

SafeLane
Surface Overlay
Protecting people, bridges and roads

Anti-icing & Anti-skid Overlay

“This is potentially the biggest technological break-through for improving highway safety in the snow-belt regions since the invention of the snow plow”

- John Bray MNDOT District 1, Duluth

2

SafeLane™ Polymer Overlay

- Cargill SafeLane™ overlay is a patented polymer pavement overlay
- Licensed to Cargill, Inc. for worldwide sales and installation

MichiganTech

- Developed after 10 years of research by the experts in snow and ice research – Michigan Tech University

3



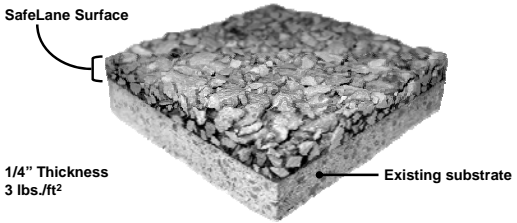
Cargill

Cargill is an international provider of food, agricultural and risk management products and services.

- > More than 140,000 employees
- > Located in 61 countries
- > More than \$70 billion in revenue

4

Cargill SafeLane™ Polymer Overlay – CA-48 Product Profile



SafeLane Surface

1/4" Thickness
3 lbs./ft²

Existing substrate

SafeLane can be installed on concrete, asphalt, FRP, steel or wood
Concrete – 12.5 lbs/sf per inch; Asphalt – 14 lbs/sf per inch

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5

Cargill SafeLane™ Polymer Overlay – Offers:

Falls account for more than 1 million injuries each year in the US.¹

Improved Safety by:

- ✓ Providing outstanding surface friction
- ✓ Ability to store and release any common deicer – preventing ice and snow from bonding to sidewalk and road surfaces
- ✓ Repair un-even surface feature- minimizing trip and fall potential

¹Source www.safety-engineer.com by Barrett C. Miller

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6

SafeLane
The Snow-Resisting

Cargill SafeLane™
Polymer Overlay – Offers:

Protection – for infrastructure (sidewalks and road ways) by:

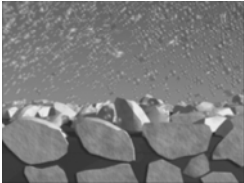
- ✓ Providing a complete pavement seal.
Minimizes the potential for chemicals and moisture to penetrate the surface.
- ✓ Extends the life of the surface
- ✓ Reduces maintenance

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7

SafeLane
The Snow-Resisting

Cargill SafeLane™
Polymer Overlay – How does it work?:

SafeLane has the patented ability to actually store and release any common deicer.



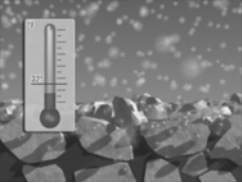
1. Deicers (liquid or dry) are applied before the winter event
2. The aggregate absorbs the chemical and stores it like a "hard sponge"

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8

SafeLane
The Snow-Resisting

Cargill SafeLane™
Polymer Overlay – How does it work?:

When the snow or ice begins, you have a pre-charged surface



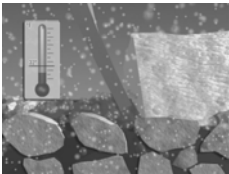
1. The chemical is released by the moisture
2. As long as the chemical is present, the surface has a lower freezing temperature – preventing ice or snow from bonding to the surface

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9

SafeLane
The Snow-Resisting

Cargill SafeLane™
Polymer Overlay – How does it work?:

The chemical residual prevents snow and ice from bonding to the surface.



SafeLane will not melt inches of snow; however, plowing and shoveling is more efficient when the snow and ice does not bond to the surface

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10

SafeLane
The Snow-Resisting

Cargill SafeLane™ Installations before the winter of 2006-07.

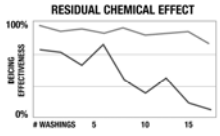
- 20 Sites in 13 States
- (DOT) Average Daily Traffic – 5,000 to 40,000
- Applications - bridges, ramps, forklift ramps - on concrete & asphalt
- All had a known winter and adverse weather accident history

All reported improvement and/or elimination of vehicle crashes

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11

SafeLane
The Snow-Resisting

SafeLane™ reduces icy pavement conditions



— SafeLane™ overlay with NaCl - - - Concrete with NaCl
Washings simulate weather-related events and vehicle traffic.
Source: Michigan Technological University Research Center

- Proprietary aggregate stores and pro-actively releases anti-icing chemicals
- Provides chemical residual through multiple snow, rain, and ice events

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12

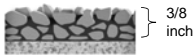
**Introducing a New Cargill
SafeLane™ Polymer Overlay
Product – CA-48**



SafeLane™ CA-48

- ✓ Same benefit of traditional SafeLane – smaller profile.
- ✓ Smaller aggregate (meets FAA FOD Requirement).
- ✓ 1 Pass application/less epoxy
- ✓ Will hold up to plows.
- ✓ Less cost.

SafeLane™HDX



SafeLane™CA-48



13

Target Applications



HDX



- Bridges or overpasses
- Dangerous intersections, curves or stretches of roads
- Entrance and exit ramps
- Approaches to toll barriers

CA-48



- Parking decks
- Sidewalks/pedestrian crosswalks
- Public transportation boarding areas
- Airports, residential, commercial etc.



14

Installation Procedure



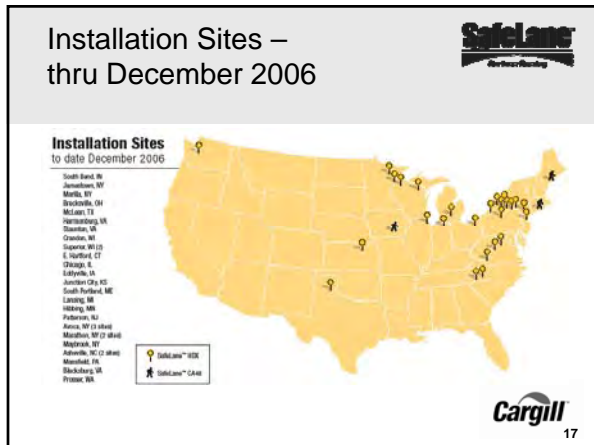
1. Surface preparation as recommended by AASHTO Task Force 34
2. Repair Surface - No Delaminations or spalling
3. Surface Preparation – Shot, Sand, or water blast
4. Apply Overlay
5. Cure – Temperature Dependent
6. Sweep
7. Open to Traffic

SafeLane must be installed by a licensed contractor



15





Summary & Questions:

- SafeLane™ Polymer Overlay:
 - Reduces the potential of winter accidents and slip and fall incidents caused by ice formation and snow bonding on sidewalk and road surfaces
 - Provides superior friction for year round traction in all weather conditions
 - Extends the life of structures and reduces pavement maintenance
 - Can be installed and open to traffic on the same day
