

CushionX TDS

1.0 General Description

The AT Sports CushionX System is a fully adhered, seamless, installed in place, rubberized overlay surface approved by the Professional Pickleball Association for use on top of bare and previously coated asphalt and concrete surfaces. The overlay is comprised of a prefabricated rubber shock pad produced with 86% post-consumer recycled crumb rubber bound with a polyurethane adhesive. It can also be used as an overlay solution for moderately degraded substrates.

2.0 Safety Guidelines

Refer to component SDS for product specific information. Wear a proper NIOSH approved respirator when handling silica sand.

3.0 Components

- 3.1 Mat adhesive
- 3.2 59" x 60' 4mm urethane adhered granulized rubber mats (230 lbs. ea.)
- 3.3 Seam Sealer
- 3.4 Mat sealer
- 3.5 PicklePro™ Flex 100% self-crosslinking acrylic coatings
- 3.6 Line primer
- 3.7 Line paint
- 3.8 Flex Resurfacer (Only Pitted Asphalt)

4.0 Tools

- 4.1 Standard 3 or 4 ft, 50-60 durometer squeegee
- 4.2 26" wide, 1/4" Notch Squeegee
- 4.3 Extra 1/4" Notch Squeegee Blades
- 4.4 Landscape roller
- 4.5 V-Squeegee

5.0 Storage and Handling

Protect liquid products from freezing. Store products between 4°C (40°F) and 32°C (90°F).

Mat Packaging: 162 lb rubber rolls

Liquid Packaging: 55 gallon drum (460-570 lbs.); 30 gallon drum (260-310 lbs.); 5 gallon pails (50 lbs.)

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Drums are heavy. Use caution when moving.

6.0 Surface Preparation Guidelines

- 6.1 New Construction (asphalt)
 - a. Allow asphalt to cure a minimum of 14 days.
 - b. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to cure.
 - c. Pitted Asphalt: "Loose" asphalt that has substantial voids in the surface. Clean with pressure washer as needed. Apply one coat of Resurfacer Flex to fill voids.
 - d. Smooth Asphalt: "Tight" asphalt. Clean with pressure washer as needed.
 - e. Fill cracks and level with ACRYTECH Sport Patch (Deep Patch) as needed.
- 6.2 New Construction (concrete) -See section 15 Limitations.
 - a. For proper bonding concrete should have a smooth to light broom finish (CSP1-CSP3) and a vapor barrier installed.
 - b. Allow concrete to cure a minimum of 30 days.
 - c. Prepare concrete according to SSPC-SP 13. Pressure wash to remove efflorescence, concrete dust, dirt, etc. Prior to applying adhesive, ensure concrete is not "dusting." If so, acid etch, shot blast to CSP1- CSP3 and re-pressure wash.
 - d. Flood surface with water to check for depressions 1/16" or greater.
 - e. Fill cracks and level with ACRYTECH Sport Patch (Deep Patch) as needed.
 - f. Fill any expansion joints with ACRYTECH Fill-N-Fix.
- 6.3 Existing Construction (asphalt or concrete)
 - a. Pressure wash surface hard to remove dirt, mildew, etc., and delaminated paint.
 - b. Fill cracks and level with ACRYTECH Sport Patch (Deep Patch) as needed.
 - c. Fill any expansion joints with ACRYTECH Fill-N-Fix.

7.0 Measuring and Mat Preparation

- 7.1 Measure existing surface and plan to center mats. Mats are 60 feet long and 59 inches wide. Up to one foot of open space may be allowed on all sides of the mat. Mats may be trimmed on edges as necessary. Pop string line or place string along one long, one short side of fence, and for courts approximately 120 feet long, the center width.
- 7.2 Starting at one side of the court at the net line, Unroll the first section of mat toward a fence and along the string line and ensure it is square. When unrolled, mats may be nudged with foot, hand, and "waved" into position. Do not apply too much force or the mats can tear. Small tears can be patched with ACRYTECH Fill-N-Fix.



- 7.3 Unroll the second mat and square up along the first mat and butt up seams so there is no gap.
- 7.4 Repeat process for every mat.
- 7.5 Apply 3-4" masking tape to edges of mat where adhesive should not touch.

