

**1. Identification**

Product name : SCHÖNOX® MR 18

Supplier : HPS North America, Inc.,  
511 Wilhite Street, Florence, AL 35630  
USA

Telephone : 256.246.0345

Telefax : 256.246.0346

E-mail address : info@hpssubfloors.com

Emergency telephone : GBK/Infotrac ID 108313 at 1 800 535 5053 (USA)  
INTERNATIONAL: (001) 352 323 3500


Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

**2. Hazards identification**

**GHS Classification**

|   |  |
|---|--|
| Acute toxicity, Category 4 (Inhalation)   | H332: Harmful if inhaled.  |
| Skin irritation, Category 2   | H315: Causes skin irritation.  |
| Eye irritation, Category 2A   | H319: Causes serious eye irritation.   |
| Respiratory sensitization, Category 1   | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization, Category 1  | H317: May cause an allergic skin reaction.                                       |
| Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system | H335: May cause respiratory irritation.  |
| Specific target organ systemic toxicity - repeated exposure, Category 2                   | H373: May cause damage to organs through prolonged or repeated exposure.         |

**GHS label elements**

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or

repeated exposure.

Precautionary Statements : **Prevention:**  
 P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/ eye protection/ face protection.  
 P285 In case of inadequate ventilation wear respiratory protection.  
**Response:**  
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304 + P340 IF INHALED: 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.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P362 Take off contaminated clothing and wash before reuse.  
**Storage:**  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
**Disposal:**  
 P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.  
 There are no hazards not otherwise classified that have been identified during the classification process.  
 There are no ingredients with unknown acute toxicity used in a mixture at a concentration  $\geq 1\%$ .

**3. Composition/information on ingredients**

Pure substance/mixture : Mixture

**Hazardous ingredients**

| Chemical name  | CAS-No.    | Concentration (%)   |
|--|------------|---------------------|
| 4,4'-methylenediphenyl diisocyanate                  | 101-68-8   | $\geq 25 - < 50 \%$ |
| Aromatic Polyisocyanate-Prepolymer                   | 67815-87-6 | $\geq 25 - < 50 \%$ |
| o-(p-isocyanatobenzyl)phenyl isocyanate              | 5873-54-1  | $\geq 10 - < 20 \%$ |
| Diphenylmethanediisocyanate, isomeres and homologues | 9016-87-9  | $\geq 2 - < 5 \%$   |
| 2,2'-methylenediphenyl diisocyanate                  | 2536-05-2  | $\geq 2 - < 5 \%$   |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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**4. First aid measures**

- |   |   |   |
|---|---|---|
| If inhaled  | : | Move to fresh air.<br>Consult a physician after significant exposure.   |
| In case of skin contact                                     | : | Take off contaminated clothing and shoes immediately.<br>Wash off with soap and plenty of water.<br>If symptoms persist, call a physician.  |
| In case of eye contact                                      | : | Immediately flush eye(s) with plenty of water.<br>Remove contact lenses.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist.  |
| If swallowed  | : | Clean mouth with water and drink afterwards plenty of water.<br>Do not induce vomiting without medical advice.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>Obtain medical attention.   |
| Most important symptoms and effects, both acute and delayed | : | irritant effects<br>sensitizing effects<br><br>Asthmatic appearance<br>Cough<br>Respiratory disorder<br>Allergic reactions<br>Excessive lachrymation<br>Erythema<br>Headache<br>Dermatitis<br>See Section 11 for more detailed information on health effects and symptoms.<br><br>Causes skin irritation.<br>May cause an allergic skin reaction.<br>Causes serious eye irritation.<br>Harmful if inhaled.<br>May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>May cause respiratory irritation.<br>May cause damage to organs through prolonged or repeated exposure. |
| Protection of first-aiders                                  | : | Move out of dangerous area.<br>Consult a physician.<br>Show this material safety data sheet to the doctor in attendance.  |
| Notes to physician  | : | Treat symptomatically.  |

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**5. Fire-fighting measures**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

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**6. Accidental release measures**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

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**7. Handling and storage**

- Advice on safe handling : Avoid formation of aerosol. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Follow standard hygiene measures when handling chemical products.
- Conditions for safe storage : Store in original container. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Store in accordance with local regulations.
- Materials to avoid : No data available

**8. Exposure controls/personal protection**

| Component                                     | CAS-No.   | Basis ** | Value | Exposure limit(s)* / Form of exposure |
|---|-----------|----------|-------|---------------------------------------|
| 4,4'-methylenediphenyl diisocyanate           | 101-68-8  | ACGIH    | TWA   | 0.005 ppm                             |
|   |           | OSHA Z-1 | C     | 0.02 ppm<br>0.2 mg/m3                 |
|   |           | OSHA P0  | C     | 0.02 ppm<br>0.2 mg/m3                 |
| o-(p-isocyanatobenzyl)phenyl isocyanate (MDI) | 5873-54-1 | OSHA Z-1 | C     | 0.02 ppm<br>0.2 mg/m3                 |
|   |           | OSHA P0  | C     | 0.02 ppm<br>0.2 mg/m3                 |
| 2,2'-methylenediphenyl diisocyanate           | 2536-05-2 | OSHA Z-1 | C     | 0.02 ppm<br>0.2 mg/m3                 |
|   |           | OSHA P0  | C     | 0.02 ppm<br>0.2 mg/m3                 |

\*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

**\*\*Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

**Engineering measures** : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Personal protective equipment**

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling

the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

- Hand protection  
Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.  
Wash hands before breaks and immediately after handling the product.  
Remove contaminated clothing and protective equipment before entering eating areas.  
Wash thoroughly after handling.

