# SAFETY DATA SHEET

## 1. Product Identification

**Product line:** **Hoosier Penn -20 Windshield Washer Pre-Mix**
**Products:** 1110027, 1110021, 1110115
**CAS:** Not applicable (Mixture)
**Synonyms:** Aqueous Methanol
**Recommended use:** Windshield Washer Fluid
**Restrictions:** Do not use near heat/sparks/open flames.
**Created:** 14 February 2012
**Revised:** 15 February 2012
**Emergency phone:** CHEMTREC: (+1) 800-424-9300

## 2. Hazards Identification

**Appearance:** Clear, colorless liquid
**Odor:** Mild alcohol odor
**Classification(s):** Flammable Liquid, Category 3
Acute Toxicity, Category 1*
Reproductive Toxicity, Category 1B
Target Organ Toxicity, Repeat Cat. 2
Aspiration Hazard, Category 1**
**Target organs:** Central Nervous System, Eyes
**Symbol(s):**

**Signal Word:** **DANGER**
**Hazard Statement(s):** Flammable liquid and vapor. Fatal if swallowed. May damage fertility or the unborn child (fetotoxic and teratogenic effects). May cause damage to the eyes and central nervous system. May be fatal if swallowed and enters airways

**Other hazard(s):** Repeated exposure may cause dryness of the skin

**Precaution(s):** Keep away from heat/sparks/open flames/hot surfaces – no smoking. Do not breathe mist/vapors/spray. Use in a well ventilated area. Wear protective gloves/protective clothing. Do no ingest. IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

**Disposal:** Keep out of waterways. Check local, national, and international regulations for proper disposal

**Classified based on human experience and epistemological data, not based on strict application of the GHS criteria*

***Classified based on human experience and very low viscosity, not based on strict application of the GHS criteria*

## 3. Composition/Information on Ingredients

**Hazardous Ingredients:**

| *Component* | *CAS No.* | *Conc (wt%)* |
|---|---|---|
| Methanol | 67-56-1 | 25 - 50 |

## 4. First Aid Measures

**Eyes** Remove contact lenses, if worn. Rinse with running water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.

**Skin** Remove affected clothing and launder before reuse. Wash affected area for at least 15 minutes with soap and running water. Prolonged or repeated exposure may cause defatting of the skin – symptoms include redness, dryness, cracking

**Inhalation** Remove exposed person to fresh air immediately. Restore or assist breathing, if necessary. Get medical attention immediately – symptoms of exposure may include giddiness, intoxication, CNS depression, or coma

**Ingestion** Swallowing methanol is potentially lethal. Symptoms of methanol poisoning may be delayed up to 24 hours. Do NOT induce vomiting. If ingested, do not wait for symptoms to develop – Seek medical attention IMMEDIATELY.

**Additional Info** Note to physician: Treat for methanol poisoning

**Specific Treatments** Inhibit oxidation of methanol by administering ethanol or fomepizole. Increase formic acid metabolism by administering IV folinic acid. Treat acidosis with IV sodium bicarbonate.

## 5. Fire Fighting Measures

**NFPA (estimated):** **Health – 1 Fire – 3 Instability – 0**

**Flash Point** 35°C / 95°F

**Extinguishing Media** $CO_2$, dry chemical, water spray, aqueous film forming foam (alcohol resistant) type with 3% or 6% foam proportioning system.

**Unsuitable Media** General purpose synthetic foams or protein foams may work, but much less effectively. Water may be effective for cooling, but may not be effective for extinguishing a fire because it may not cool methanol below its flash point

**Firefighting Procedures:** Methanol burns with a clean, clear flame that is almost invisible in daylight. Stay upwind! Isolate and restrict area access. Concentrations of greater than 25% methanol in water can be ignited. Use fine water spray or got to control fire spread and cool adjacent structures of containers. Contain fire control water for later disposal. Fire fighters must wear full face, positive pressure, self-contained breathing apparatus or airline and appropriate protective fire fighting clothing as per NFPA. Not that methanol fires may require proximity suits. Take care not to walk through any spilled chemical.

