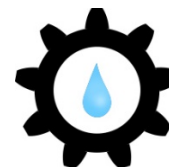


# Certificate of Environmental Impact

## Ice Free Zone®



### Environmental Perspective

SolliQ AB and SolliQ AF AB are committed to providing environmentally sound products. Ice Free Zone® is a proven effective product formulated with organic and renewable resources. Ice Free Zone® is a glycerin based anti-ice agent used for rail switches, rolling stock, tunnel walls, catenary wires and other areas.

The use of Ice free Zone® poses no harm to humans or the environment. The raw materials in Ice free Switch are used in many applications in industry, consumer markets and many include human and animal contact. Ice Free Zone is non-toxic to humans via ingestions, inhalation or skin contact.

Numerous studies on aquatic, mammal and other species demonstrates a very low level of toxicity that under normal circumstances would not pose a risk. Ice Free Zone is considered readily biodegradable by OECD standards. Bioaccumulation is negligible when using or spraying freely.

<u>Species</u>	<u>Parameters</u>	<u>LD<sub>50</sub></u>
Rat	oral	27,200 mg/kg
Mouse	oral	23,000mg/kg
Rabbit	dermal	>18,7000 mg/kg
Goldfish	96 hours	>5000 mg/L
Rainbow trout	96 hours	51,000 mg/L (LC <sub>100</sub> )
Daphnia magna	24 hours	>10,000 mg/L
Green algae	8 days	>10,000 mg/L (EC <sub>0</sub> )
C. paramecium (bacteria)	48 hours	> 10,000 mg/L (NOEC)

This data shows that when used properly or even in extreme conditions there is little chance of negative environmental impact.

This document certifies that Ice free Zone, when used as recommended for industrial use will not negatively impact human health or safety and will not negatively impact the environment.

Sincerely,



Marie-Celine van Severen, Ph.D.  
Head Chemist, SolliQ

### SolliQ AB

*Solutions with Liquids*

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