1 **Identification**

- **Product identifier**
  - **Trade name:** M25694 Griptide Catalyst
  - **Article number:** M25694
  - **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](image)
  Flam. Liq. 3 H226 Flammable liquid and vapor.

  ![GHS08 Health hazard](image)
  Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

  ![GHS07](image)
  Acute Tox. 4 H302 Harmful if swallowed.
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2A H319 Causes serious eye irritation.
  Skin Sens. 1 H317 May cause an allergic skin reaction.

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

  ![GHS02](image) GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:** HDI Prepolymer

(Contd. on page 2)
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H371 May cause damage to organs.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
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.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Wear protective gloves/protective clothing/eye protection/face protection.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P330 Rinse mouth.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 IF exposed or concerned: Call a poison center/doctor.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see on this label).
P337+P313 If eye irritation persists: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P400+P205 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)

- Health = 2
- Fire = 3
- Reactivity = 0
Trade name: M25694 Griptide Catalyst

- HMIS-ratings (scale 0 - 4)
  - Health = *2
  - 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:
  - 28182-81-2 HDI Prepolymer 70-100%
  - 123-86-4 n-butyl acetate 10-13%

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 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.
  - After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing: Immediately call a 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.
**Trade name:** M25694 Griptide Catalyst

**Advice for firefighters**
- **Protective equipment:** No special measures required.

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### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.

- **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:**
  - 28182-81-2 HDI Prepolymer: 7.8 mg/m³
  - 123-86-4 n-butyl acetate: 5 ppm
  - 822-06-0 hexamethylene-di-isocyanate: 0.018 ppm

- **PAC-2:**
  - 28182-81-2 HDI Prepolymer: 86 mg/m³
  - 123-86-4 n-butyl acetate: 200 ppm
  - 822-06-0 hexamethylene-di-isocyanate: 0.2 ppm

- **PAC-3:**
  - 28182-81-2 HDI Prepolymer: 510 mg/m³
  - 123-86-4 n-butyl acetate: 3000* ppm
  - 822-06-0 hexamethylene-di-isocyanate: 3 ppm

---

### 7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    No special measures required.
    Ensure good ventilation/exhaustion at the workplace.

  - **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:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Keep receptacle tightly sealed.

(Contd. on page 5)
**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><strong>PEL</strong></td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td></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.
    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 of the product.

**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.
### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>pH-value</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>124 °C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>27 °C</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong></td>
<td>370 °C</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Auto igniting</strong></td>
<td>Product is not selfigniting</td>
</tr>
<tr>
<td><strong>Danger of explosion</strong></td>
<td>In use, may form flammable/explosive vapour-air mixture.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1.2 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>7.5 Vol %</td>
</tr>
<tr>
<td><strong>Vapor pressure at 20 °C</strong></td>
<td>10.7 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C</strong></td>
<td>1.10151 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water</strong></td>
<td>Not miscible or difficult to mix</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water)</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solvent content</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents</td>
<td>11.9 %</td>
</tr>
</tbody>
</table>
**Trade name:** M25694 Griptide Catalyst

**VOC content:** 11.87%

130.8 g/l / 1.09 lb/gl

**Solids content:** 88.0%

- Other information
  No further relevant information available.

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### 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**: No further 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.

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### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity**:
    - **LD/LC50 values that are relevant for classification**:

      |          | LD50     | LC50     |
      |----------|----------|----------|
      | Oral     | 1,000 mg/kg (rat) |          |
      | Dermal   | 5,000 mg/kg (rabbit) |        |
      | Inhalative | 137-1,150 mg/l (rat) |    |

- **Primary irritant effect**:
  - **on the skin**: Irritant to skin and mucous membranes.
  - **on the eye**: Irritating effect.
- **Sensitization**:
  Sensitization possible through inhalation.
  Sensitization possible through skin contact.
- **Additional toxicological information**:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  - Harmful
  - Irritant

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    None of the ingredients is listed.
  - **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:** Generally not hazardous for water
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1993
- **UN proper shipping name**
  - **DOT** Flammable liquids, n.o.s. (n-butyl acetate)
  - **ADR** 1993 Flammable liquids, n.o.s. (n-butyl acetate)
  - **IMDG** FLAMMABLE LIQUID, N.O.S. (n-butyl acetate, HDI Prepolymer)
  - **IATA** FLAMMABLE LIQUID, N.O.S. (n-butyl acetate)
- **Transport hazard class(es)**
  - **DOT**
    - **Class** 3 Flammable liquids
    - **Label** 3
  - **ADR, IATA**
    - **Class** 3 Flammable liquids
Trade name: M25694 Griptide Catalyst

- Label
  - IMDG
  - Class
    - 3 Flammable liquids
  - Label
    - 3
- Packing group
  - DOT, ADR, IMDG, IATA
    - III
- Environmental hazards:
  - Product contains environmentally hazardous substances: HDI Prepolymer
- Marine pollutant:
  - Yes
  - Symbol (fish and tree)
- Special precautions for user
  - Warning: Flammable liquids
- EMS Number:
  - F-E,S-E
- Stowage Category
  - A
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.
- Transport/Additional information:
  - DOT
    - Quantity limitations
      - On passenger aircraft/rail: 60 L
      - On cargo aircraft only: 220 L
  - ADR
    - Excepted quantities (EQ)
      - Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
  - 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 1993 FLAMMABLE LIQUIDS, N.O.S. (N-BUTYL ACETATE), 3, III

*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):
      - 822-06-0 hexamethylene-di-isocyanate

(Contd. on page 10)
Trade name: M25694 Griptide Catalyst

- **TSCA (Toxic Substances Control Act):** All ingredients are listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** None of the ingredients is listed.
- **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:** None of the ingredients is listed.
- **Cancerogenity categories**
  - **EPA (Environmental Protection Agency)** None of the ingredients is listed.
  - **TLV (Threshold Limit Value established by ACGIH)** None of the ingredients is listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)** None of the ingredients is listed.
- **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:**
    - HDI Prepolymer
    - n-butyl acetate
  - **Hazard statements**
    - H226 Flammable liquid and vapor.
    - H302 Harmful if swallowed.
    - H315 Causes skin irritation.
    - H319 Causes serious eye irritation.
    - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
    - H317 May cause an allergic skin reaction.
    - H371 May cause damage to organs.
  - **Precautionary statements**
    - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
    - P233 Keep container tightly closed.
    - 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.

(Contd. of page 9)
Trade name: M25694 Griptide Catalyst

P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P330 Rinse mouth.
P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 If exposed or concerned: Call a poison center/doctor.
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P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P325 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 / 8
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
Trade name: M25694 Griptide Catalyst

PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
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
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

* Data compared to the previous version altered.