CRAFCO® INC
PRESERVATION PRODUCTS PAVEMENT
Delivering Confidence Through Innovation, Quality and Value Since 1976

6165 W Detroit St. • Chandler AZ 85226
+1 (602) 276-0406 • +1 (800) 528-8242 • FAX +1 (480) 961-0513
www.crafco.com

PRODUCT DATA SHEET
ROADSAVER 201

PART NO. 34201

SEPTEMBER 2016

READ BEFORE USING THIS PRODUCT

GENERAL Crafco RoadSaver 201sealant is a hot-applied, asphalt based product used to seal and fill cracks and joints in asphalt or Portland cement concrete pavements in moderate to cold climates. RoadSaver 201 is supplied in solid form which when melted and properly applied forms a highly adhesive and flexible compound that resists cracking in the winter and resists flow at summer temperatures. RoadSaver 201 is used in highway, street and airfield pavements and is applied to pavement cracks and joints using pressure feed melter applicators or pour pots. The unique formulation of RoadSaver 201 contains a minimum of 18% recycled rubber by weight of asphaltic components, which increases application temperature viscosity. RoadSaver 201 has been a quality Crafco product for over 30 years. During this time RoadSaver 201 has become a preferred product by many users for sealing asphalt pavement cracks due to the increased viscosity and improved slump and flow resistance when applied. VOC = 0 g/l.

USAGE GUIDELINES RoadSaver 201 is applicable for Sealant / Reservoir Use and Filler / Overband Use in moderate to cold climates with low and high pavement temperatures identified in the charts. Pavement temperatures for the project location are determined at 98% reliability using FHWA LTPPBind V 3.1, and sealant or filler use is determined following Crafco Product Selection Procedures.

Applicable Pavement Temperatures

High Temperature (°C)

Low Temperature (°C)

°C	52	58	64	70	76	82
-10	▨	▨	▨			
-16	▨	▨	▨			
-22	▨	▨	▨			
-28	▨	▨	▨			
-34						
-40						
-46						

Sealant / Reservoir Use

High Temperature (°C)

Low Temperature (°C)

°C	52	58	64	70	76	82
-10	▨	▨				
-16	▨	▨				
-22	▨	▨	▨			
-28	▨	▨	▨			
-34	▨	▨	▨			
-40						
-46						

Filler / Overband Use

SPECIFICATION CONFORMANCE RoadSaver 201 meets all requirements of ASTM D6690 (AASHTO M324), Type II, "Joint and Crack Sealants, Hot-Applied, for Concrete and Asphalt Pavements", (formerly ASTM D3405 and AASHTO M301). RoadSaver 201 exceeds requirements of ASTM D6690 (AASHTO 324), Type I, (formerly ASTM D1190, AASHTO M173), and Federal Specification SS-S-164.

Test	ASTM D6690 (AASHTO M324) Type II Limits
Cone Penetration	90 max.
Resilience	60% min
Softening Point	176°F (80°C) min.
Bond, -20°F, 50% ext.	Pass 3 cycles
Asphalt Compatibility	Compatible
Minimum Application Temperature	380°F (193°C)
Maximum Heating Temperature	400°F (204°C)

INSTALLATION The unit weight of Crafco RoadSaver 201 is 9.7 lbs. per gallon (1.16 kg/L) at 60°F (15.5°C). Prior to use, the user must read and follow Installation Instructions for Hot- Applied RoadSaver, PolyFlex, Parking Lot and Asphalt Rubber Products to verify proper product selection, heating methods, pavement preparation procedures, application geometry, usage precautions and safety procedures. These instructions are provided with each pallet of product.

PACKAGING Product is supplied in either cardboard boxes, or in meltable, boxless PLEXI-melt packaging. Both package types are labeled in accordance with OSHA, GHS, and specification requirements; are sold by net weight; are interlock stacked on 48 x 40 in. (122 x102 cm) 4-way pallets; can be stored outside; and are covered with a weather resistant pallet cover and 2 layers of UV protected stretch wrap.

