Rubberize It!™

Eco-Friendly System of Protective Liquid Rubber™ Coatings

PO BOX 642 – MOSIER, OR 97040 – (855) 782-2374

www.RubberizeIt.com

Rubberizeit!™

System of Protective Coatings

Ten years experience of Rubberizeit!™ products application successfully proves usefulness, effectiveness and longevity of using the System of Protective Coatings for solving the problems of waterproofing and anti-corrosive protection of materials, ponds,constructions and buildings.

Created for industrial usage, Rubberizeit!™ products allow fast and simple formation of high-quality, corrosion-preventing, water-proof seamless membrane on horizontal and vertical surfaces.

Cold spraying allows conditioning any materials and complex surfaces of all types and, by virtue of its characteristics, Rubberizeit!™ products prevent errors connected with the “human factor” influence during the application process and receive guaranteed results.

Membrane formation begins directly after application. In the process of polymerization; it receives unique features that are saved without changes for more than 25 years in severe environmental conditions:

- 100% engagement with all materials;
- Increased elasticity (stretching more than 1350%);
- High resistance to stretching and piercing;
- Returning 95% of form after stretching;
- Absolutely hermetical barrier for water, steam and gasses;
- High durability to corrosive substances, UV & ozone;
- Wide range of temperatures, from -55C to +95C

Rubberizeit!™ products are ECO-Friendly and in accordance with world ecology standards for water-based, free from Volatile Organic Compounds (VOC), non-toxic and harmless to the environment and people.

Application Range of Rubberizeit!™ System of Protective Coating is Extremely Wide:

Home and DIY Projects: Roll-on Roofing Repairs, Container Gardening, Koi Ponds, Water-gardens, Fountains and other Water Features.

Industrial Projects: Tunnels, bridges, dams, metal supports, pipe-lines, water reservoirs, treatment facilities, industrial waste storage, elevators, bank protection works, reservoirs and cisterns for drinking water, flyovers, warehouses, access ramps, production facilities.

Civil Engineering: Fundaments, drainage and engineering systems, technical facilities, basements, garages, basement facilities, roof coatings, balconies, terraces, wells, ponds, swimming pools.

Anti-corrosive and Rust Prevention: Sea and River Craft, chemical storage, containers, automobiles, metal constructions, pipe-lines.

Agriculture and Livestock: Irrigation constructions, canals, elevators, retention ponds, growth rooms, hydroponics, barnyards, systems of drinking and industrial water supply.

Visit the “Liquid Rubber™ Forum” at www.RubberizeIt.com for discussions on uses these and many more Liquid Rubber™ applications.

Rubberizeit!™ System of Protective Coating Products:

Rubberizeit!™ Industrial Grade (IG): Professional system of industrial usage for the installation of high-quality waterproofing and anti-corrosive coating of any shape and base configuration. Typically used in spray applications with catalyst. Can be brush or roller applied.

Rubberizeit!™ Universal Grade (UG): Ready for use product with high protection attributes for local and industrial applications. Typically used for brush and roller applications – product is thicker and contains less water. Can be used to bridge gaps up to ¼".

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RUBBERIZEIT!™ INDUSTRIAL GRADE (IG) ▼

Product Composition	**Water Emulsion Highly Modified, Refined, of Bitumen, Elastomeric and Polymeric Material**
Characteristics	Binary product of industrial application for the production of joint-free waterproof coating. Used for protection of any engineering constructions, exposed to UV rays, water, majority of acid solutions, alkali, oxidation and aging processes. Laid on any surfaces as: concrete, artificial and natural stone, marble, schist, wood ferrous and galvanized metal, plastic, polystyrol, glass and etc.
Field of Use	• Waterproofing of bases, bridges, tunnels underground facilities • Deformation and heat-shrinkage joints treatment between constructions, bridges and etc • Waterproofing of roof coating, floor structure, inversion roof coatings, balconies, perimeter walks, basements, toilet facilities, bathrooms and processing areas • Installation of roof coatings, repair of old bitumen roof coatings, metallic, schist and other materials coating repair. • Waterproofing of wells, drainage systems, hopper heads and dumps. Tank, swimming pools, reservoirs, containers for water storage and chemical substances waterproofing • Anti-corrosive treatment of metal constructions, underground engineering communications.
Finished Coating Characteristics	After product application, unique joint-free membrane coating is created, which receives the characteristics of high elasticity (1350%) after complete drying, permanence to deformation, absolute water, steam and gas resistance Coating preserves its performance for more than 25 years with constant exposure to temperature changes, UV rays, ozone and chemical substances. Suitable for coating installation with constant and long-term water contact. Product is nonresistant to the long-term contact with oil, chemical solvents, gasoline and lubricants.
Physical Coating Characteristics (by GOST 34092-2000)	Coating thickness – 2.5 mm; Density – 0.64 kg/dm'; Indurate – 40A; Mass fraction of nonvolatile substances – 67%; Failure Resistance – 0.38 mPa (after 48 hours), 1.09 mPa (after 14 days) Apparent stretching failure resistance – 0.89%; Apparent stretching elongation – 220%; Fissuring elongation – 1800%; Shape regaining – 95%; Flexibility on a rail with 5mm in radius (for -15C) – **absence of cracks;** Adhesion to concrete – 0.90Mpa; Adhesion to steel – 0.45mPa; Heat-distortion temperature (for 95C) – **no blisters and drips are visible;** Moisture regain – 1.57%; Water resistance at pressure of 0.03 MPa during 10 mins – **no signs of water penetration;** Water resistance at pressure of 0.001 Mpa during 72 h – **no signs of water penetration;** Flexibility (R=25) - -25C