**Unusual Hazards** Burns with a clean flame that is difficult to see in certain conditions. Vapors may travel long distances along the ground and may be ignited from distant sources. See section 10 for additional information

## 6. Accidental Release Measures

**Personal precautions, protective equipment, and emergency procedures:** Flammable liquid – can burn without a visible flame. Do not walk through spilled material. Keep unnecessary personnel away. Wear appropriate personal protective equipment for emergency. Ventilate if released in a confined area. Eliminate sources of ignition if it is safe to do so.

**Environmental precautions:** Avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways or groundwater

**Methods for removal:** Use an explosion-proof pump to remove bulk liquid. Residual liquid can be absorbed on inert material. **Use only non-sparking tools**.

## 7. Handling and Storage

**Max. Handling Temp:** Do not store or handle at elevated temperatures. See Section 5 for flammability and Section 10 for chemical stability

**Procedures:** Use only in a well ventilated area. Avoid breathing vapors. Keep containers closed when not in use. Use appropriate containment to avoid environmental contamination. Vapors are heavier than air and will tend to accumulate in low areas. Avoid use in confined areas without adequate ventilation. Areas of inadequate ventilation could contain concentrations high enough to cause eye irritation, headaches, intoxication, nervous system depression or methanol poisoning. Avoid breathing dust, fume, gas, mist, vapors, or spray. Wash thoroughly after handling. Launder contaminated clothing before reuse. Empty container contains product residue which may exhibit hazards of the product. Do no weld, heat, or pressurize empty containers. Do not re-use containers. Dispose of packaging or containers in accordance with local, regional, national, and international regulations. Store away from strong oxidizers

**Max Store Temp:** Do not store or handle at elevated temperatures.

## 8. Exposure Controls/Personal Protection

**Exposure Limits**

**US**
**Guidelines by component**

*Methanol (CAS # 67-56-1)*

OSHA TWA: 200 ppm or 260mg/$m^3$
OSHA STEL: 250 ppm or 325mg/$m^3$
ACGIH TWA: 200 ppm
ACGIH STEL: 250 ppm

**Other Exposure Limits:** Not determined

**Engineering Controls:** Use in a well ventilated area. Local and general ventilation should keep methanol vapor concentration below permissible limits. Where exposure potential exceeds recommended limits, use a NIOSH/OSHA approved supplied air respirator as recommended. Vapors are heavier than air and will tend to accumulate in low-lying areas.

**Personal Protective Equipment**

**Respiratory (based on methanol concentrations):**

| | |
|---|---|
| <2000 ppm: | supplied air respirator |
| <5000 ppm: | supplied air respirator operated in continuous-flow mode |
| <6000 ppm: | supplied air respirator with a tight-fitting facepiece operated in a continuous-flow mode; or Full facepiece self-contained breathing apparatus or full facepiece supplied air respirator |

**Eye:** Face shield or chemical splash goggles when splashing may occur. If possible, remove contact lenses before handling

**Gloves:** Use butyl rubber or nitrile rubber gloves.

**Clothing:** Use chemical resistant pants and jackets, preferably of butyl or nitrile rubber

**Other:** Locate the nearest eyewash station and safety shower before handling this product. Limit exposure whenever possible. Consider flammability and always use non-sparking tools.

**Hygiene:** Wash thoroughly after handling this product.

## 9. Physical and Chemical Properties

| | |
|---|---|
| **Appearance** | Clear, colorless liquid |
| **Odor** | Mild alcoholic odor |
| **Odor threshold** | Not determined |
| **pH** | Not determined |
| **Melting Point** | -26°C / -15°F |
| **Initial Boiling Pt** | 82°C / 180°F |
| **Flash Point** | 35°C / 95°F |
| **Evaporation Rate** | Not determined |
| **Upper Flammable Lm** | Not determined |
| **Lower Flammable Lm** | Not determined |
| **Explosive Data** | Vapors of this product may form explosive mixtures with air |
| **Vapor Pressure** | Not determined |
| **Vapor Density** | >1 (where air = 1) |
| **Volatile Organics** | Not determined |
| **Evaporation Rate** | Not determined |
| **Density** | 0.957 mg/cu. cm @15.6°C |
| **Solubility** | Miscible in water, alcohol; insoluble in organic solvents |
| **$K_{ow}$** | Not determined |
| **Viscosity** | Not determined |
| **Autoignition Point** | Not determined |
| **Decomposition Temp** | Not determined |