- **BOX** packaging consists of cardboard boxes containing approximately 30 lb. (13.6 kg) of product with 75 boxes per pallet, weighing approximately 2250 lb. (1020 kg). Boxes contain a quick melting release film for easy removal and are taped closed, without any staples.
- **PLEXI-melt** packaging consists of 30 lb. (13.6 kg) blocks of product with 70 packages per pallet, weighing 2100 lb. (952 kg). To use, the pallet wrap is removed, and individual blocks are placed in the melter. There are no cardboard boxes or other cardboard components to open, empty, handle, or dispose of. PLEXI-melt packaging quickly melts into the product without affecting specification conformance.

WARRANTY CRAFCO, Inc. warrants that CRAFCO products meet applicable ASTM, AASHTO, Federal or State specifications at time of shipment. Techniques used for the preparation of the cracks and joints prior to sealing or filling are beyond our control as are the use and application of the products; therefore, Crafco shall not be responsible for improperly applied or misused products. Remedies against Crafco, Inc., as agreed to by Crafco, are limited to replacing nonconforming product or refund (full or partial) of purchase price from Crafco, Inc. All claims for breach of this warranty must be made within three (3) months of the date of use or twelve (12) months from the date of delivery by Crafco, Inc. whichever is earlier. There shall be no other warranties expressed or implied. **For optimum performance, follow Crafco recommendations for product installation.**

©2016, Crafco, Inc. #A1116

SAFETY DATA SHEET

1. Identification

Product identifier **Roadsaver, Polyflex, Parking Lot, Asphalt Rubber, Asphalt Cement, DF, Superflex, Matrix Binder, Loop Detector, Joint Adhesive, Polyfiber, Fiber Asphalt, Marker Adhesive, Quikstix, Asphalt Adhesive, PCF 100, High Slope, QWIKSEAL, QWIKDOT, Joint Binder**

Other means of identification None.

Recommended use Pavement Crack and Joint Sealing and Preservation

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer: Crafco, Inc.

Address: 6165 West Detroit St.
Chandler, AZ 85226 USA

Contact Name: Jim Chehovits

Telephone: 602-276-0406

E-mail: jim.chehovits@crafco.com

CHEMTREC: 800-424-9300 (North America)
+ 1-703-527-3887 (International)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

Label elements

Hazard symbol None.

Signal word Not applicable.

Hazard statement Not applicable.

Precautionary statement

Prevention Not applicable.

Response Not applicable.

Storage Not applicable.

Disposal Not applicable.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ASPHALT		8052-42-4	20 - 100
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC		64742-52-5	0 - 40
Other components below reportable levels			0 - 75

4. First-aid measures

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention, if needed. Call a physician if symptoms develop or persist.

Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly wash (or discard) clothing and shoes before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do not induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Call a POISON CENTER or doctor/physician if you feel unwell.
Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. Certain pre-existing conditions may make workers particularly susceptible to the effects of this chemical: asthma, allergies, impaired pulmonary function.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Discard any shoes or clothing items that cannot be decontaminated.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Addition of water or foam to the fire may cause frothing.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases. Development of hazardous combustion gases or vapours possible in the event of a fire. The following may develop: Acrolein.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. In the event of fire, cool tanks with water spray. By fire, toxic gases may be formed (COx, NOx). Keep run-off water out of sewers and water sources. Dike for water control.
Specific methods	In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Ventilate closed spaces before entering them. Do not touch or walk through spilled material.
Methods and materials for containment and cleaning up	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Dike far ahead of spill for later disposal. Following product recovery, flush area with water. Never return spills in original containers for re-use.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Runoff or release to sewer, waterway or ground is forbidden.