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**9. Physical and chemical properties**

- Appearance : liquid
- Color : blue
- Odor : characteristic
- Odor Threshold : No data available
- Flash point : 410 °F (210 °C)
- Autoignition temperature : 968 °F (520 °C)
- Decomposition temperature : No data available
- Lower explosion limit (Vol%) : No data available
- Upper explosion limit (Vol%) : No data available
- Flammability (solid, gas) : No data available
- Oxidizing properties : No data available
- pH : Note: Not applicable
- Melting point/range : 50 °F (10 °C)
- Boiling point/boiling range : 664 °F (351 °C)
- Vapor pressure : 0.01 mmHg (0.01 hpa)

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|  |   |   |
|--|---|---|
| Density                                  | : | 1.17 g/cm <sup>3</sup><br>at 68 °F (20 °C)        |
| Water solubility                         | : | Note: hydrolyzes                                  |
| Partition coefficient: n-octanol/water   | : | No data available                                 |
| Viscosity, dynamic                       | : | 300 mPa.s<br>at 68 °F (20 °C)<br>Method: ISO 2555 |
| Viscosity, kinematic                     | : | > 20.5 mm <sup>2</sup> /s<br>at 104 °F (40 °C)    |
| Relative vapor density                   | : | No data available                                 |
| Evaporation rate                         | : | No data available                                 |
| Burning rate                             | : | No data available                                 |
| Volatile organic compounds (VOC) content | : | 0.0 g/l (calculated)                              |

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**10. Stability and reactivity**

|                                    |   |   |
|------------------------------------|---|---|
| Reactivity                         | : | No dangerous reaction known under conditions of normal use. |
| Chemical stability                 | : | The product is chemically stable.                           |
| Possibility of hazardous reactions | : | Stable under recommended storage conditions.                |
| Conditions to avoid                | : | No data available   |
| Incompatible materials             | : | No data available   |

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**11. Toxicological information**

**Acute toxicity**

Harmful if inhaled.

**Ingredients:**

**4,4'-methylenediphenyl diisocyanate:**

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l  
Test atmosphere: dust/mist  
Method: Expert judgment

**Aromatic Polyisocyanate-Prepolymer:**

Acute inhalation toxicity : LC50: 1.5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

**Diphenylmethanediisocyanate, isomeres and homologues:**

Acute oral toxicity : LD50 Oral (Rat): > 10,000 mg/kg

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Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Expert judgment

Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Respiratory or skin sensitization**

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Germ cell mutagenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

May cause respiratory irritation.

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Aspiration toxicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC** Not applicable

**NTP** Not applicable

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**12. Ecological information**

Other information Do not empty into drains; dispose of this material and its container in a safe way.  
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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**13. Disposal considerations**

**Disposal methods**



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- Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**14. Transport information**

**DOT**  
Not dangerous goods  
**IATA**  
Not dangerous goods  
**IMDG**  
Not dangerous goods

**Special precautions for user**  
No data available

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable

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**15. Regulatory information**

**TSCA list** : On the inventory, or in compliance with the inventory

**EPCRA - Emergency Planning and Community Right-to-Know**

**CERCLA Reportable Quantity**

| Ingredients                         | CAS-No.  | Component RQ (lbs) |
|-------------------------------------|----------|--------------------|
| 4,4'-methylenediphenyl diisocyanate | 101-68-8 | 5000               |

**SARA304 Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Chronic Health Hazard  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitization  
Specific target organ toxicity (single or repeated exposure)

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

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**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
4,4'-methylenediphenyl diisocyanate 101-68-8  
Diphenylmethanediisocyanate, isomeres and homologues 9016-87-9

**Clean Air Act**

**Ozone-Depletion Potential** This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

4,4'-methylenediphenyl diisocyanate 101-68-8

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

**California Prop 65** This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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**16. Other information**

**HMIS Classification**

|                            |   |   |
|----------------------------|---|---|
| <b>Health</b>              | * | 3 |
| <b>Flammability</b>        |   | 1 |
| <b>Physical Hazard</b>     |   | 0 |
| <b>Personal Protection</b> |   | X |

**Caution:** HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

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**Notes to Reader**

The information contained in this Safety Data Sheet applies only to the actual Product name identified and described herein ("Product Name"). This information is not intended to address, nor does it address the use or application of the identified Product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified Product that is believed to be reliable as of the date hereof. Prior to each use of the Product, the user must always read and follow the warnings and instructions on the Product's most current product label, Product Data Sheet, and Safety Data Sheet, which are available at [www.schonox.us](http://www.schonox.us) and/or the telephone number listed in Section 1 of this SDS.

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