



TOPGLAZE 100

Aliphatic Urethane Topcoat

DESCRIPTION

Topglaze 100 is a polyester, aliphatic, single component, liquid applied, moisture cured, urethane topcoat for waterproofing membrane systems.

FEATURES

- ◆ Durable
- ◆ Excellent Weatherability
- ◆ Seamless Waterproofing Membrane
- ◆ UV Resistant For Gloss Retention
- ◆ Can Meet California AQMD Requirements

TYPICAL USES

- ◆ Concrete
- ◆ Plywood
- ◆ Some Types of Chemical Spills
- ◆ Re-sealing Existing Urethane Surfaces
- ◆ Most Metal, Wood, or Masonry Surfaces
- ◆ Vehicular Traffic
- ◆ Heavy Pedestrian Traffic

COLOR

Clear, Stone Grey, Dolphin Grey, Battleship Grey, Tan, Indian Sand, White

Custom colors are also available. Minimum order of 100 gallons (380 liters). See color chart for special provisions.

PACKAGING

- 1 gallon (3.78 liter) can
- 5 gallon (19 liter) pail
- 55 gallon drum, net fill 50 gallons (189 liters)

MIXING

Before application, mix Topglaze 100 using a mechanical mixer (Jiffy Mixer) at slow speeds until a homogeneous mixture and color is obtained. Topglaze 100 may also be mixed by hand for at least five minutes. Use caution not to whip too much air into the material as this may result in pinhole blisters or shortened potlife.

APPLICATION

Apply Topglaze 100 evenly over the entire deck. For best results, airless sprayer or phenolic resin core roller may be used but extra care should be taken not to cause air bubbles. Topglaze 100 may require more than one coat depending on the job specifications and requirements. When estimating material requirements, coverage rates tend to increase for subsequent coats of material. To obtain proper adhesion between coats it is imperative that recoating be done **within** 48 hours.

When Topglaze 100 Clear is used as a seal coat only, the

TECHNICAL DATA, TG100-Clear, (DOES NOT MEET CALIF. VOC)

| | |
|--|--|
| Coverage Rate | See Guide Specification |
| Dry Film Thickness, exclusive of aggregate, Per coat @ 1 gal/100 sq. ft. | 10 ± 2 mils 254 ± 50 micron |
| Hardness, ASTM D-2240 | 95 ± 5 Shore A |
| Tear Resistance, Die C, ASTM D-624 | 500 ± 50 pli 87.6 ± 10 kN/m |
| Tensile Strength, ASTM D-412 | 5500 ± 500 psi 37.9 ± 3.4 MPa |
| Ultimate Elongation, ASTM D-412 | 250 ± 30% |
| Specific Gravity | 0.988 |
| Total Solids by Weight, ASTM D-2369 | 66.2% |
| Total Solids by Volume, ASTM D-2697 | 61.7% |
| Viscosity at 75°F (24°C) | 500 ± 300 cps |
| Volatile Organic Compounds, | 2.78 lb/gal ASTM D-2369-81 334 gm/liter |

TECHNICAL DATA, TG100-Pigmented, (DOES NOT MEET CALIF. VOC)

| | |
|--|--|
| Coverage Rate | See Guide Specification |
| Dry Film Thickness, exclusive of aggregate, Per coat @ 1 gal/100 sq. ft. | 10 ± 2 mils 254 ± 50 micron |
| Hardness, ASTM D-2240 | 95 ± 5 Shore A |
| Tear Resistance, Die C, ASTM D-624 | 500 ± 50 pli 87.6 ± 10 kN/m |
| Tensile Strength, ASTM D-412 | 3800 ± 300 psi 26.2 ± 2 MPa |
| Ultimate Elongation, ASTM D-412 | 250 ± 25% |
| Specific Gravity | 1.14 |
| Total Solids by Weight, ASTM D-2369 | 70.9% |
| Total Solids by Volume, ASTM D-2697 | 61.3% |
| Viscosity at 75°F (24°C) | 1200 ± 600 cps |
| Volatile Organic Compounds, | 2.79 lb/gal ASTM D-2369-81 334 gm/liter |

