Material Safety Data Sheet

Product: Gorilla Grip

MSDS Date: 6/14/10
Product Name: Gorilla Grip
Manufacturer: NAPCO, Ltd.

1. Product and Company Description

North American Polymer Company, Ltd.
7315 Hamlin Ave.
Skokie, IL 60076

For Product Emergency:
Infotrac 24-hour number: 1-800-535-5053
24-hour number outside the US and Canada: +1-352-323-3500

For Product Information:
800-888-1081/847-779-6464

Chemical Synonym/Formula: N/A

2. Hazards Identification

Emergency Overview
Color: Colorless
Physical State: Liquid
Odor: Characteristic

Hazard of product:

Material Safety Data Sheet

Product: Gorilla Grip

Potential Health Effects:
Eye Contact: May cause severe eye irritation. May cause severe corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. Vapor may cause lacrimation (tears).
Skin Contact: Prolonged contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin.
Skin Absorption: Prolonged or widespread skin contact may result in absorption of harmful amounts. Repeated skin contact may result in absorption of harmful amounts. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney, Bladder. Effects of methanol are the same as observed via oral and inhalation exposure and include CNS depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.
Skin Sensitization: A component in this mixture has been shown to be a skin sensitizer.
Inhalation: Easily attainable vapor concentrations may cause serious adverse effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause central nervous system effects. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death. Effects may be delayed. Alcohol consumption and exertion may increase the adverse effects of toluene. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Symptoms may include as tingling, numbness or pain in the extremities.
Ingestion: Swallowing a small amount may cause serious injury; swallowing larger amounts may be fatal. Methanol, a component in this mixture, is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart. Effects may be delayed.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Effects of Repeated Exposure: Contains component(s) which have been reported to cause effects on the following organs in animals: Central nervous system. Excessive exposure may cause neurologic signs and symptoms. Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations. Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.
Birth Defects/Developmental Effects: Methanol has caused birth defects in mice at doses nontoxic to the mother as well as slight behavioral effects in offspring of rats. In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

3. Chemical Composition

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS#</th>
<th>% Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-883</td>
<td>&gt;45% - &lt;55%</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt;45% - &lt;55%</td>
</tr>
<tr>
<td>Proprietary</td>
<td>n/a</td>
<td>&lt; 5%</td>
</tr>
</tbody>
</table>
4. First Aid Measures

Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention without delay. Wash clothing before reuse. Properly dispose of contaminated leather items, such as shoes, belts, and watchbands. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Safety shower should be located in immediate work area.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1 2 ounce (2 1/3 tbsp) for a 40 pound child or 36 ml for an 18 kg child]. Never give anything by mouth to an unconscious person.

Notes to Physician: In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:8, p 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. Alcohol consumed before or after exposure may increase adverse effects. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis. Emergency Personnel Protection: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

5. Fire Fighting Measures
Fire Hazard Data:

Extinguishing Media: Water fog or fire spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Pump with explosion-proof equipment if available, use foam to smother or suppress. For large spills, warn public of downwind explosion hazard.

Ignition Sources Removal: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges.

Dust Control: Not applicable

Personal Precautions: Evacuate area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Only trained and properly protected personnel must be involved in clean-up operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment.

Inhalation, Skin, Mucous and Eye Contact Prevention: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Use with adequate ventilation. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Keep container closed. Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Never use air pressure for transferring product. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Storage

Store in tightly closed, properly vented containers. Store in a dry place. Store indoors. Store away from direct sunlight. Flammable mixtures may exist within the vapor space of containers at room temperature. Minimize sources of ignition, such as static build-up, heat, spark or flame.

Storage temperature: 10 - 35 °C
8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Component</th>
<th>List</th>
<th>Type</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
<td>SKIN, BEI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>250 ppm</td>
<td>SKIN, BEI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Table</td>
<td>PEL</td>
<td>260 mg/m3</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
<td>BEI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA/Z2</td>
<td>TWA</td>
<td>200 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA/Z2</td>
<td>Ceiling</td>
<td>300 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA/Z2</td>
<td>MAX. CONC</td>
<td>500 ppm</td>
<td>10 minutes</td>
<td></td>
</tr>
</tbody>
</table>

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

Personal Protection

Eye/Face Protection: Use chemical goggles. Eye wash fountain should be located in immediate work area. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand Protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Viton. Polyethylene. Neoprene. Chlorinated polyethylene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Ethyl vinyl alcohol laminate ("EVA"). Examples of acceptable glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls
Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

