

· Information department:
  cust_care@semproducts.com : SEM Products,Inc. 1685 Overview Dr. Rock Hill, SC 29730 : phone 1-800-831-1122, M - TH 7am - 4pm EDT
  · Emergency telephone number: CHEMTREC 1-800-424-9300

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.
  STOT SE 3 H336 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

· Hazard-determining components of labeling:
  toluene
cyclohexane

(Contd. on page 2)
Trade name: 39101 & 39104 TPO-Direct Bumper Coaters

- Hazard statements
  H225 Highly flammable liquid and vapor.
  H315 Causes skin irritation.
  H361 Suspected of damaging fertility or the unborn child.
  H336 May cause drowsiness or dizziness.
  H373 May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements
  P201 Obtain special instructions before use.
  P202 Do not handle until all safety precautions have been read and understood.
  P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  P240 Ground/bond container and receiving equipment.
  P241 Use explosion-proof electrical/ventilating/lighting/equipment.
  P242 Use only non-sparking tools.
  P243 Take precautionary measures against static discharge.
  P260 Do not breathe dust/fume/gas/mist/vapors/spray.
  P264 Wash thoroughly after handling.
  P271 Use only outdoors or in a well-ventilated area.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P308+P313 IF exposed or concerned: Get medical advice/attention.
  P312 Call a poison center/doctor if you feel unwell.
  P321 Specific treatment (see on this label).
  P314 Get medical advice/attention if you feel unwell.
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P403+P235 Store in a well-ventilated place. Keep cool.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    ![NFPA Rating](image)
    Health = 1
    Fire = 3
    Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    ![HMIS Rating](image)
    Health = 1
    Fire = 3
    Reactivity = 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
3 Composition/information on ingredients

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

- Dangerous components:
<table>
<thead>
<tr>
<th>Material</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>60-70%</td>
</tr>
<tr>
<td>1333-86-4 Carbon black</td>
<td>5-7%</td>
</tr>
<tr>
<td>110-19-0 isobutyl acetate</td>
<td>1.5-5%</td>
</tr>
<tr>
<td>110-82-7 cyclohexane</td>
<td>1.5-5%</td>
</tr>
</tbody>
</table>

4 First-aid measures

- Description of first aid measures
  - 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.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: 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:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
  - Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

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 item 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:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>67 ppm</td>
</tr>
<tr>
<td>1333-86-4 Carbon black</td>
<td>9 mg/m³</td>
</tr>
<tr>
<td>110-19-0 isobutyl acetate</td>
<td>450 ppm</td>
</tr>
<tr>
<td>110-82-7 cyclohexane</td>
<td>300 ppm</td>
</tr>
<tr>
<td>112926-00-8 precipitated Silica (Silica-Amorphous)</td>
<td>18 mg/m³</td>
</tr>
<tr>
<td>67-63-0 propan-2-ol</td>
<td>400 ppm</td>
</tr>
<tr>
<td>25068-38-6 bisphenolA(chloro)oxirane polymer</td>
<td>90 mg/m³</td>
</tr>
</tbody>
</table>

### PAC-2:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>560 ppm</td>
</tr>
<tr>
<td>1333-86-4 Carbon black</td>
<td>99 mg/m³</td>
</tr>
<tr>
<td>110-19-0 isobutyl acetate</td>
<td>1300* ppm</td>
</tr>
<tr>
<td>110-82-7 cyclohexane</td>
<td>1700* ppm</td>
</tr>
<tr>
<td>112926-00-8 precipitated Silica (Silica-Amorphous)</td>
<td>200 mg/m³</td>
</tr>
<tr>
<td>67-63-0 propan-2-ol</td>
<td>2000* ppm</td>
</tr>
<tr>
<td>25068-38-6 bisphenolA(chloro)oxirane polymer</td>
<td>990 mg/m³</td>
</tr>
</tbody>
</table>

### PAC-3:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>3700* ppm</td>
</tr>
<tr>
<td>1333-86-4 Carbon black</td>
<td>590 mg/m³</td>
</tr>
<tr>
<td>110-19-0 isobutyl acetate</td>
<td>7500** ppm</td>
</tr>
<tr>
<td>110-82-7 cyclohexane</td>
<td>10000** ppm</td>
</tr>
<tr>
<td>112926-00-8 precipitated Silica (Silica-Amorphous)</td>
<td>1,200 mg/m³</td>
</tr>
<tr>
<td>67-63-0 propan-2-ol</td>
<td>12000** ppm</td>
</tr>
<tr>
<td>25068-38-6 bisphenolA(chloro)oxirane polymer</td>
<td>5,900 mg/m³</td>
</tr>
</tbody>
</table>

## Handling and storage

### Handling:
- **Precautions for safe handling** No special measures required.
- **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 location.
- **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)** No further relevant information available.
### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL (Long-term value)</th>
<th>REL (Short-term value)</th>
<th>TLV (Long-term value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>200 ppm</td>
<td>560 mg/m³, 150 ppm</td>
<td>75 mg/m³, 20 ppm</td>
</tr>
<tr>
<td>1333-86-4 Carbon black</td>
<td>3.5 mg/m³</td>
<td>3.5* mg/m³</td>
<td>3* mg/m³</td>
</tr>
<tr>
<td>110-19-0 isobutyl acetate</td>
<td>700 mg/m³, 150 ppm</td>
<td></td>
<td>712 mg/m³, 150 ppm</td>
</tr>
<tr>
<td>110-82-7 cyclohexane</td>
<td>1050 mg/m³, 300 ppm</td>
<td></td>
<td>344 mg/m³, 100 ppm</td>
</tr>
</tbody>
</table>