Aging Quality (by GOST 9.401-91)	90 cycles (25 years) – no negative changes in physicochemical composition.	
Fire Safety Class	Spread of fire – RP1 Ignitability – G3 Inflammation - V2	
Chemical resistance to the Influence of Corroding Liquids (with exposure for 30 days)	1n of Sulfuric acid 1n of Sodium hydrate 3% of Sodium chloride Oil	Durability + 100.3% elongation 0.00% Durability +71.8% elongation -8% Durability +80.8% elongation 0.0% Durability -53.8% elongation 0.0%
Product Composition	**Water Emulsion Highly Modified, Refined, of Bitumen, Elastomeric and Polymeric Material**	
Ecological Safety, Quality of EU and RF (SRN 2.1.4.1074-01, SRN 2.1.1.1188-03)	Coating is Non-Toxic Allowed to use as protection for swimming pools and reservoirs for drinking water. Realization and utilization for isolation of an engineering construction.	
Method of Application	Rubberizeit!™ Industrial Grade is applied by dual-channel equipment for hydro spraying for large commercial projects. (LRSG-2) Induration is momentary while mixing the components in the jet, on the surface of the base. Application is performed at a temperature of not less than +5C. Application must not be performed on open spaces with high probability of rain/precipitation. Rubberizeit!™ Industrial Grade can also be rolled and or brushed on.	
Time of Coated Drying	Induration – momentary (spray applications) – N/A for brush or roll-on applications Drying "until tack" - less than 1 minute (spray applications) – 1-3 hours for brush or roll-on applications Surface drying – 2 hours (spray applications) – 24 hours for brush or roll-on applications Deep Drying – from 24-72 hours (spray applications) – 24-72 hours for brush or roll-on applications Vulcanizing – from 2-7 days (spray applications) – 3-7 days for brush or roll-on applications	
Consumption	Recommended thickness of ready coating – from 2 – 3mm. 2.8l of product is necessary for making a finished coating with thickness of 2mm. Necessary thickness is applied at a time, for one operation.	
Conditions of Application	The product is applied to a dry, clean, de-greased, dust-free base, without any coating or impurities that lower the adhesive performance of the product. While applying on porous materials, humidity of not more than 15% is allowed on the base, upon condition of high durability and indurates. In case of absence of required durability and indurate of a base (sand screed, foam concrete blocks), cohesive primers of deep penetration on water base are used. Metal base needs mechanical conditioning, removal of oil coatings, corrosive layering or lacquer coat with low adhesion, and dust free procedure. On metal bases, Rubberizeit!™ Universal Grade anti-corrosive precoating is used, which is washed by a brush with followed by complete drying. Using Rubberizeit!™ industrial Grade may correspond with reinforced non-woven thermo-bonded geotextile with density from 30g/m to 200g/m. Reinforcing is applied on the places of abutting, sharp external and internal nooks, and the places of essential resistance to pressure and strain with tearing-off.	

Conditions of Exploitation	After full vulcanizing, coating turns black, becomes resistant to UV ray influence and to suitable for exploitation under heavy load.
Tare and Storage Conditions	Plastic barrels 205l Storage temperature: from +5C to 30C Shelf life: In hermetically sealed tare – 24 months After usage, keep in hermetically sealed tare. **DO NOT ALLOW PRODUCT FREEZING!**
Preparation of the Product for Usage	Product is ready for use. Do not extend by thinners. Mix firmly by hand before using
Instruments Cleaning	For the product removal in wet condition it is necessary to wash the instrument by water. Indurate product is removed by White Spirit
Safety and Hygiene Information	Product is on water base, not toxic, does not contain chemical thinners. While accidental contact with skin does not induce burns or excitation. Rubber gloves, special uniform and other individual protective measures are used for application. In liquid condition, the product is washed by water and soap, after that, softening cream or oil is applied to skin.