## 10. Stability and Reactivity

| | |
|---|---|
| **Stability** | Material is normally stable at ambient temperatures and pressures. Has low vapor pressure – vapors may form explosive mixtures with air! |
| **Decomposition Temp** | Not determined |
| **Incompatibility** | Oxidizers and strong acids or bases. Contact with these materials may cause violent or explosive reactions. May react with metallic aluminum or magnesium to generate explosive hydrogen gas. |
| **Polymerization** | Will not occur |
| **Thermal Decomposition** | Primarily oxidizes to carbon dioxide in normal combustion conditions. In lower oxygen environments carbon monoxide, formaldehyde, or formic acid may be formed. |
| **Conditions to Avoid** | Flammable liquid and vapor – keep away from strong oxidizers, acids, bases as well as heat/sparks/open flames/hot surfaces |

## 11. Toxicological Information

**- Acute Exposure –**

| | |
|---|---|
| **Eye Irritation** | Expected to cause mild to moderate irritation of the eye if exposed to liquid or in high vapor concentrations. May cause irritation, tearing, or burning of the eyes. |
| **Skin Irritation** | Expected to be mildly irritating to the skin. Symptoms of irritation may include redness, drying, and cracking of the skin. |
| **Respiratory Irritation** | Methanol may cause irritation of mucous membranes, especially if concentrations exceed 1000 ppm. |
| **Dermal Toxicity** | Methanol can be absorbed through the skin and presents a toxicity hazard similar to that of inhalation or ingestion. |
| **Inhalation Toxicity** | Inhalation of this product may be harmful or fatal. Symptoms may include headaches, sleepiness, nausea, confusion, loss of consciousness, digestive and visual disturbances and even death. If exposure exceeds recommended levels, or if you feel unwell – seek medical help for methanol poisoning. If left untreated, may cause permanent blindness, nervous system effects, or death. |
| **Oral Toxicity** | Toxic or fatal if ingested. Symptoms of methanol poisoning include heachaches, sleepiness, nausea, confusion, intoxication, loss of consciousness, digestive and visual disturbances, coma or death. Seek medical attention immediately for methanol poisoning. If ingested, DO NOT wait for symptoms to develop before getting treatment. |

**Aspiration Hazard** This product has a very low viscosity and may be fatal if aspirated into the airways. Do NOT induce vomiting, as this increases risk of aspiration.

**- Chronic Exposure –**

**Chronic Toxicity** This product may cause dryness or defatting of the skin, dermatitis, or may aggravate existing skin conditions.

**Carcinogenicity** This product and its components are NOT listed by the IARC, NTP, ACGIH, or OSHA as carcinogens

**Mutagenicity** Available information does not suggest that this product is a germ cell mutagen

**Reproductive Toxicity** Available information does not suggest that this product is a reproductive toxin.

**Teratogenicity** Methanol has produced fetoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations of methanol vapors.

**- Additional Information –**

**Target organ toxicity** Product is toxic to organs: Central nervous system, eyes. Methanol poisoning produces metabolic acidosis (formic acid) that may damage the liver, kidneys, or other organs.

**Synergistic effects** In animals, high concentrations of methanol has increased the toxicity of other chemicals, particularly liver toxins such as carbon tetrachloride. Ethanol significantly *reduces* the toxicity of methanol due to competition with alcohol dehydrogenase, and is sometimes used to treat methanol poisoning

**Pharmacokinetics** Methanol is oxidized to carbon dioxide and water in a multi-step process. Metabolic intermediates are responsible for the toxicity of methanol**.** The half-life of methanol is 1.5-3 hours for low doses (less than 100mg/kg).