8.0 Application-Adhering Mats

- 8.1 A "butterfly" method is to be used for adhering the mats to the substrate. The first half of the first mat will be the final adhered.
- 8.2 Apply Mat Adhesive, one half of court at a time.
 - a. Peel back, width ways, the entire half of mat #1 and #2, exposing approximately 5'x 60' of the substrate. Apply adhesive with a 1/4" notched squeegee at an average application of 4.5-5 gallons of adhesive over the whole section. Place mats back down over adhesive with at least two people. Mats may be nudged with foot, hand, and "waved back into place. NOTE: Notched squeegee blades must be replaced when worn. Lifespan varies based on surface and can be 1800-7200 sq ft. When coverage rate meets 4.5 gallons per 5' x 60' roll, replace squeegee blade.
 - b. Repeat through the remaining mat sections. It is possible the mats expand from heat when peeled and placed back into position. It is acceptable to slightly reposition the mat outward to accommodate this expansion.
 - c. On the last mat, peel back and apply 2.25-2.5 gallons of adhesive.
 - d. Go back to first mat, peel back the unadhered section and apply 2.25-2.5 gallons of adhesive.
 - e. Upon completion of adhesive application, review seams and press down by foot any seams that have protruded or are uneven.
 - f. Repeat for other half of court.
 - g. Allow adhesive to set for 1 to 5 hours (weather dependent). Proceed as soon as possible after the mat does not have movement when twisting foot on top.
- 8.3 After the adhesive has set, roll the entire mat with a 100+ lb. landscape roller, paying special attention to seams. Note: If the roller "buckles" the mat, the adhesive is not set, and more time is needed. When rolling the mat, it is acceptable for adhesive to come to the top of the mat in thicker spots. Mark these spots and re-roll an hour later. Repeat until no more wet adhesive is apparent, then move to the next section.

9.0 Apply Seam Sealer

- 9.1 With 1 gallon squeeze jug of Seam Sealer, pour a bead over one seam at a time.
- 9.2 With V-Squeegee, squeegee the seam and repeat for each seam. Allow to dry 1-2 hrs.

10.0 Apply Mat Sealer



- 10.1 Squeegee Mat sealer onto mat with standard squeegee application process and allow to dry. Coverage is approximately 15 gal per 1800 sq ft.
- 10.2 After drying, review the entire mat and seams. Use Fill-N-Fix caulk to fill in any voids in the seams and fix any broken or scarred rubber.

11.0 Apply PicklePro Flex Coatings

11.1 Apply two coats of PicklePro Flex color coatings with standard squeegee application process. Two versions of Flex Coatings are available, Flex 2 and Flex 5. Flex 2 has a two-year warranty, and Flex 5 has a five-year warranty.

12.0 Apply Line Paint and Primer

12.1 Finish surface with Line Primer and Line Paint. Do not apply excessive pressure to the line striping machine as this may deform lines. Less pressure is required with line striping machines on the pad than on hard surfaces.

13.0 Finishing

13.1 Trim mat as necessary. Review all edges of mat and check for adhesion. If any sections are not adhered, apply Fill-N-Fix caulk under the mat.

14.0 Limitations

Do not apply to wet or damp substrates, or when rain is expected within 24 hours.

Substrate and ambient air temperatures: Min 50°F (10°C), Max 100°F (38°C).

Do not apply to concrete substrates with moisture levels above 4% by mass (parts by weight). Concrete moisture may be tested with Tramex® CME/CMEX type concrete moisture meters. If Moisture is above 4%, apply ACRYTECH AcryLock according to the TDS.

Do not apply when relative air humidity is expected to be above 80% within 4 hours of application.



CushionX Spray and Roll TDS + Install Guide

1.0 General Description

The AT Sports CushionX System is a fully adhered, seamless, installed in place, rubberized overlay surface for use on top of bare and previously coated asphalt and concrete surfaces. The overlay is comprised of a prefabricated rubber shock pad produced with 86% post-consumer recycled crumb rubber bound with a polyurethane adhesive. It can also be used as an overlay solution for moderately degraded substrates. The Spray and Roll method requires less time, labor, and offers better seam control compared to the standard "butterfly" application method. The Spray and Roll Method also allows for 6mm and 8mm thick rubber overlays, as the adhesive is pressure-sensitive and dries before adhering the mats.