7. Handling and storage

Precautions for safe handling	The product is non-combustible. If heated, irritating vapors may be formed. Do not use in areas without adequate ventilation. Wash hands thoroughly after handling. Wash hands after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a well-ventilated place. Keep the container tightly closed and dry. Store in a closed container away from incompatible materials. Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ASPHALT (CAS 8052-42-4)	TWA	0.5 mg/m3	Inhalable fume.
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
ASPHALT (CAS 8052-42-4)	Ceiling	5 mg/m3	Fume.
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
	TWA	350 mg/m3	

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses; chemical goggles (if splashing is possible). Wear chemical goggles; face shield (if handling molten material).

Skin protection

Hand protection Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Other Wear suitable protective clothing and eye/face protection. Use of an impervious apron is recommended.

Respiratory protection If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Thermal hazards During product use, there is a risk of thermal burns.

General hygiene considerations When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance Solid.

Physical state Solid.

Form Solid.

Color Black. Dark brown

Odor Product is a black, semi-solid with a burnt tar odor.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 150 - 250 °F (65.56 - 121.11 °C) ASTM D36 Softening Point

Initial boiling point and boiling range	> 800 °F (> 426.67 °C)
Flash point	> 400.0 °F (> 204.4 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 700 °F (> 371.11 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	Not Available
Percent volatile	0 %
Specific gravity	1 - 1.9

10. Stability and reactivity

Reactivity	Not Reactive
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Strong oxidizing agents.
Incompatible materials	Incompatible with oxidizing agents.
Hazardous decomposition products	Upon decomposition, product emits acrid dense smoke with carbon dioxide, carbon monoxide, trace oxides of nitrogen and sulfur, and water.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be harmful if inhaled. However, this product does not currently meet the criteria for classification.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis
Eye contact	May be irritating to eyes.
Ingestion	May cause gastrointestinal discomfort if swallowed. Do not induce vomiting. Vomiting may increase risk of product aspiration.
Symptoms related to the physical, chemical and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity	Not classified.
Skin corrosion/irritation	Not classified. May cause defatting of the skin, but is neither an irritant nor a sensitizer.

Serious eye damage/eye irritation	Not classified.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Non-mutagenic based on Modified Ames Assay.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Contains no ingredient listed as toxic to reproduction
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged or repeated contact may cause drying, cracking, or irritation of the skin.

12. Ecological information

Ecotoxicity	This product has no known eco-toxicological effects. Not expected to be harmful to aquatic organisms.
Persistence and degradability	Not available.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.
Hazardous waste code	Not applicable.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.
General information	Not regulated as dangerous goods.
Further information	If the product is shipped at temperatures below 212°F (100°C), it is not regulated for transport by ground, air or vessel. If shipped above 212 deg F: "UN3257, Elevated Temperature Liquid, n.o.s. (Asphalt mixture), 9, PG III"

15. Regulatory information

US federal regulations	All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 06-24-2019

Version # 01

Further information HMIS® is a registered trade and service mark of the NPCA.

NFPA ratings Health: 0
Flammability: 1
Instability: 0

References ACGIH
EPA: AQUIRE database
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties

CRAFCO® INC
PRESERVATION PRODUCTS PAVEMENT
Delivering Confidence Through Innovation, Quality and Value Since 1976
6165 W Detroit St. • Chandler AZ 85226
+1 (602) 276-0406 • +1 (800) 528-8242 • FAX +1 (480) 961-0513
www.crafco.com

INSTALLATION INSTRUCTIONS

HOT-APPLIED ROADSAVER, POLYFLEX , PARKING LOT AND ASPHALT RUBBER PRODUCTS

MARCH 2019

READ BEFORE USING THIS PRODUCT

GENERAL: These products are hot-applied, single component polymer/rubber modified asphalts supplied in solid form used to seal or fill cracks or joints in asphalt concrete or Portland cement concrete pavements. These products are not fuel resistant, and should not be used in fuel or oil spill prone areas. To use, product is removed from the package, heated in a melter and applied to the pavement. Details on product specifications, climate and usage suitability, and product selection are contained in Product Data Sheets.