RUBBERIZEIT!™ UNIVERSAL GRADE ▼

Product Composition	Water Emulsion Highly Modified, Refined, of Bitumen, Elastomeric and Polymeric Material	
Characteristics	Unary product, ready for application for the production of thin-layer joint-free waterproof coating for the purpose of protection and any engineering constructions, exposed to the UV rays, water, majority of acid solutions, alkali, oxidation and aging processes. Laid on any surface as: concrete, artifical and natural stone, marble, schist, wood, black and galvanized metal, plastic, polystyrol and etc.	
Field of Use	• Waterproofing of roof coatings, balconies, perimeter walks, basements, bathrooms and processing areas. • Repair of old bitumen roof coatings, metallic, schist and other materials coating repair. • Waterproofing of wells, drainage systems, hopper heads, and dumps. • Tank, swimming pools, reservoirs, containers for water storage and chemical substances waterproofing. • Anti-corrosive treatment of metal constructions.	
Product Exterior	Deep-brown liquid, low viscosity, with light oil flavor.	
Product Physical Structure	Density, 1180 g/dm Application temperature from +5 to +40C Drying time (full polymerization), 12 (24) h pH, >7 Nonvolatile content, 70%±1 Volatile compounds, 30%±1 (water)	
Finished Coating Characteristics	After product application, unique joint-free mastic covering is created, which receives the characteristics of high elasticity (1350%) after complete drying, permanence to deformation, absolute water, steam and gas resistance. Coating preserves its performance for more than 25 years with constant exposure to temperature changes, UV rays, ozone and chemical substances.	
Physical Coating Characteristics (by GOST 34092-2000)	Coating thickness – 1.0 mm; Density – 0.72 kg/dm'; Indurate – 90A; Mass fraction of nonvolatile substances – 70%; Apparent stretching failure resistance – 0.97%; Apparent stretching elongation – 206%; Fissuring elongation – 1150%; Shape regaining – 90%; Flexibility on a rail with 5mm in radius (for -15C) – **absence of cracks;** Adhesion to concrete – 1.0Mpa; Adhesion to steel – 0.9mPa; Heat-distortion temperature (for 95C) – **no blisters and drips are visible;** Moisture regain – .68%; Water resistance at pressure of 0.03 MPa during 10 mins – **no signs of water penetration;** Water resistance at pressure of 0.001 Mpa during 72 h – **no signs of water penetration;** Flexibility (R=25) - -25C	
Aging Quality (by GOST 9.401-91)	90 cycles (25 years) – no negative changes in physicochemical composition.	
Fire Safety Class	Spread of fire – RP1 Ignitability – G3 Inflammation - V2	
Chemical resistance to the	1n of Sulfuric acid	Durability + 100.3% elongation 0.00%

Influence of Corroding Liquids (with exposure for 30 days)	1n of Sodium hydrate 3% of Sodium chloride Oil	Durability +71.8% elongation -8% Durability +80.8% elongation 0.0% Durability -53.8% elongation 0.0%
Product Composition	**Water Emulsion Highly Modified, Refined, of Bitumen, Elastomeric and Polymeric Material**	
Ecological Safety, Quality of EU and RF (SRN 2.1.4.1074-01, SRN 2.1.1.1188-03)	Coating is Non-Toxic Allowed to use as protection for swimming pools and reservoirs for drinking water. Realization and utilization for isolation of an engineering construction.	
Method of Application	Rubberizeit!™ Universal Grade is a unary product that is ready for use. Applied by equimpent of high pressure for hydro spraying or by hands with the help of a brush or a roller. If necessary, for viscosity control extending by Rubberizeit!™ Industrial Grade emulsion to 10% of the volume is allowed. Application is performed at a temperature of not less than +5C. Application must not be performed on open spaces with high probability of rain/precipitation.	
Time of Coated Drying (air temperature +20C humidity 55%)	Drying "until tack" - 5-10 minutes Surface drying – 1 hour Deep drying – from 12 – 24 hours. Vulcanizing – from 2 to 7 days	
Consumption	1.2l/m² of the product is necessary for making a finished coating with thickness of 1mm. The product is applied in 2-4 layers with full in-depth drying of each layer.	
Conditions of Application	The product is applied to a dry, clean, de-greased, dust-free base, without any coating or impurities that lower the adhesive performance of the product. While applying on porous materials, humidity of not more than 15% is allowed on the base, upon condition of high durability and indurates. In case of absence of required durability and indurate of a base (sand screed, foam concrete blocks), cohesive primers of deep penetration on water base are used. Metal base needs mechanical conditioning, removal of oil coatings, corrosive layering or lacquer coat with low adhesion, and dust free procedure. On metal bases, Rubberizeit!™ Universal Grade anti-corrosive precoating is used, which is washed by a brush with followed by complete drying. Using Rubberizeit!™ industrial Grade may correspond with reinforced non-woven thermo-bonded geotextile with density from 30g/m to 200g/m. Reinforcing is applied on the places of abutting, sharp external and internal nooks, and the places of essential resistance to pressure and strain with tearing-off.	
Conditions of Exploitation	After full vulcanizing, coating turns black, becomes resistant to UV ray influence and to suitable for exploitation under heavy load.	
Tare and Storage Conditions	Plastic barrels 205l - Storage temperature: from +5C to 30C - Shelf life: In hermetically sealed tare – 12mo After usage, keep in hermetically sealed tare. **DO NOT ALLOW PRODUCT FREEZING!**	
Preparation of the Product for Usage	Product is ready for use. Do not extend by thinners. Mix firmly by hand before using	
Instruments Cleaning	For the product removal in wet condition it is necessary to wash the instrument by water. Indurate product is removed by White Spirit	
Safety and Hygiene Information	Product is on water base, not toxic, does not contain chemical thinners. While accidental contact with skin does not induce burns or excitation. Rubber gloves, special uniform and other individual protective measures are used for application. In liquid condition, the product is washed by water and soap, after that, softening cream or oil is applied to skin.	