2.0 Safety Guidelines

Refer to component SDS for product specific information. Wear a proper NIOSH approved respirator when handling silica sand.

3.0 Components

- 3.1 Spray mat adhesive
- 3.2 59" x 60' 4, 6 or 8mm urethane adhered granulized rubber mats.
- 3.3 Seam Sealer
- 3.4 Mat sealer
- 3.5 Flex Resurfacer (Only for pitted asphalt)
- 3.6 PicklePro™ Flex 100% self-crosslinking acrylic coatings
- 3.7 Line primer
- 3.8 Line paint

4.0 Tools

- 4.1 Standard 3 or 4 ft, 50-60 durometer squeegee
- 4.2 Triple diaphragm 110v, 50+PSI, 4+GPM water pump, 3/4" hose, spray wand and nozzle (available from AT Sports)
- 4.3 High tensile strength tape for temporary seam adhesion
- 4.4 Tape line machine
- 4.5 10-13" outside diameter cardboard cores (available from AT Sports)
- 4.6 Landscape or tile roller
- 4.7 V-Squeegee

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4.8 Paper rolls for overspray

5.0 Storage and Handling

_Protect liquid products from freezing. Store products between 4°C (40°F) and 32°C (90°F).

Mat Packaging: 162 lb 4mm, 235 lb 6mm or 310 lb 8mm.

Liquid Packaging: 55 gallon drum (460-570 lbs.); 30 gallon drum (260-310 lbs.); 5 gallon pails (50 lbs.)

Drums are heavy. Use caution when moving.

6.0 Surface Preparation Guidelines

6.1 New Construction (asphalt)

- a. Allow asphalt to cure a minimum of 14 days.
- b. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to cure.
- c. Pitted Asphalt: "Loose" asphalt that has substantial voids in the surface. Clean with pressure washer as needed. Apply one coat of Resurfacer Flex to fill voids.
- d. Smooth Asphalt: "Tight" asphalt. Clean with pressure washer as needed.
- e. Fill cracks and level with ACRYTECH Sport Patch (Deep Patch) as needed.
- 6.2 New Construction (concrete) -See section 15 Limitations.
 - a. For proper bonding concrete should have a light broom finish (CSP1-CSP3) and a vapor barrier installed.
 - b. Allow concrete to cure a minimum of 30 days.
 - c. Prepare concrete according to SSPC-SP 13. Pressure wash to remove efflorescence, concrete dust, dirt, etc. Prior to applying adhesive, ensure concrete is not "dusting." If so, acid etch, grind or shot blast to CSP1- CSP3 and re-pressure wash.
 - d. Flood surface with water to check for depressions 1/16" or greater.
 - e. Fill cracks and level with ACRYTECH Sport Patch (Deep Patch) as needed.
 - f. Fill any expansion joints with ACRYTECH Fill-N-Fix.

6.3 Existing Construction (asphalt or concrete)

- a. Pressure wash surface hard to remove dirt, mildew, etc., and delaminated paint.
- b. Fill cracks and level with ACRYTECH Sport Patch (Deep Patch) as needed.
- c. Fill any expansion joints with ACRYTECH Fill-N-Fix.

7.0 Measuring and Mat Preparation

7.1 Measure existing surface and plan to place mats. Six mats at a time will be laid down and taped together, then temporarily rolled up together. More than 6 mats may be applied at once if

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enough installers and cores are available, otherwise, sections of 6 mats should be applied at a time. Mats are 60 feet long and 59 inches wide. Custom length mats may be ordered. It is recommended to plan for and install mats with 6" (12" max) of open border on all sides. Mats may be trimmed on edges as necessary. For reference, pop a chalk line 6" (12") max on all sides.