MELTING AND APPLICATION: These products must be melted in jacketed double boiler melters with effective agitation that meet requirements of Appendix X1.1 of ASTM D6690. Crafco Supershot, EZ Series 2, and EZ Pour melters are recommended. Do not use direct fired or air heated machines. Heat transfer oil should not exceed 525°F (274°C). The melter must be capable of safely heating product to 400°F (204°C). **CAUTION**: Stop agitation when adding product to prevent splashing. Product is heated to between the minimum application temperature and the maximum heating temperature which are shown on product containers and Product Data Sheets. These products are most effectively applied with pressure feed wand systems. RoadSaver, PolyFlex and Parking Lot products can also be applied using gravity feed pour pots (Part No.40200 and 40201).

APPLICATION LIFE: Application life when heated to application temperature is approximately 12 to 15 hours and may be extended by adding fresh product as quantity in the melter decreases. Product shall be agitated during installation. Product may be reheated once to application temperature, after initial heat up. When application life has been exceeded, RoadSaver and Parking Lot products will thicken, become "stringy" and may then gel. If this occurs, product should immediately be removed from the melter and discarded. Asphalt Rubber and PolyFlex products will soften when overheated or heated for too long.

PAVEMENT TEMPERATURES: Apply product when pavement temperature exceeds 40°F (4°C). Lower temperatures may result in reduced adhesion due to presence of moisture or ice. If pavement temperature is lower than 40°F (4°C), it may be warmed using a heat lance (Part No. 45650) that puts no direct flame on the pavement. If installing at lower pavement temperature than 40°F (4°C), extreme care should be used to insure that cracks or joints are dry and free from ice and other contaminants. Product temperature should be maintained at the maximum heating temperature. If installing product at night, assure that dew is not forming on the pavement surface. Applied product should be checked by qualified personnel to assure that adhesion is adequate.

TRAFFIC CONTROLS: Place traffic controls in accordance with Part 6, Temporary Controls, of the FHWA Manual on Uniform Traffic Control devices (MUTCD) to protect the work site for the duration of the repairs.

CRACK / JOINT CLEANING: For appropriate adhesion, cracks or joints must be thoroughly clean and dry immediately prior to product installation. After widening or debris removal, and just prior to product installation, final cleaning shall use high pressure 90 psi (620kpa) minimum, dry, oil free compressed air to remove any remaining dust. Both sides of the crack or joint shall be cleaned. Surfaces should be inspected to assure adequate cleanliness and dryness.

©2019, Crafco, Inc., All Rights Reserved

ASPHALT PAVEMENT CRACK SEALING: Crack sealing consists of installing extensible sealants into routed reservoirs in working cracks in pavements in good condition.

Reservoir Cutting: Based on the 98% LTPPBIND temperature range (difference from high to low), cracks are to be routed as follows:

Temperature Grade Range	Reservoir Width	Reservoir Depth
80°C or less	½" (12 mm)	¾" (19 mm)
86°C	¾" (19 mm)	¾" (19 mm)
92°C	1 1/8" (28 mm)	½" (12 mm)
98° or greater	1 ½" (38 mm)	½" (12 mm)

Reservoir width should not exceed 1 ½" (38 mm). Cutting should remove at least 1/8" (3 mm) from each side and produce vertical, intact surfaces with no loosely bonded aggregate. The pavement should be sound enough to resist significant spalling during cutting. Final reservoir width should not exceed twice the cutter width or 1 ½" (38 mm) maximum.

Installation and Finishing: After cleaning, sealant at the required temperature is installed in the reservoir. Sealant can be installed with up to a 3/8" (10 mm) underfill, flush fill, or with an overband cap that does not exceed 1/16" (1.5mm) above the pavement surface, and not greater than a 2" (50 mm) width beyond crack edges, depending on project specifications. These configurations are achieved using appropriate wand tips, shoes or squeegees. To reduce surface tack, Crafco DeTack or other approved material may be applied.