## 12. Ecological Information

**- Environmental Toxicity –**

**Freshwater Fish** Acute LD50 = 63 g/l (96h)

**Freshwater Invertebrates** Acute LD50 = 120g/l (48h); 33g/l (24h)

**Algae** Not determined

**Saltwater Fish** Not determined

**Saltwater Invertebrates** Not determined

**Bacteria** See Miscallaneous

**Miscellaneous** Study of methanol on sewage sludge bacteria reported a retardation of bacterial digestion at concentrations of 0.5%.

**- Environmental Fate –**

**Biodegradation** This product easily biodegrades in water and soil. Products of biodegradation are carbon dioxide and water.

| | |
|---|---|
| **Bioaccumulation** | Product is very mobile in soil and water and is volatile – it is not expected to bioaccumulate. |
| **Soil Mobility** | Product has high mobility in soil, and evaporates easily at environmentally relevant temperatures |
| **Other Effects** | Not determined |

## 13. Disposal Considerations

**Disposal Considerations**

All disposal practices must be in accordance with local, regional, national, and international regulations. Store material for disposal as indicated in Section 7. Disposal by controlled incineration or by secure land fill may be acceptable – review applicable regulations or regulatory bodies before making disposal decisions.

**Contaminated Containers or Packaging**

Empty containers are likely to contain flammable vapors or explosive mixtures of vapor and air. Do NOT weld, cut, or grind empty containers. Rinse empty containers with water and dispose of in accordance with local, regional, national, and international regulations

## 14. Transportation Information

Description shown may not apply to all shipping situations. Consult applicable shipping codes to determine any additional shipping requirements

| | |
|---|---|
| **US DOT** | |
| **UN No** | 1986 |
| **UN Proper Name** | Alcohols, flammable, toxic, n.o.s. (methanol solution) |
| **UN Class** | 3 |
| **Packing Group** | III |
| **Marine Pollutant** | No |
| **IMDG** | UN 1986, Alcohols, flammable, toxic, n.o.s. (methanol solution), Class 3(6.1), PG III<br>Stowage Cat. “A” (on deck or under deck) |
| **ICAO/IATA** | UN 1986, Alcohols, flammable, toxic, n.o.s. (methanol solution), Class 3(6.1), PG III<br>Passenger Aircraft – less than 60L<br>Cargo Aircraft – less than 220L |

## 15. Regulatory Information

**- Global Chemical Inventories/Regulations –**

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|---|---|
| **USA** | All components of this material are on the US TSCA |
| **Other TSCA Reg.** | None known |

| | |
|---|---|
| **EU** | Components of this product and similar mixtures are registered under REACH. Consult the European Chemicals Agency regarding REACH registration, reporting, and other legal requirements for methanol solutions before importing to the EU. |
| **New Zealand** | May require notification before sale under New Zealand Regulations |
| **Canada** | All components of this product are listed on the Canadian Domestic Substances List (DSL). |
| **Canada WHMIS** | B2, D1B, D2A, D2B |

**- Other U.S. Federal Regulations –**

| | |
|---|---|
| **SARA Ext. Haz. Subst.** | No chemicals in this product are listed on the SARA 302 Extremely Hazardous Substances list. |
| **SARA Sect. 313** | This product contains methanol (CAS # 67-56-1), found in SARA 313. See 40 CFR 372 |
| **SARA 311/312 Class** | *Acute Hazard* - YES<br>*Chronic Hazard* - YES<br>*Fire Hazard* - YES<br>*Reactivity Hazard* - NO |
| **CERCLA Haz. Sub.** | Methanol (CAS # 67-56-1) is listed. See 40 CFR 302 |

**- State Regulations –**

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

| ***Right to Know Component*** | ***Right to Know States*** |
|---|---|
| Methanol (CAS # 67-56-1) | NJ, PA, MA |

**- Other –**

Not determined

## 16. Other Information

Revision updates may be in many sections and the MSDS should be read in its entirety.
Prepared according to the UN Globally Harmonized System for the Classification and Labeling of Chemicals (GHS) by

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