MSDS

Industrial Grade (IG)

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www.RubberizeIt.com

MATERIAL SAFETY DATA SHEET

Supplier: Hood River Industrial

Phone: 541-578-0108

(THIS PRODUCT NOT SUBJECT TO THE CONTROLLED PRODUCTS REGULATIONS)

SECTION 1 MATERIAL IDENTIFICATION

TRADE NAME: **Rubberizeit! Industrial Grade (IG)**

CHEMICAL FAMILY: Water suspension of petroleum derived hydrocarbons (polymer modified emulsified asphalt).

MATERIAL USE: Protective Coating for waterproofing & corrosion prevention

T.D.G. CLASSIFICATION: NON REGULATED

WHIMIS CLASSIFICATION: NON REGULATED

EMERGENCY TELEPHONE #: 541-578-0108

SECTION II HAZARDOUS INGREDIENTS

COMPONENT	CAS#	% (BY MASS)	LC50 (ppm) (rat inhal)	LD50 (mg/kg) (rat oral)
Complex mixture of bitumens	n/a	40-70	n/a	n/a
anionic surfactants	n/a	0.5-2.0	n/a	n/a
water	7732-18-5	30-60	n/a	n/a
Polymer dispersion		5-25	n/a	n/a

SECTION III PHYSICAL PROPERTIES

Odor and appearance: Viscous brown liquid, slight resinous odor.
Odor threshold: n/a
Specific gravity: 1.00 (approx.)
Coefficient of water/oil distribution: n/a
Vapour pressure (mm Hg): 17 @20°C (water)
Boiling point: 100°C (water)
Freezing point: 0°C
pH: 7-13
Vapour density (air = 1): >1
Evaporation rate (nBuAcetate = 1): <1
Volatiles %: 40-60 (water)
Solubility in water: Soluble

SECTION IV FIRE & EXPLOSION DATA

Means of extinction: n/a
Sensitivity to mechanical impact/static discharge: n/a
Flash point (method): n/a (non-combustible)
Upper flammable limits % : n/a
Lower flammable limits % : n/a
Autoignition temperature: n/a
Special fire fighting instructions: n/a
Unusual fire and explosion hazards: Product will not burn but may splatter if temperature exceeds the boiling point.

SECTION V REACTIVITY DATA

Chemical stability: Stable
Incompatible materials: Will react with alkaline sensitive materials such as acids and certain metals. Contact with reactive metals such as aluminium or magnesium will result in the formation of explosive hydrogen gas.
Hazardous decomposition products: Avoid heating above 200^{o}C. At elevated temperatures hazardous vapours can be released, including carbon monoxide, hydrogen chloride, organic acids and aldehydes.
Hazardous polymerization: Will not occur.

SECTION VI HEALTH INFORMATION

Exposure limit: n/a
Inhalation: n/a
Skin: adhesion
Eyes: adhesion, irritation.
Ingestion: Blockage of digestive and/or respiratory tract.
Chronic effects: n/a

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: n/a

Skin: This is an alkaline product. If splashed on the skin immediately wash thoroughly with fresh water. If the product has dried on the skin massage the area with medical grade mineral oil, baby oil or edible oil, then wash with soap and water. If irritation persists seek medical attention..