ASPHALT PAVEMENT CRACK FILLING: Crack filling consists of installing flexible, traffic resistant product into prepared, cleaned, non-working pavement cracks. Filler can be installed in routed or unrouted cracks or in surface overbands.

Routed Reservoir – Routed reservoirs are recommended for longest life. Guidelines for determining reservoir use are:

1. Crack density should not exceed approximately 20% (linear feet of cracks per square feet of pavement area).
2. Pavement should be sound enough to resist significant spalling during cutting. (Final reservoir width should not exceed double the cutter width, or 1 ½"(38 mm) maximum

Reservoir Dimensions – Determined as follows:

1. The cut should remove at least 1/8" (3mm) from each side of the crack and cut back to sound pavement.
2. Minimum width is ½" (12 mm), maximum is 1 ½" (38 mm).
3. Recommended cut depth is ¾" (19 mm).
4. Reservoirs are then cleaned with compressed air.

Cleaned Unrouted Cracks – Cracks may be cleaned and filled without reservoirs, but longer life is achieved with reservoirs. Cleaning consists of using high-pressure dry, clean compressed air, brushing, or vacuum techniques to remove debris.

Surface Overbands – Product can be applied in overbands after crack cleaning with compressed air. Overbands should not exceed 1/16" (1.5 mm) high above the pavement surface and not extend greater than 2" (50 mm) beyond each crack edge.

Filler Installation and Finishing – Same as sealant installation and finishing.

PORTLAND CEMENT CONCRETE PAVEMENT JOINT SEALING AND RESEALING: Joint sealing and resealing consist of

installing extensible sealants into sawn and cleaned joint reservoirs in PCC pavements.

Reservoir Sawing – New concrete should be cured for at least 7 days prior to sawing the joint reservoir. Joint spacing should be at the design dimension, generally from approximately 12 to 20 ft. (3.7 to 6.2m). Joints shall be at least ¼" (6mm) wide, and should not exceed 1½" (38mm). For new pavements designed with narrow joints using the initial narrow saw cut as the reservoir, spaced at 15 ft (5m) maximum, and when using low modulus type sealants, joint width may be as narrow as 1/8 inch (3mm). Contact Crafco for more details. Reservoir depth should allow a sealant depth to width ratio of 1:1 to 2:1, sufficient depth for backer rod, and the specified surface recess. Reservoirs shall be cut no deeper than required. When resealing, old sealant can be removed by knives, plows or sawing. Sawing shall slightly widen the joint by 1/8 to ¼ inch (3-6mm) to remove all traces of old sealant and produce clean, intact vertical surfaces. Maximum joint width is 1 ½ inch (38mm).

Reservoir Cleaning – After sawing, joints shall be flushed with water to remove sawing slurry and allowed to dry. Just prior to installing sealant, both joint surfaces shall be cleaned using sandblasting, brushing or other means to remove any remaining of sawing residue. Final cleaning is then done with high-pressure (minimum 90 psi , 62N/cm2) clean, dry , oil free compressed air the same day that sealant is installed. Moisture and oil traps are required on the compressor. Joints must be inspected to assure cleanliness by rubbing a finger along each face to spot dust or other contaminants. If found, recleaning should occur until joints are completely clean and dry. The objective of sawing and cleaning is to provide vertical, intact, clean concrete bonding surfaces free from all contaminants and are dry.

Backer Rod – After cleaning, heat resistant backer rod (ASTM D5249, Type I) approx. 25% larger than the joint width shall be installed to the required depth without damage or punctures. Punctures or damage to backer rod may cause sealant bubbling.

Sealant Installation – Concrete should be cured at least 7 days prior to installing sealant. Sealant heated to required temperature is installed per project specifications. Typical installations include a recess up to ¼ inch (6mm), flush, or with a surface overband (maximum 1/16" (1.5mm) above the surface, and 2" (50 mm) maximum beyond each joint edge).