- 7.2 Unroll the first mat at one corner of the court along the chalk line and position accordingly. When unrolled, mats may be nudged with foot, hand, and "waved" into position. Do not apply too much force or the mats can tear. Small tears can be patched with ACRYTECH Fill-N-Fix.
- 7.3 Unroll the second mat and square up along the first mat and butt up seams so there is no gap.
- 7.4 Repeat process for every mat and recheck seams for gaps, correct as necessary.
- 7.5 Mask for overspray: When multiple 6 roll sections are to be applied, account for overspray and apply paper and masking tape to the substrate along the adjoining edge.

8.0 Taping Seams and Rolling Up 1

- 8.1 Using the high tensile strength tape supplied by AT Sports, and a tape line machine with a 2" guide, gently and with minimal force, apply one length of tape over the seam. Do not allow the mat to curl in front of the machine. If it curls, reduce downward force on the line tape machine. Apply tape to all seams. If the mat is curled up seam-to-seam prior or after tape, it is OK. Seam-to-seam curling is caused by mat heat expansion.
- 8.2 Using the line tape machine with no tape, make another pass over the tape using the wheels to push the tape into the seams. Avoid curling.
- 8.3 At the side where you will be rolling up the mats, apply 16-18" long high-tensile tape pieces to underside of mats, leaving 4-6" exposed. Apply to each seam, in-between each seam, and at the ends. A 6 mat wide section requires 13 pieces of tape on each end.
- 8.4 Tape two 15.5' long cardboard cores (available from AT Sports) together with the high-tensile tape, to make a "core unit" and position squarely along the width end of the rubber mat assembly. A suggested method for positioning the core unit is to place it at the center of the rubber mat assembly, then roll it toward a width end. Take note of its movement and reposition it as needed to ensure they are rolling up square.
- 8.5 With the cardboard core unit at the width end with tape, beginning with the center piece of tape, apply it to the cardboard core. If numbering the tape in a line, 1-13, tape the mat assembly to the core with the following sequence: 7,6,8,5,9,4,10,3,11,2,12,1,13 (one taper) or 7,6,5,4,3,2,1,8,9,10,11,12,13 (two+ tapers).
- 8.6 Roll up the mat to the center of the rubber rolls and blow off the substrate.

9.0 Applying Adhesive 1



- 9.1 For reference and learning application rate, pop a chalk line at 10' increments on the substrate measuring from the rolled-up mats. The adhesive should be applied at approximately 4.5-5 gallons per 10'x30' section. A 55-gallon drum should drop 2.6-3 inches per section.
- 9.2 Setup pump, hose, and sprayer, then prime the line by placing the suction line through the bung-hole of a 55-gallon drum of spray adhesive, and the sprayer tip into the hole as well. Measure the adhesive level, top of drum down and take note.
- 9.3 Uniformly spray the adhesive onto the substrate in the first 10' section, and lightly spray the 6"-12" border (Concrete Only) as the adhesive also acts as a concrete primer. Check the adhesive level drop. Apply additional adhesive if necessary.
- 9.4 Place the sprayer wand in a bucket of water to keep the adhesive from clogging the tip when not in use. For extended periods when the pump is not in use, unplug.
- 9.5 Wait for the adhesive to dry at least 90% throughout, typically 5 minutes-1 hr, depending on the conditions.

10.0 Application-Adhering Mat Section 1

- 10.1 Within 30 minutes of the adhesive dry, slowly and carefully unroll the mat assembly and ensure it stays as square as possible. The roll can and should be guided and its direction can be corrected as necessary by having helpers brake one side while the other is pushed. The mat assembly will have an immediate grab and it cannot be rolled backwards after it contacts the adhesive. Remove the tape from the core unit and mat assembly and move the core unit to the other side.
- 10.2 With a landscape or tile roller, roll the adhered area. Any "bubbles" in the mat should easily press and adhere down.

11.0 Rolling Up 2 and Applying Adhesive 2

- 11.1 Repeat section 8 roll up method. Rolling up the mat assembly will come to a halt from the existing adhered mat assembly, when arriving at the center.
- 11.2 Apply Adhesive as in section 9 but make sure to spray under the roll, saturating any substrate area that lacks adhesive. Pushing the roll lightly toward the first section with your foot helps to ensure the entire substrate is sprayed where the first adhered section ends.
- 11.3 The high-tensile seam tape from the first section may be removed while the adhesive is drying. Pull the tape low to the ground to avoid pulling the mat "up."