Eyes: Flush thoroughly with fresh water for at least ten minutes. Seek medical attention.

Ingestion: DO NOT INDUCE VOMITING. Seek medical attention.

SECTION VII SPILL PROCEDURES

In the event of a spill: Dike and contain, transfer to containers for recovery or disposal. Keep out of sewers.
Waste disposal method: Follow federal, provincial and local regulations regarding disposal.

SECTION VIII SPECIAL PROTECTION

Respiratory protection: n/a
Ventilation: n/a
Protective gloves: Recommended
Eye protection: safety glasses/splash goggles recommended
Other protective equipment: Long sleeves, loose clothing recommended.

SECTION IX SPECIAL PRECAUTIONS

Storage and handling conditions: Keep containers tightly closed when not in use. KEEP FROM FREEZING.
Special shipping information: Not regulated by the Transportation of Dangerous Goods Regulations.

Prepared by: **Rubberizeit!**
Preparation date: 11th Feb 2009
Replaces: n/a

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MSDS

Universal Grade (UG)

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MATERIAL SAFETY DATA SHEET

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anionic surfactants	n/a	0.5-2.0	n/a	n/a
water	7732-18-5	30-60	n/a	n/a
Polymer dispersion		5-25	n/a	n/a

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Specific gravity: 1.00 (approx.)
Coefficient of water/oil distribution: n/a
Vapour pressure (mm Hg): 17 @20°C (water)
Boiling point: 100°C (water)
Freezing point: 0°C
pH: 7-13
Vapour density (air = 1): >1
Evaporation rate (nBuAcetate = 1): <1
Volatiles %: 40-60 (water)
Solubility in water: Soluble

SECTION IV FIRE & EXPLOSION DATA

Means of extinction: n/a
Sensitivity to mechanical impact/static discharge: n/a
Flash point (method): n/a (non-combustible)
Upper flammable limits % : n/a
Lower flammable limits % : n/a
Autoignition temperature: n/a
Special fire fighting instructions: n/a
Unusual fire and explosion hazards: Product will not burn but may splatter if temperature exceeds the boiling point.

SECTION V REACTIVITY DATA

Chemical stability: Stable
Incompatible materials: Will react with alkaline sensitive materials such as acids and certain metals. Contact with reactive metals such as aluminium or magnesium will result in the formation of explosive hydrogen gas.
Hazardous decomposition products: Avoid heating above 200^{o}C. At elevated temperatures hazardous vapours can be released, including carbon monoxide, hydrogen chloride, organic acids and aldehydes.
Hazardous polymerization: Will not occur.

SECTION VI HEALTH INFORMATION

Exposure limit: n/a
Inhalation: n/a
Skin: adhesion
Eyes: adhesion, irritation.
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Respiratory protection: n/a
Ventilation: n/a
Protective gloves: Recommended
Eye protection: safety glasses/splash goggles recommended
Other protective equipment: Long sleeves, loose clothing recommended.

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Rubberize It!™

Application Instructions

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APPLICATION INSTRUCTIONS

Construction, Corrosion Protection, Marine, Automotive, Landscape, Agricultural & Industrial Applications

PRODUCT SAFETY/STORAGE:
Rubberizeit!™ is a non-flammable liquid and does not present any storage or transportation hazards. Store all Rubberizeit!™ Liquid Rubber™ in a cool dry space over 40°F / 5°C.

>>>> DO NOT ALLOW PRODUCT TO FREEZE <<<<

>>>> ALL CONTAINERS MUST REMAIN TIGHTLY SEALED WHEN NOT IN USE <<<<

>>>> PRODUCT PREPARATION: STIR BY HAND FOR 2 TO 4 MINUTES <<<<

>>>> DO NOT STIR PRODUCT WITH DRILL ATTACHMENTS <<<<

SURFACE PREPERATION:
Surfaces must be dry and free of anything that could adversely affect the adhesion of the Liquid Rubber™ to the surface. You should be sure to remove all loose, scaling, peeling, blistering, chipping, cracking, chalking or gravel, dust, dirt, sand, soot, grease, oil, uncured tar, wax, soap film, animal fats or petroleum-based residue, coal tar, chlorine, salts, efflorescence, or any other chemically reactive substance; and the surface to be coated must be completely free of all mold, mildew or any other living organism and COMPLETELY DRY.

High-pressure 2,500 P.S.I. should be used to thoroughly pressure clean all surfaces prior to application when any of the above conditions exist.

Mildew and similar growths need to be killed with 5% chlorine solution household bleach in water, followed by a thorough rinse with clean water. All surfaces must then be allowed to THOROUGHLY DRY before proceeding with application.