- **Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>Component</th>
<th>BEI (Limit value)</th>
<th>Medium</th>
<th>Time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>0.02 mg/L</td>
<td>blood</td>
<td>prior to last shift of workweek</td>
<td>Toluene</td>
</tr>
<tr>
<td></td>
<td>0.03 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>Toluene</td>
</tr>
<tr>
<td></td>
<td>0.3 mg/g creatinine</td>
<td>urine</td>
<td>end of shift</td>
<td>o-Cresol with hydrolysis (background)</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.
Trade name: 39101 & 39104 TPO-Direct Bumper Coaters

- **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 skin.
    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:**
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **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 trough 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: Liquid
    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: 79 °C
### 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
- **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:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>108-88-3 toluene</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>12,124 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>5,320 mg/l (mouse)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>110-82-7 cyclohexane</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>12,705 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- 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:
The product shows the following dangers according to internally approved calculation methods for preparations:
  - Irritant

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)
    - 108-88-3 toluene 3
    - 1333-86-4 Carbon black 2B
    - 67-63-0 propan-2-ol 3

  - 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
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - 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.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA UN1263

- UN proper shipping name
  - DOT Paint
  - ADR 1263 Paint, ENVIRONMENTALLY HAZARDOUS, special provision 640D
  - IMDG PAINT (CYCLOHEXANE)
  - IATA PAINT

- Transport hazard class(es)
  - DOT
    - Class 3 Flammable liquids
    - Label 3

  - ADR, IMDG
    - Class 3 Flammable liquids
    - Label 3

  - IATA
    - Class 3 Flammable liquids
    - Label 3
### Packing group

DOT, ADR, IMDG, IATA

II

### Environmental hazards:

Product contains environmentally hazardous substances:

- cyclohexane

### Marine pollutant:

Yes

Symbol (fish and tree)

### Special marking (ADR):

Symbol (fish and tree)

### Special precautions for user

Warning: Flammable liquids

### EMS Number:

F-E, S-E

### Stowage Category

B

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

### Transport/Additional information:

#### DOT

- Quantity limitations
  - On passenger aircraft/rail: 5 L
  - On cargo aircraft only: 60 L

- Remarks
  - ORM-D 49CFR 173.150, 156, 306

#### ADR

- Excepted quantities (EQ)
  - Code: E2
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 500 ml

#### IMDG

- Limited quantities (LQ)
  - 5L

- Excepted quantities (EQ)
  - Code: E2
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 500 ml

#### UN "Model Regulation"

UN 1263 PAINT, SPECIAL PROVISION 640D, 3, II, ENVIRONMENTALLY HAZARDOUS

---

### 15 Regulatory information

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

- **Sara**

  - Section 355 (extremely hazardous substances):
    - None of the ingredient is listed.

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

  - 108-88-3 toluene
  - 110-82-7 cyclohexane
  - 67-63-0 propan-2-ol

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

  - 108-88-3 toluene
  - 1333-86-4 Carbon black
  - 110-19-0 isobutyl acetate

  (Contd. on page 11)
**Trade name: 39101 & 39104 TPO-Direct Bumper Coaters**

<table>
<thead>
<tr>
<th>UN number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-82-7</td>
<td>cyclohexane</td>
</tr>
<tr>
<td>67-63-0</td>
<td>propan-2-ol</td>
</tr>
<tr>
<td>25068-38-6</td>
<td>bisphenolA(chloro)oxirane polymer</td>
</tr>
</tbody>
</table>

- **Proposition 65**
  - **Chemicals known to cause cancer:**
    - 1333-86-4 Carbon black
    - 25068-38-6 bisphenolA(chloro)oxirane polymer
  - **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:**
    - 108-88-3 toluene

- **Cancerogenity categories**
  - **EPA (Environmental Protection Agency)**
    - 108-88-3 toluene II
    - 110-82-7 cyclohexane I
  - **TLV (Threshold Limit Value established by ACGIH)**
    - 108-88-3 toluene A4
    - 1333-86-4 Carbon black A4
    - 67-63-0 propan-2-ol A4
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    - 1333-86-4 Carbon black

- **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:**
  - toluene
  - cyclohexane
- **Hazard statements**
  - H225 Highly flammable liquid and vapor.
  - H315 Causes skin irritation.
  - H361 Suspected of damaging fertility or the unborn child.
  - H366 May cause drowsiness or dizziness.
  - H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
  - P201 Obtain special instructions before use.
  - P202 Do not handle until all safety precautions have been read and understood.
  - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - P240 Ground/bond container and receiving equipment.
Trade name: 39101 & 39104 TPO-Direct Bumper Coaters

P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P314 Get medical advice/attention if you feel unwell.
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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: Environment protection department.
Contact: Rita Joiner (rjoiner@semproducts.com)
Date of preparation / last revision 03/14/2018 / 6
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
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
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
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
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids – Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation – Category 2</td>
</tr>
<tr>
<td>Rep. 2</td>
<td>Reproductive toxicity – Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) – Category 3</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>Specific target organ toxicity (repeated exposure) – Category 2</td>
</tr>
</tbody>
</table>

* Data compared to the previous version altered.