TECHNICAL DATA, TG100C-Pigmented, (MEETS CALIF. AQMD VOC)

| | |
|--|---|
| Coverage Rate | See Guide Specification |
| Dry Film Thickness, exclusive of aggregate, Per coat @ 1 gal/100 sq. ft. | 10 ± 2 mils 254 ± 50 micron |
| Hardness, ASTM D-2240 | 95 ± 5 Shore A |
| Tear Resistance, Die C, ASTM D-624 | 450 ± 50 pli 78.8 ± 10 kN/m |
| Tensile Strength, ASTM D-412 | 4000 ± 400 psi 27.6 ± 2.7 MPa |
| Ultimate Elongation, ASTM D-412 | 200 ± 25% |
| Specific Gravity | 1.25 |
| Total Solids by Weight, ASTM D-2369 | 71 ± 2% |
| Total Solids by Volume, ASTM D-2697 | 65 ± 2% |
| Viscosity at 75°F (24°C) | 1500±1000cps |
| Volatile Organic Compounds, | 2.09 lb/gal ASTM D-2369-81, (with exempt solvent) 250 gm/liter |

surface must be clean, dry and primed with primer to achieve proper adhesion to the surface. Primer may discolor when used under Topglaze 100 Clear as a seal coat.

CURING

At 70°F (21°C) and 50% relative humidity, allow each coat to cure a minimum of 16 hours between each coat.

Allow 24 hours before permitting light pedestrian traffic and at least 72 hours before permitting heavy pedestrian or auto traffic on to the finished surface. If more than 48 hours passes between coats, re-prime the surface with Polyprime 21 or 2180 before proceeding.

Uncured Topglaze 100 is very sensitive to heat and moisture. Higher temperatures and/or high humidity will accelerate the cure time. Use caution in batch sizes and thickness of application.

Low temperature and/or low humidity extend the cure time. To accelerate cure Polyglaze Hardener may be used.

EQUIPMENT CLEANUP

Equipment should be cleaned with an environmentally safe solvent, as permitted under local regulations, immediately after use.

STORAGE

Topglaze 100 has a shelf life of six (6) months from date of manufacture in original, factory sealed containers.

LIMITATIONS

Surfaces must be dry, clean and free of foreign matter.

Clear coating may turn opaque and cloudy due to moisture penetration, especially in exterior applications.

Surface may be slippery when wet.

Regular primer cannot be used between coats of Topglaze 100 Clear as it will discolor.

Containers that have been opened must be used as soon as possible.

Do not dilute under any circumstance.

WARNING

This product contains Isocyanates and Solvent.

Topglaze 100 Clear is considered Dangerous Goods. DOT regulations classify it as: PAINT, Class 3, UN 1263, PG III, FLAMMABLE LIQUID.

Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local Custom Linings representative or visit our website for current technical data and instructions.

LIMITED WARRANTY

Custom Linings warrants its products to be free of manufacturing defects and that they will meet Custom Linings current published physical properties. Custom Linings warrants that its products, when properly installed by a licensed applicator according to Custom Linings guide specifications and product data sheets over a sound, properly prepared substrate, will not allow water migration for a period of three (3) years. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. There are no other warranties by Custom Linings of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Custom Linings shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Custom Linings shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Custom Linings reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the users responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and Custom Linings makes no claim that these tests or any other tests, accurately represent all environments.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: TOPGLAZE 100 Clear