12.0 Application-Adhering Mat Section 2

12.1 Repeat section 10, then remove high-tensile seam tape.

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- 12.2 Remove overspray paper and tape.
- 12.3 If adding a section of mats, proceed to section 13, otherwise, skip to section 15.

13.0 Application-Additional Sections

- 13.1 Ensure the existing adhered edge is square using a string line. If it is not, pop a chalk line as close to the edge as possible and trim with straight edge.
- 13.2 Mask with paper and tape, 2-3 feet inward of the adhered rubber where the new mat section will be butted up to.
- 13.3 Arrange rubber rolls and repeat sections 7, 8, and 9.

14.0 Unrolling Additional Unit of 6 rolls

- 14.1 Best effort should be made when unrolling to ensure a tight seam to adhered edge, as the rubber has an immediate and permanent bond as soon as it touches the adhesive and cannot be rolled backwards.
- 14.2 Unroll the mat slowly, guiding the leading edge by pulling or pushing it to or from the adhered mat edge to line up. The leading edge will form a slight bulge as the unit is unrolled, allowing it to be pushed or pulled to line up. The roll can and should be guided and its direction can be corrected as necessary by having helpers' brake one side while the other is pushed.
- 14.3 Repeat for all additional sections.

15.0 Trim Borders

15.1 Trim all mat borders for uniformity by marking with chalk line and using straight-edge and razor knife, or other suitable method.

16.0 Apply Seam Sealer

- 16.1 Review seams and apply Fill-N-Fix to fill in any large seam gaps.
- 16.2 Apply Seam Sealer over each seam and smooth with V-Squeegee. Allow to dry.

17.0 Apply Mat Sealer

17.1 Squeegee Mat Sealer (do not dilute) over entire mat with standard squeegee application and allow to dry. Coverage is approximately 15 gal per 1800 sq ft.

18.0 Apply PicklePro Flex Coatings

18.1 Apply two coats of Colorguard Flex with standard squeegee application process.



19.0 Apply Line Paint and Primer

19.1 Finish surface with Line Primer and Line Paint. Do not apply excessive pressure to the line striping machine as this may deform lines. Less pressure is required with line striping machines on CushionX than on hard surfaces.

20.0 Limitations

Do not apply when rain is expected within 24 hours.

Do not apply with concrete moisture content: ASTM F1869: 20 lb/24hr/1000ft² or greater, ASTM F2170: 85% RH or less.

Substrate and ambient air temperature requirements56: Min 36°F (2°C), Max 100°F (38°C).



Mat Adhesive TDS

1.0 General Description

ACRYTECH Mat Adhesive is a Carboxylated Styrene Butadiene Pressure Sensitive Adhesive designed specifically for permanent adhesion of membranes over concrete and asphalt substrates.

2.0 Safety Guidelines

Avoid contact with eyes, skin and clothing. Refer to Safety Data Sheet for additional information.

3.0 Storage and Handling

Protect from freezing. Store between 40°F (4°C) and 90°F (32°C). Packaging: 55 gallon drum (500 lbs.), 30 gallon drum (265 lbs), 5 gal pail (50 lbs)

4.0 Coverage

Coverage varies based on membrane porosity and application thickness. 60-65 sq ft/gallon.

5.0 Application

Apply when membrane and ambient air temperature is between $36^{\circ}F$ ($2^{\circ}C$) - $130^{\circ}F$ ($54^{\circ}C$). Apply with $\frac{1}{2}$ notched squeegee to substrate and adhere rubber mat while wet. Dry time varies, 1 to 6 hours, based on application thickness, temperature, and humidity.

6.0 Physical Properties

Weight per gallon (20°C) 8.3 - 8.5 lbs Solids Content by weight 45 - 55% pH 8.5 - 9.0 Brookfield Viscosity (#2, 20 rpm) 160-180 kU

Application Temperature 36°F (2°C) - 130°F (54°C)
Color Milky White, dries Clear

Typical Dry time 1 - 6 hours



CushionX 2k Urethane Mat Adhesive (2kUMA) TDS

1.0 PRODUCT DESCRIPTION

A solvent free, neutral color, elastic, viscous two component polyurethane adhesive. **CushionX 2k UMA** is designed for adhering 6mm and 8mm thick rubber granule mats on concrete & asphalt substrates.