INSTALLATION PRECAUTIONS: In certain situations, additional consideration needs to be given to product selection and application geometries.

Parking lots and other areas subjected to slow moving traffic and pedestrians: Product used must be stiff enough at hot summer temperatures to resist pick up and should not be applied on top of the pavement surface. Product should have a high temperature grade at least one step above the LTPPBIND grade for the climate. For even better pick-up resistance, increase by two grades.

Pavement to receive an Overlay, Surface Treatment, or Seal Coat: Product will be subjected to overlay heat effects and carriers for surface treatments and seal coats. If product is applied on top of the pavement, and an overlay is then placed, bumps may occur during compaction. Refer to "Bump Formation & Prevention in Asphalt Concrete Overlays Which Have Been Crack Sealed" (www.crafco.com) for more information. Solvents or other carriers in surface treatments may soften product. Prior to placing a surface treatment or seal coat, a test strip should be placed to verify compatibility of the product and treatment.

High Severity Cracked Areas: Highly cracked areas (fatigue cracks in wheel paths) should not be treated by covering cracks because pavement friction may be affected. These cracks can be filled if followed by a surface treatment or overlay to restore friction.

Fuel or Oil Spill Areas: These products should not be used in fuel or oil spill areas due to softening of the sealant that may occur. Sealant will not adhere to asphalt or concrete pavements surfaces that are contaminated with oil spills.

Crack Sealing or Filling in Pavements with Surface Treatments: When crack sealing or filling pavements with chip seals, slurry seals, and open graded friction courses, routing should be deep enough to extend through the surface treatment layer into the underlying asphalt concrete. This anchors product into solid pavement for better bonding.

CLEAN OUT: If melters used require clean out, follow manufacturer's instructions. If solvent is used, insure it does not contaminate product because dilution and flash problems may occur.

STORAGE: Pallets of product are protected with a weather resistant covering. During storage, this covering must be intact to prevent boxes from getting wet. If wet, boxes may lose strength and crush. Rips in the pallet covering should be repaired to maintain packaging integrity. Pallets should be stored on a dry, level surface with good drainage. Pallets should not be stacked because crushing of bottom boxes may occur. Product properties are not affected by packaging deterioration.

SAFETY PRECAUTIONS: Since these products are heated to elevated temperatures, it is essential that operations be conducted safely. All personnel need to be aware of hazards of using hot applied materials and safety precautions. Before use, the crew should read and understand product use and safety information on the box and the product SDS. User should check D.O.T. requirements for transportation of product at elevated temperatures above 212°F (100°C).

HAZARDS ASSOCIATED WITH HOT-APPLIED MATERIALS: Skin contact with hot materials causes burns. Over exposure to fumes may cause respiratory tract irritation, nausea, or headaches. Precautions are to be taken to prevent contact with hot material and to avoid inhalation of fumes for everyone in the vicinity. Safety precautions should include:

1. Protective clothing to prevent skin contact with hot material.
1. Care when adding product to melters to reduce splashing.
3. Careful operation of wands or pour pots that apply product.
4. Traffic and pedestrian control measures which meet or exceed MUTCD requirements to prevent access to work areas while product is in a molten state.
5. Avoidance of material fumes.
6. Proper application configurations with a minimum amount of material excess.
7. Appropriate clean up of excessive applications or product spills.

ADDITIONAL INFORMATION: Additional information regarding these products is available by contacting your distributor or Crafco, Inc. This information includes:

1. Product Data Sheets
2. Safety Data Sheet,
3. Safety Manual
4. Sealing Cracks and Joints in Parking and Pedestrian Areas
5. "Bump Formation & Prevention In Asphalt Concrete Overlays Which Have Been Crack Sealed"

©2019, Crafco, Inc., All Rights Reserved