SECTION I - COMPANY IDENTIFICATION

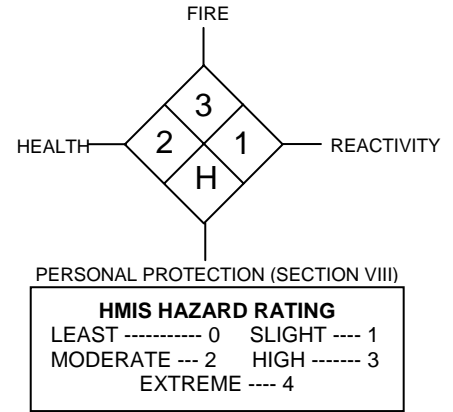
MANUFACTURER'S NAME: Custom Linings

ADDRESS: Buena Vista, CO

INFORMATION PHONE: 719-395-4414

EMERGENCY CONTACT: 888-878-5233

DATE REVISED: March 16, 2004



SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

| HAZARDOUS COMPONENTS | OCCUPATIONAL EXPOSURE LIMITS | | | | VAPOR PRESSURE | |
|---------------------------------|------------------------------|----------------|----------------|---------|----------------|--------------|
| | CAS NUMBER | OSHA PEL | ACGIH TLV | MFG TLV | mm | Hg @ TEMP |
| *3-ISOCYANATOMETHYL-3,5,5 | 4098-71-9 | .005 ppm | .005 ppm | | .0003 | 20°C (68°F) |
| TRIMETHYL CYCLOHEXYL ISOCYANATE | | (SKIN) | (SKIN) | | | |
| *DIMETHYL BENZENE | 1330-20-7 | 100 ppm | 100 ppm | | 14.0 | 38°C (100°F) |
| | | (STEL-125 ppm) | (STEL-125 ppm) | | | |
| URETHANE PREPOLYMER | | N/E | N/E | | | |

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. Information concerning non-hazardous ingredients is considered a Trade Secret

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: >138°C (280°F)

SPECIFIC GRAVITY: (H₂O=1): 0.98

COATING V.O.C.: 340 g/l (2.8 lb/gal)

VAPOR DENSITY: N/A

EVAPORATION RATE: Slower than ether

SOLUBILITY IN WATER: Reacts with water

APPEARANCE AND ODOR: Thin liquid, aromatic odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 26°C (79°F)

METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME: (Based on Xylene)

Lower: 1.0% Upper: 7.1%

EXTINGUISHING MEDIA: Dry chemical, foam, and carbon dioxide. If water is used, use very large quantities of cold water. The reaction between water and hot isocyanate may be vigorous.

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required. Excessive pressure or temperature may cause explosive rupture of containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them. Combustible.

SECTION V - REACTIVITY DATA

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause liberation of carbon dioxide and buildup of pressure.

INCOMPATIBILITY (MATERIALS TO AVOID): This product will react with any material containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids, the reaction with water is very slow under 50°C, but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds. Some reactions can be violent. Material can react violently with strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon dioxide, carbon monoxide, nitrogen oxides, trace amounts of hydrogen cyanide and unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions but under high temperatures in the presence of alkalis, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers.

SECTION VI - HEALTH HAZARD DATA

SKIN CONTACT: Some components used in this material when spilled on the skin may cause irritation, redness, swelling, or blistering. Repeated contact may cause irritation of the skin and an allergic skin reaction consisting of a hive-like rash on locations not even directly contacted by the liquid. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor.

EYE CONTACT: Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. The effects of liquid directly contacting the eye can lead to possible damage to the cornea and impairment of vision. The effects of high vapor concentration may vary from slight irritation with tearing and burning sensation to keratitis consisting of inflammation of the cornea and impairment of vision. Any level of contact should not be left untreated.

SKIN ABSORPTION: Systemically toxic concentrations of this product will probably not be absorbed through human skin.

INGESTION: Can result in irritating and corrosive action in the mouth, stomach tissue and digestive tract and gastroenteritis. Symptoms can include sore throat, headache, abdominal pain, nausea, vomiting and diarrhea. Pronounced gastroenteritis effects would probably occur on repeated ingestion.

INHALATION: Isocyanate vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). High vapor concentrations may cause central nervous system (CNS) depression as evidenced by dizziness, headache, dizziness, and nausea. Persons with a preexisting, non-specific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). As a result of previous repeated overexposures or a single large dose, certain individuals may develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanate has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

HEALTH HAZARDS: ACUTE: Exposure may cause mucous membrane and respiratory tract irritation, tightness of chest, headache, shortness of breath, and a dry cough. At concentrations exceeding current occupational limits and for sensitized individuals at levels less than or greater than current occupational limits, asthma-like symptoms may occur. These symptoms may include coughing, wheezing, and shortness of breath. A hypersensitive pneumonitis may also occur if the person is sensitized. This syndrome is characterized by fever, nonproductive cough, wheezing, chills, and shortness of breath. Central nervous system (CNS) depression may also result. The effects of acute exposure may be delayed in onset up to 12-24 hours. **CHRONIC:** Repeated exposure above current occupational limits may cause an allergic sensitization of the respiratory tract. This is characterized by an asthma-like response upon re-exposure to the chemical. The symptoms may include coughing, wheezing, shortness of breath and chest tightness, and may be fatal. Central nervous system (CNS) impairment possibly leading to unconsciousness.