2.0 TYPICAL PROPERTIES

	Polyol	Isocyanate	Mixture
Density g/cm³ DIN 53217/2 (20°C, 68°F)	1.41	1.22	1.38
Viscosity (cP) DIN 53018/2 (20°C, 68°F)	450 +/- 150	2.5 +/- 1.5	-
Mixing Ratio	100	20	By weight

3.0 POT LIFE

	Polyol	Isocyanate	Pot Life
Pot Life (20°C, 68°F) DIN 16945/1	166.7 gr	33.3 gr	40 /- 5 min.

4.0 PHYSICAL PROPERTIES

Shore Hardness	DIN 53505	55 /- 3	D
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5.0 SAFETY GUIDELINES

Refer to Safety Data Sheet

6.0 CURING

The adhered surface may be walked on after 18 – 24 hours at 68°F (20°C). Full curing is

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achieved within approximately 4 - 7 days. Higher temperatures or the addition of an accelerator will shorten the cure time. Curing will be longer at lower temperatures. The temperature must not fall below $50^{\circ}F$ ($10^{\circ}C$) during curing.

7.0 PREPARATION

- 7.1 New Construction (asphalt)
 - a. Allow asphalt to cure a minimum of 14 days.
 - b. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to cure.

7.2 New Construction (concrete)

- a. For proper bonding concrete should have a broom finish and a vapor barrier installed.
- b. Allow concrete to cure a minimum of 30 days.
- c. Acid bath concrete using muriatic acid. Follow manufacturers' recommendations.
- d. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed.

7.3 Existing Construction (asphalt or concrete)

- a. Pressure wash surface to remove dirt, mildew and other contaminants.
- b. Fill cracks with ACRYTECH Sport Patch (Deep Patch) or other crack repair method.

8.0 APPLICATION

- 8.1 Do not apply when:
 - a. Substrate temperature is below 50°F(10°C) or above 5 % humidity.
 - b. Ambient air temperature is below 50°F(10°C) or above 80% humidity.
 - c. The substrate or ambient air temperature is expected to be below 50°F(10°C) during or within one hour of application.

8.2 MIXING

a. Pour Part B into Part A and stir vigorously using a drill and mixing bit, usually 1-2 minutes.

8.3 COVERAGE RATE

- a. 48-71 ft²/gal. Average 60 ft²/gal. Coverage rate varies upon surface condition, porosity and application tool.
- b. Kit size: Approximately 4.6 gallons.



Mat Sealer TDS

1.0 General Description

ACRYTECH Mat Sealer is a Carboxylated Styrene Butadiene Latex Sealer designed specifically to seal rubber mats. Mat Sealer is rapid drying and permanent.

2.0 Safety Guidelines

Avoid contact with eyes, skin and clothing. Refer to Safety Data Sheet for additional information.

3.0 Storage and Handling

Protect from freezing. Store between 40°F (4°C) and 90°F (32°C). Packaging: 265 gal tote (2360 lbs) 55 gallon drum (500 lbs.), 30 gallon drum (265 lbs).

4.0 Coverage

Coverage varies depending on temperature and humidity, 60-65 sq ft/gal.

5.0 Application

Apply when surface and ambient air temperature is between 36°F (2°C) - 130°F (54°C). Apply with squeegee. Do not apply when rain is expected in the near future.

6.0 Physical Properties

Weight per gallon (20° C) 8.3 - 8.5 lbs Solids Content by weight 45 - 55% pH 8.5 - 9.0

Brookfield Viscosity (#2, 20 rpm) 1500 - 1800 cP

Application Temperature 36°F (2°C) - 130°F (54°C)
Color Milky White, dries Clear

Typical Dry time 10 - 30 minutes



9.0 STORAGE

- 9.1 Protect from humidity and freezing. Do not store at temperatures below 50°F (10°C) or above 86°F (30°C).
- 9.2 Storage life: 6 months.