After all surfaces are thoroughly dry inspect for cracks, holes and any surface irregularities that will need to be repaired prior to Spray, or roller/brush Rubberizeit!™ Liquid Rubber™ application.

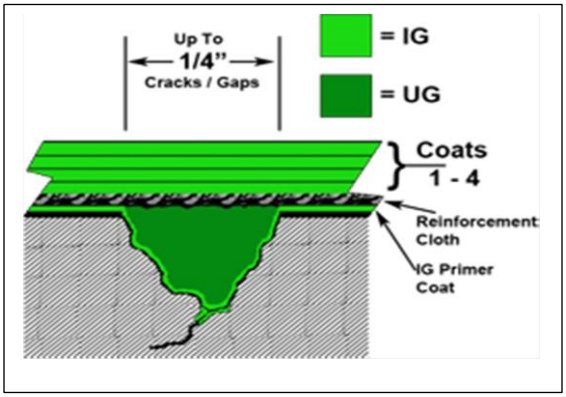
Rubberizeit!™ must be stirred, by hand slowly for 2-5 minutes, not shaken, or aggressively blended prior to use. **DO NOT THIN PRODUCT.**

Types of Rubberizeit!™ Liquid Rubber™

Industrial Grade (IG) - is a 'thinner' grade suitable for spraying (airless sprayer), brushing/painting or rolling on to the medium being waterproofed. IG is best used in large flat areas, as a primer to UG, roofing applications, CMU pond applications and applications where the substrate is porous requiring the deep penetration of Liquid Rubber™.

Universal Grade (UG) - is a 'thicker' grade suitable for brushing/painting or rolling on to the medium being waterproofed. UG is best used on horizontal or vertical smaller porous areas. UG can be used to fill areas having gaps (up to 1/4") or cracks. IG should be used as a primer to UG - for deep penetration. Suitable for roofing penetration applications, CMU pond applications and applications where the substrate may require some "build-up" of Liquid Rubber™.

Repairing Crack in Concrete or Other Mediums (up to ¼" cracks or gaps)



Repairs should be made with an application of Liquid Rubber™ IG as a primer followed by an embedded reinforcement fabric, fabric needs to be at least 4" in width, with 2" each direction from repair at all open joints, seams, cracks, holes, or areas of damage as well as at all penetrations, inside or outside corners and at any pan, or threshold that are determined by specification to be part of the waterproof envelope.

Application on new wood, concrete, or ferrous metals should follow the same guidelines as repairs with all seams, joints, imperfections, or penetrations, inside or outside corners, pans, thresholds, or surfaces edges or transitions treated with a primer coat of IG, imbedded reinforcement cloth and a top-coat of IG prior to additional coats or final sprayed membrane. This preparation technique will add mil thickness and strength that is in addition to the additional coats or final top-coat – thickness determined by below Application Rate:

Application Rate:
Rates of Application are typically:

1. **40 mils dry** on any granular or non-granular cap sheet that is in good condition, and is free of damage, or has been repaired according to our instructions.
2. **50 mils dry** for any loose lay membrane that has been exposed to the sun so it has been oxidized and is cleaned as stated above.
3. **60 mils dry** for any concrete, (vertical, or Horizontal), or new wood substrates (vertical, or horizontal), that have been properly prepared as above.
   * these mil thickness recommendations are based on proper application and preparation. Deep Drying / Curing times depend on *temperature and relative humidity*.

Deep Drying Times
Deep Drying times are typically:

1. **IG Primer Coat**
   a. Brushed or Rolled liquid rubber will be ready to have cloth embedded or filled with UG in 4 hours – depending on temperature and relative humidity.

2. **IG Application Coat**
   a. Liquid Rubber™ needs to "deep" dry between application coats. This means that because Rubberizeit!™ is water-based, all water must evaporate out of each application coat prior to the next application coat. Otherwise the rubber will develop small bubbles of fluid between the coats. If you have small bubbles appearing on your project, you need to wait longer between your application coats. Time to dry between applications coats of IG is approximately 24 hours – depending on temperature and relative humidity.

3. **UG Crack / Gap Fill Coat**
   a. Because a normal coat of UG being used as crack / gap fill will average about 1/8" O.D. you will need to wait approximately 24 hours before applying any reinforcement cloth or applications coats. This will allow the water to completely evaporate before applying additional coats – depending on temperature and relative humidity.

4. **UG Application Coat**
    a. UG goes on at a thicker rate than IG, this is because there are more solids in UG. Because of this, UG typically Deep Dries quicker than IG – however, it is still recommended to wait approximately 24 hours between coats to allow for complete evaporation – depending on temperature and relative humidity.