CARCINOGENICITY: NTP: No IARC Monographs: No OSHA Regulated: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Cardiovascular disease, asthma or asthmatic bronchitis, emphysema, allergic disease, chronic respiratory disease, sinusitis, headache, dizziness.

EMERGENCY AND FIRST AID PROCEDURES: **EYE CONTACT:** Immediately flush eyes with plenty of water, preferably lukewarm. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel. **INHALATION:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel. **SKIN CONTACT:** Wash material off the skin thoroughly with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse. **INGESTION:** Do not induce vomiting. Immediately drink large quantities of water and refer person to medical personnel. Do not give anything by mouth to an unconscious person.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 2.0% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Follow the precautions on the supplier's material safety data sheets. All operations should be performed by trained personnel familiar with the hazards of the chemicals used. Treat the spill area with the decontamination solution, using about 10 parts of solution for each part of the spill, and allow it to react for at least 15 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. Residues from spill cleanup, even when treated as described may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

WASTE DISPOSAL METHOD: Slowly stir the isocyanate waste into the decontamination solution described above. Let stand for 48 hours, allowing the evolved carbon dioxide to vent away, residues may still be subject to RCRA storage and disposal requirements. Dispose off in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep in cool, dry, ventilated storage area, in closed containers and out of direct sunlight. Keep liquid and vapors away from heat, sparks and flame, store in containers above ground and surrounded by dikes to contain spills or leaks. Sufficient heat or pressure may ignite or detonate even liquid product in the absence of sparks or open flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use until all vapors are gone. Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can result. Keep containers closed when not in use. Containers, even those that have been emptied, may contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not pressurize containers to empty them. Use explosion-proof lighting and equipment, non-sparking tools, clothes and shoes. Ground all structures, transfer containers, equipment to confirm to the national electrical code. Use procedures that prevent static electrical sparks. Static electricity may accumulate and create a fire hazard.

OTHER PRECAUTIONS: Prevent skin and eye contact, observe TLV limitations. Avoid breathing vapors. Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product that caused the sensitization. Air circulation and exhaustion of vapors must be maintained until the coatings have fully cured to insure that no potential fire, explosion or health hazard remains. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This product can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposure to lower concentrations. Exposure to vapors of heated product can be extremely dangerous. Employee education and training in safe handling of this material is required under OSHA hazard communication standard. Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed to the product. These individuals should be identified through baseline and annual evaluation and removed from further exposure. Medical examination should include medical history, vital capacity, and forced expiratory volume at one second.

SECTION VIII - CONTROL MEASURES

VENTILATION: The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated. Use explosion-proof ventilation equipment. Use local exhaust ventilation to keep airborne concentrations below the TLV. Follow guidelines in the ACGIH publication 'Industrial Ventilation'. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

RESPIRATORY PROTECTION: If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied air respirator with a full face piece or an air supplied hood. For emergencies, use a positive pressure self-contained breathing apparatus. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

PROTECTIVE CLOTHING: Gloves determined to be impervious under the conditions of use should be worn always when working with this product. Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

EYE PROTECTION:-Chemical tight goggles and full-face shield.

OTHER PROTECTIVE EQUIPMENT AND MEASURES: Unhindered access to safety shower and eye wash stations. As a general hygienic practice, wash hands and face after use. Showers and cleaning of clothes are recommended. Follow all label instructions. Educate and train employees in safe use of product.

SECTION IX - REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: Paint, Class 3, UN 1263, PG III, Flammable Liquid.

IATA PROPER SHIPPING NAME: Paint, Class 3, UN 1263, PG III, Flammable Liquid.

IMO PROPER SHIPPING NAME: Paint, Class 3, UN 1263, PG III, Flammable Liquid.

STATE REGULATIONS: CALIFORNIA - As per requirements of the Safe Drinking Water & Toxic Enforcement Act of CA, USA 1985 (Proposition 65), the public is warned that materials used in this product may create an exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. This warning required by Section 25249.6 of the California Health and Safety Code.

TOXIC SUBSTANCE CONTROL ACT: All chemicals comprising this product are listed on the TSCA inventory.

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate and current as of the date of this MSDS. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.