# SAFETY DATA SHEET

## 1. Identification

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|---|---|
| **Product identifier** | **Icex® II** |
| **Other means of identification** | |
| **Product code** | 74-451-136, 74-451-139, 74-451-245, (Contained in 74-451-Z Kit)" |
| **Recommended use** | Aerospace Coating |
| **Recommended restrictions** | None known. |
| **Manufacturer/Importer/Supplier/Distributor information** | |
| **Supplier** | |
| **Company name** | Goodrich Corporation<br>Collins Aerospace, Interiors - Evacuation, Water & Lighting (Formerly De-icing and Specialty Systems) |
| **Address** | 1555 Corporate Woods Parkway<br>Uniontown, Ohio 44685<br>USA |
| **E-mail** | Terry.Sluss@utas.utc.com |
| **Contact name** | EH&S Manager |
| **Telephone number** | (330)374-4011 |
| **Emergency telephone number** | (800)424-9300/ 1-703-741-5970 |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Not classified. | |
| **Health hazards** | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 1 |
| | Reproductive toxicity (fertility) | Category 2 |
| **OSHA defined hazards** | Not classified. | |

**Label elements**

| | |
|---|---|
| **Signal word** | Danger |
| **Hazard statement** | Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility. |
| **Precautionary statement** | |
| **Prevention** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. |
| **Response** | If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. |
| **Storage** | Store locked up. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | None known. |
| **Supplemental information** | Repeated exposure may cause skin dryness or cracking. |

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | CAS number | % |
|---|---|---|
| Aminofunctionel oligosiloxane | 67923-07-3 | 9 - 24 |
| Octamethylcyclotetrasiloxane | 556-67-2 | 0.1-1 |

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The manufacturer has claimed one or more hazardous ingredients as trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s) are given on this SDS.

## 4. First-aid measures

**Inhalation** Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

**Skin contact** Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed** Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information** IF exposed or concerned: Get medical advice/attention. 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.

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media** Water.

**Specific hazards arising from the chemical** This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 º F (150 º C) and above, in atmospheres which contain oxygen. During fire, hazardous combustion products are released that may include: Carbon oxides (COx). Nitrogen oxides (NOx). Silicon oxides.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When heated to temperatures above 300 F (149°C) in the presence of air, product can form formaldehyde vapors.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Protect from freezing.

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. Workplace Environmental Exposure Level (WEEL) Guides**

| Components | Type | Value |
|---|---|---|
| Octamethylcyclotetrasiloxane (CAS 556-67-2) | TWA | 10 ppm |

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

**Appropriate engineering controls** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Skin protection**

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

**Appearance**

**Physical state** Liquid.

**Form** Liquid.

**Color** Clear.

**Odor** Amine.

**Odor threshold** No data available.

**pH** No data available.

**Melting point/freezing point** No data available.

**Initial boiling point and boiling range** > 300.2 °F (> 149 °C)

**Flash point** > 199.4 °F (> 93.0 °C)

**Evaporation rate** < 1 (Butyl acetate = 1)

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** No data available.

**Flammability limit - upper (%)** No data available.

**Vapor pressure** No data available.

| | |
|---|---|
| **Vapor density** | > 1 (Air = 1) |
| **Relative density** | 0.986 |
| **Solubility(ies)** | |
| **Solubility (water)** | Reacts slowly. |
| **Partition coefficient (n-octanol/water)** | No data available. |
| **Auto-ignition temperature** | No data available. |
| **Decomposition temperature** | No data available. |
| **Viscosity** | No data available. |
| **Other information** | |
| **Softening point** | Not applicable. |

## 10. Stability and reactivity

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|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Contact with incompatible materials. Elevated temperatures. |
| **Incompatible materials** | Strong oxidizing agents. Water. |
| **Hazardous decomposition products** | Carbon oxides. Silicon oxides. This material may generate formaldehyde and benzene at temperatures greater than 150°C (300°F). |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | Prolonged inhalation may be harmful. |
| **Skin contact** | Causes skin irritation. Repeated exposure may cause skin dryness or cracking. |
| **Eye contact** | Causes serious eye damage. |
| **Ingestion** | May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Causes severe eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. |

**Information on toxicological effects**

**Acute toxicity** May cause discomfort if swallowed.

| Components | Species | Test Results |
|---|---|---|
| Octamethylcyclotetrasiloxane (CAS 556-67-2) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | > 2400 mg/kg |
| **Inhalation** | | |
| LC50 | Rat | > 12.17 mg/l |
| **Oral** | | |
| LD50 | Rat | > 5000 mg/kg |

| | |
|---|---|
| **Skin corrosion/irritation** | Causes skin irritation. |
| **Serious eye damage/eye irritation** | Causes serious eye damage. |
| **Respiratory or skin sensitization** | |
| **Respiratory sensitization** | Not a respiratory sensitizer. |
| **Skin sensitization** | This product is not expected to cause skin sensitization. |
| **Germ cell mutagenicity** | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| **Carcinogenicity** | Not classifiable as to carcinogenicity to humans. |

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**NTP Report on Carcinogens**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

| | |
|---|---|
| **Reproductive toxicity** | Suspected of damaging fertility.<br>A two year combined chronic/carcinogenicity assay was conducted on octamethylcyclotetrasiloxane (D4). Fischer-344 rats were exposed by whole body vapor inhalation 6 hours/day, 5 days/week for up to 103 weeks to 0, 10, 30, 150 or 700 ppm of D4. A statistically significant increase in incidence of uterine endometrial cell hyperplasia and uterine adenomas (benign tumors) were observed in female rats at 700 ppm. Since these effects only occurred at 700 ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing D4 would result in a significant risk to humans. |
| **Specific target organ toxicity - single exposure** | Not classified. |
| **Specific target organ toxicity - repeated exposure** | Not classified. |
| **Aspiration hazard** | Not an aspiration hazard. |
| **Chronic effects** | Prolonged inhalation may be harmful. Repeated exposure may cause skin dryness or cracking. |

## 12. Ecological information

| | |
|---|---|
| **Ecotoxicity** | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
| **Persistence and degradability** | No data is available on the degradability of this product. |
| **Bioaccumulative potential** | No data available for this product. |
| **Mobility in soil** | Reacts slowly with water. |
| **Other adverse effects** | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

## 13. Disposal considerations

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|---|---|
| **Disposal instructions** | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Local disposal regulations** | Dispose in accordance with all applicable regulations. |
| **Hazardous waste code** | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| **Waste from residues / unused products** | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| **Contaminated packaging** | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

## 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 established. |

## 15. Regulatory information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are listed on or exempt from the U.S. EPA TSCA Inventory List.

One or more proprietary components are TSCA 12b listed but exempt from reporting requirements because % concentration is below threshold.

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

Octamethylcyclotetrasiloxane (CAS 556-67-2) 1.0 % One-Time Export Notification only.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)**

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated “inactive”.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories**

Skin corrosion or irritation
Serious eye damage or eye irritation
Reproductive toxicity

**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**

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Octamethylcyclotetrasiloxane (CAS 556-67-2)

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

**Issue date** 22-September-2019

**Revision date** -

**Version #** 01

**HMIS® ratings**

Health: 2*
Flammability: 1
Physical hazard: 0

**NFPA ratings**


**List of abbreviations**

LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
TWA: Time weighted average.

**References**

ACGIH
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity

**Disclaimer**

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