"Curing" or "Vulcanization" Times

You will notice the product is dry to the touch with-in 2-3 days, however, the rubber is still going through a very important process called "Vulcanization" – this is the process where the rubber becomes one single membrane and can contain water on a continuous basis. The process of "Vulcanization" can take between 5-7 days of warm weather.

Typical Coat Thickness – Based on Application Type

1. IG – Roller Applied – 10mils per coat*
2. IG – Brush Applied – 10mils per coat*
3. UG – Roller Applied – 17mils per coat*
4. UG – Brush Applied – 17mils per coat*

    * These thicknesses are typical – you may experience slight variances depending on the type of brush or roller used to apply the rubber.

If you have a question about your specific application please do not hesitate contacting us either via the phone, e-mail or our live online support chat. We are here to help!

RUBBER WHERE YOU NEED IT

Rubberize It!™

Application Coverage Table

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Rubberizeit! COVERAGE TABLE ▼

Required Thickness (cured membrane)			Coverage	
Mils	mm	ft²/gal	m²/gal	m²/litre
40	1.02	30	2.79	0.74
60	1.53	20	1.86	0.49
80	2.04	15	1.39	0.37
100	2.55	12	1.11	0.29
120	3.06	10	0.92	0.24
140	3.55	8.5	0.78	0.21
160	4.08	7.5	0.69	0.18
180	4.59	6.6	0.61	0.16
200	5.1	6	0.55	0.15

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Chemical Resistance Chart

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Rubberizeit! CHEMICAL RESISTANCE CHART ▼

Chemical name	Formula	Concentration	Acceptability
Acetic acid	CH3COOH	10%	Limited
Acetic acid	CH3COOH	50%	Unsuitable
Aluminum chloride	NH4Cl	Saturated	Suitable
Aluminum sulfate	NH4SO4	Saturated	Suitable
Ammonium chloride	NH4Cl	Saturated	Suitable
Ammonium nitrate	NH4NO3	All concentrations	Unsuitable
Ammonium sulfate	(NH4)2SO4	Saturated	Suitable
Aqua regia	HCl-H NO3	All concentrations	Unsuitable
Barium carbonate	BaCO3	Saturated	Suitable
Barium chloride	BaCl2	Saturated	Suitable
Barium hydroxide	Ba(OH)2	Saturated	Suitable
Barium sulfate	BaSO4	Saturated	Suitable
Borax (sodium tetraborate)	Na2B4O 7	Saturated	Suitable
Bromine (gas or liquid)	Br2	All concentrations	Unsuitable
Calcium carbonate	CaCO3	Saturated	Suitable
Calcium chloride	CaCl2	Saturated	Suitable
Calcium cyanide	Ca(CN)2	All concentrations	Unsuitable
Calcium hydroxide (lime)	Ca(OH)2	Saturated	Suitable
Calcium nitrate	Ca(NO3)2	Saturated	Suitable
Calcium sulfate	CaSO4	Saturated	Suitable
Carbon dioxide (gas)	CO2	All concentrations	Suitable
Chlorine	Cl2, gas	All concentrations	Unsuitable
Chromic acid	H2CrO7	All concentrations	Unsuitable
Copper carbonate	CuCO3	Saturated	Suitable
Copper (cupric) chloride	CuCl2	Saturated	Suitable
Copper (cupric) hydroxide	Cu(OH)2	Saturated	Suitable
Copper (cupric) nitrate	Cu(NO3)2	Saturated	Suitable
Copper (cupric) sulfate	CuSO4	Saturated	Suitable
Corn Syrup	C 6O6H 12	<50% w/w	Suitable
Corn Syrup	C 6O6H 12	>50% w/w	Limited
Ethyl alcohol	C2H5OH	<35% w/w	Limited
Ethyl alcohol	C2H5OH	>35% w/w	Unsuitable
Glycerol	C 3O3H 6	<35% w/w	Limited
Glycerol	C 3O3H 6	>35% w/w	Unsuitable
Hydrochloric acid	HCl	35% w/w (conc.)	Unsuitable

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Rubberizeit! CHEMICAL RESISTANCE CHART (continued) ▼