### 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical State</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Colorless</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Characteristic</td>
</tr>
<tr>
<td><strong>Odor Threshold</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Flash Point - Closed Cup</strong></td>
<td>-28 °C (270 °F) ASTM D3278</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable to liquids</td>
</tr>
<tr>
<td><strong>Flammable Limits In Air</strong></td>
<td>Upper: No test data available</td>
</tr>
<tr>
<td><strong>Autoignition Temperature</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Boiling Point (760 mmHg)</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Vapor Density (air = 1)</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Specific Gravity (H2O = 1)</strong></td>
<td>0.83 ASTM D1475</td>
</tr>
<tr>
<td><strong>Freezing Point</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Melting Point</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>Solubility in water (by weight)</strong></td>
<td>No test data available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>No test data available</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

Product: Gorilla Grip

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>No test data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No test data available</td>
</tr>
<tr>
<td>Partition coefficient, n-octanol/water (log Pow)</td>
<td>No test data available</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>No test data available</td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>No test data available</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>6.94 lb/gal EPA Method No 24 (typical value)</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Stability/Instability
Stable under recommended storage conditions. See Storage, Section 7.
Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.


Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity
Ingestion
The data presented are for the following material: Methanol. Estimated Lethal Dose, Human 1 - 8 Ounces

Skin Absorption
The dermal LD50 has not been determined.

Sensitization
Skin
A component in this mixture has been shown to be a skin sensitizer.

Repeated Dose Toxicity
Contains component(s) which have been reported to cause effects on the following organs in animals: Central nervous system. Excessive exposure may cause neurologic signs and symptoms. Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations. Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death. Methanol is highly toxic to humans and may cause central nervous system
12. Ecological Information

**ENVIRONMENTAL FATE**

*Data for Component: Toluene*

**Movement & Partitioning**
- Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
- Henry's Law Constant (H): 6.46E-03 atm*m3/mole; 25 °C Estimated
- Partition coefficient, n-octanol/water (log Pow): 2.73 Measured
- Partition coefficient, soil organic carbon/water (Koc): 37 - 178 Estimated
- Bioconcentration Factor (BCF): 13.2 - 90; fish; Measured

**Persistence and Degradability**
- Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
- **Indirect Photodegradation with OH Radicals**

<table>
<thead>
<tr>
<th>Rate Constant</th>
<th>Atmospheric Half-life</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.23E-12 cm3/s</td>
<td>2 d</td>
<td>Estimated</td>
</tr>
</tbody>
</table>

**OECD Biodegradation Tests:**
- **Biodegradation**

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>Exposure Time</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 %</td>
<td>14 d</td>
<td>OECD 301C Test</td>
</tr>
</tbody>
</table>

**Biological oxygen demand (BOD):**
- **BOD 5**
- **BOD 10**
- **BOD 20**
- **BOD 28**

<table>
<thead>
<tr>
<th></th>
<th>BOD 5</th>
<th>BOD 10</th>
<th>BOD 20</th>
<th>BOD 28</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>53 - 56 %</td>
<td>59 - 80 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Theoretical Oxygen Demand:** 3.13 mg/mg
Product: Gorilla Grip

Data for Component: Methanol

Movement & Partitioning
Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).
Henry's Law Constant (H): 4.40E-06 - 6.94E-06 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): -0.77 Measured
Partition coefficient, soil organic carbon/water (Koc): 0.44 Estimated
Bioconcentration Factor (BCF): < 10; fish; Measured

Persistence and Degradability
Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
Indirect Photodegradation with OH Radicals

<table>
<thead>
<tr>
<th>Rate Constant</th>
<th>Atmospheric Half-life</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.16E-13 cm3/s</td>
<td>8 - 18 d</td>
<td>Estimated</td>
</tr>
</tbody>
</table>

OECD Biodegradation Tests:
Biodegradation

<table>
<thead>
<tr>
<th>Exposure Time</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>69 %</td>
<td>OECD 301D Test</td>
</tr>
<tr>
<td>28 d</td>
<td></td>
</tr>
</tbody>
</table>

Biological oxygen demand (BOD):

<table>
<thead>
<tr>
<th>BOD 5</th>
<th>BOD 10</th>
<th>BOD 20</th>
<th>BOD 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>72 %</td>
<td>79 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chemical Oxygen Demand: 1.49 mg/mg
Theoretical Oxygen Demand: 1.50 mg/mg

Data for Component: (3-Mercaptopropyl)trimethoxysilane

Movement & Partitioning
Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is slight (Koc between 2000 and 5000).
Henry's Law Constant (H): 5.42E-08 atm*m3/mole Estimated using a bond contribution method
Partition coefficient, n-octanol/water (log Pow): 0.25 Estimated
Partition coefficient, soil organic carbon/water (Koc): 2.577 Estimated

Persistence and Degradability
Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%)
Indirect Photodegradation with OH Radicals