Chemical name	Formula	Concentration	Acceptability
Hydrocyanic acid	HCN	All concentrations	Unsuitable
Hydrogen (gas)	H2	All concentrations	Unsuitable
Hydrogen peroxide	H 2O2	5% w/w	Limited
Hydrogen peroxide	H 2O2	>20% w/w	Unsuitable
Iron (ferrous) amm. sulfate	Fe(NH4)SO4	Saturated	Suitable
Iron (ferrous) carbonate	FeCO3	Saturated	Suitable
Iron (ferrous) chloride	FeCl2	Saturated	Suitable
Iron (ferrous) hydroxide	Fe(OH)2	Saturated	Suitable
Iron (ferrous) sulfate	FeSO4	Saturated	Suitable
Iron (ferric) carbonate	Fe2(CO3)3	Saturated	Suitable
Iron (ferric) chloride	FeCl3	Saturated	Unsuitable
Iron (ferric) hydroxide	Fe(OH)3	Saturated	Suitable
Iron (ferric) nitrate	Fe(NO3)3	Saturated	Unsuitable
Iron (ferric) sulfate	Fe2(SO4)3	Saturated	Limited
Magnesium carbonate	MgCO3	Saturated	Suitable
Magnesium chloride	MgCl2	Saturated	Suitable
Magnesium hydroxide	Mg(OH)2	Saturated	Suitable
Magnesium sulfate	MgSO4	Saturated	Suitable
Methyl alcohol	CH3OH	<35%	Limited
Methyl alcohol	CH3OH	>35%	Unsuitable
Nickel carbonate	NiCO3	Saturated	Suitable
Nickel chloride	NiCl2	Saturated	Suitable
Nickel hydroxide	Ni(OH)2	Saturated	Suitable
Nickel sulfate	NiSO4	Saturated	Suitable
Nitric acid	HNO3	35% w/w	Limited
Phosphoric acid (ortho)	H3PO4	75% w/w	Suitable
Potassium carbonate	K2CO3	Saturated	Limited
Potassium chlorate	KClO3	All concentrations	Unsuitable
Potassium chloride	KCl	Saturated	Suitable
Potassium citrate	K3C4O7	Saturated	Suitable
Potassium cyanide	KCN	All concentrations	Unsuitable
Potassium hydroxide	KOH	45% w/w	Suitable
Potassium perchlorate	KClO4	All solutions	Unsuitable
Potassium permanganate	KMnO4	All solutions	Unsuitable
Potassium nitrate	KNO3	Saturated	Limited
Potassium sulfate	K2SO4	Saturated	Suitable
Sodium acid phosphate	NaH2PO4	Saturated	Limited
Sodium bisulfite	NaHSO 3	Saturated	Suitable
Sodium bromide	NaBr	Saturated	Suitable
Sodium carbonate	Na2CO3	Saturated	Suitable
Sodium chlorate	NaClO3	All concentrations	Unsuitable

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Rubberizeit! CHEMICAL RESISTANCE CHART (continued) ▼

Chemical name	Formula	Concentration	Acceptability
Sodium chloride	NaCl	Saturated	Suitable
Sodium cyanide	NaCN	All concentrations	Unsuitable
Sodium fluoride	NaF	Saturated	Suitable
Sodium hydroxide	NaOH	50% w/w	Suitable
Sodium hypochlorite	NaOCl	1% av.Cl2	Limited
Sodium hypochlorite	NaOCl	10% av.Cl2	Unsuitable
Sodium metasilicate	Na2SiO3	Saturated	Suitable
Sodium nitrate	NaNO3	Saturated	Suitable
Sodium nitrite	NaNO2	Saturated	Suitable
Sodium orthophosphate	Na3PO4	Saturated	Suitable
Sodium perborate	Na2B4O7.H2O2	Saturated	Suitable
Sodium perchlorate	NaClO4	All concentrations	Unsuitable
Sodium permanganate	NaMnO4	All concentrations	Unsuitable
Sodium sulfate	Na2SO4	Saturated	Suitable
Sucrose	C 6O6H 12	Saturated	Suitable
Sulfuric acid	H2SO4	50% w/w	Suitable
Sulfuric acid	H2SO4	93% w/w	Unsuitable
Tin (stannous) chloride	SnCl2	Saturated	Suitable
Tin (stannous) sulfate	Sn SO4	Saturated	Limited
Urea	CO(NH2)2	Saturated	Suitable
Zinc oxide	ZnO	Saturated	Suitable
Zinc chloride	ZnCl2	Saturated	Suitable
Zinc sulfate	ZnSO4	Saturated	Suitable

Disclaimer

The information provided here was determined in the Aquaguard Industries Laboratories using Aquaguard Engineered Coating sprayed and cured using the recommended procedures.

Samples of were immersed in the solutions shown for 90 days at room temperature (20±2oC) before examination.

The information is provided in good faith and is accurate to the best of our knowledge. Results may vary if the Aquaguard Engineered Coatings incorrectly applied or if unknown contaminants are present.

These data provide no guarantee of performance and Aquaguard Industries & Rubberizeit! accept no responsibility for any problems which might arise as a result of exposure of Aquaguard Engineered Coating to any of the chemicals described.

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