<table>
<thead>
<tr>
<th>Rate Constant</th>
<th>Atmospheric Half-life</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.66E-11 cm3/s</td>
<td>0.229 d</td>
<td>Estimated</td>
</tr>
</tbody>
</table>

Chemical Oxygen Demand: 1.73 mg/mg
Theoretical Oxygen Demand: 1.71 mg/mg

ECOTOXICITY
Data for Component: Toluene
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested)
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Fish Acute & Prolonged Toxicity
LC50, bluegill (Lepomis macrochirus): 12.7 - 340 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna: 60 - 313 mg/l
Aquatic Plant Toxicity
EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition: > 433 mg/l
Toxicity to Micro-organisms
IC50, bacteria, growth inhibition, 16 h: 29 mg/l
Toxicity to Soil Dwelling Organisms
LC50, Earthworm Eisenia fetida, adult: 150 - 280 mg/kg

Data for Component: Methanol
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 > 100 mg/l in the most sensitive species tested)

Fish Acute & Prolonged Toxicity
LC50, rainbow trout (Oncorhynchus mykiss): 17,000 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna: > 10,000 mg/l
Toxicity to Micro-organisms
IC50, activated sludge, respiration inhibition, 3 h: > 1,000 mg/l

Data for Component: (3-Mercaptopropyl)trimethoxysilane
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, fathead minnow (Pimephales promelas), 96 h: 253 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna, 48 h: 40 mg/l
Toxicity to Micro-organisms
IC50, bacteria, 16 h: 850 mg/l

13. Disposal Considerations
DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION; Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.
Product: Gorilla Grip

14. Transportation Information

US Department of Transportation Shipping Name:

<table>
<thead>
<tr>
<th>US Department of Transportation</th>
<th>ID Number</th>
<th>UN1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td></td>
<td>FLAMMABLE LIQUID, TOXIC, N.O.S.</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>3 (6.1)</td>
<td></td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>

15. Regulatory Information

OSHA Hazard Communication Standard
This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Immediate (Acute) Health Hazard: Yes
Delayed (Chronic) Health Hazard: Yes
Fire Hazard: Yes
Reactive Hazard: No
Sudden Release of Pressure Hazard: No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

Product: Gorilla Grip

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:**
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
</tbody>
</table>

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:**
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)**

<table>
<thead>
<tr>
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<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
</tbody>
</table>

**US. New Jersey Community Right-To-Know Survey, Table A: NJ Environmental Hazardous Substances [EHS] List (N.J. Admin. Code Title 7 Section 1G-2.1)**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
</tbody>
</table>

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**
This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
</tbody>
</table>

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt; 45.0 - &lt; 55.0 %</td>
</tr>
</tbody>
</table>
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Product: Gorilla Grip

US. Toxic Substances Control Act
All components of this product are either on the TSCA Inventory, are exempt from TSCA Inventory Requirements under 40 CFR 720.30, or comply with the PMN Polymer Exemption 40 CFR 723.250.

CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

European Inventory of Existing Commercial Chemical Substances (EINECS)
The components of this product are on the EINECS inventory or are exempt from inventory requirements.

China. Inventory of Existing Chemical Substances
This product is listed on, or complies with, the State Environmental Protection Agency (SEPA) China Chemical Inventory.

Korea Existing Chemicals Inventory (KECI)
The components of this product are on the Korea Existing Chemicals Inventory (KECI) or are exempt from the inventory requirements.

Philippines Inventory of Chemicals and Chemical Substances (PICCS) List
The components of this product are on the Philippines Inventory of Chemical and Chemical Substances (PICCS) or are exempt from the inventory requirements.

Japan. Industrial Safety & Health Law (ISHL) List
All components of this product are in compliance with ISHL (Japan, Industrial Safety and Health Law) inventory rules.

Japan. Kashin-Hou Law List
All components of this product are in compliance with ENCS (Japan, Inventory of Existing and New Chemical Substances) inventory rules.

16. Other Information

National Fire Protection Association Hazard Ratings – NFPA(R):

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard</td>
<td>2</td>
</tr>
<tr>
<td>Flammability</td>
<td>3</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

Key Legend Information:
N/A – Not Applicable
ND – Not Determined
ACGIH – American Conference of Governmental Industrial Hygienists
OSHA – Occupational Safety and Health Administration
TLV – Threshold Limit Value

IDLH – Immediately Dangerous to Life and Health
PEL – Permissible Exposure Limit
TWA – Time Weighted Average
STEL – Short Term Exposure Limit
NTP – National Toxicology Program
IARC – International Agency for Research on Cancer

The information contained herein is based on the data available to us and is believed to be correct. However NAPCO, Ltd. makes no warranty expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.