

Safety Data Sheet



Product name E-Insulating Ice9 Flex

MSDS number 000015

Revision Number 2

Revision Date

Issuing date

March.1.2020

June.5.2018

1. Product and company identification

Trade Name

E-insulating Ice9 Flex

The following SDS applies to products described by combinations of the following trade name, product grade and color code listed below.

Product Grade(s):

TCEI-TPE3-240-000

Color Code:

See Section 16 for list of Color Codes

Manufacturer, importer, supplier

TCPOLY, Inc.

448 Ralph David Abernathy Blvd, Ste 10

Atlanta, GA 30312

United States

www.tcpoly.com

Product Information

1-865-424-0293

info@tcpoly.com

Identified uses

Plastic processing industry.

2. Hazard Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200:

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard (29CFR 1910.1200)

3. Composition/information on ingredients

Chemical characterization

Thermoplastic polyurethane; CAS-RN of the basic polymer: 75701-44-9

Components	CAS-No	Percent %
Thermoplastic Polyurethane Polymer		25 - 75
Proprietary Filler A		20 - 55
Proprietary Filler B		5 - 20

Remarks

This product may contain proprietary ingredients.

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This is a polymeric material. Any hazardous constituents are wetted by the polymer system, and therefore are unlikely to present exposure under normal conditions of processing and handling.

4. First aid measures

Skin
Cool skin rapidly with cold water after contact with molten polymer. Do not peel solidified product off the skin. Immediate medical attention is required.

Eyes
Immediately flush eye(s) with plenty of water. Call a physician if irritation persists.

Inhalation
Move to fresh air in case of accidental inhalation of vapors. Get medical attention immediately if symptoms occur.

Ingestion
If swallowed, do not induce vomiting - seek medical advice.

Notes to physician
This product is essentially inert and nontoxic. However, if it is heated at too high a temperature or if it is burned, gases may be released. Patients who have been exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal, asphyxia (carbon dioxide replacing oxygen) is a possibility. As with any fire, irritant gases may have formed. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema.

5. Fire-fighting measures

NFPA: **Health:** 1 **Flammability:** 0 **Instability:** 0

Suitable extinguishing media
Water, Foam, Dry powder, Carbon dioxide (CO₂)

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Carbon monoxide
Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
Hydrogen cyanide (hydrocyanic acid)
Oxides of phosphorus
Boron oxides

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit.

Other Information
Keep people away from and upwind of fire. Dust can form an explosive mixture in air.

6. Accidental release measures

Personal precautions
Avoid dust formation.

Environmental precautions
Do not flush into surface water or sanitary sewer system.

Methods for cleaning up
Use mechanical handling equipment. Dispose of in accordance with local regulations.

7. Handling and storage

Advice on safe handling

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Do not handle hot or molten material without appropriate protective equipment. Do not exceed recommended process temperatures to minimize release of decomposition products. Maintain good housekeeping in work areas. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

Protection - fire and explosion:

Do not smoke in areas where polymer dust is present. Appropriate measures should be taken to control the generation and accumulation of dust during conveying and processing operations.

Material storage

Keep in a dry, cool and well-ventilated place. Maintain dryness of filament.

8. Exposure controls / personal protection

OSHA Exposure Limits

Components	TWA
Proprietary Filler A	15 mg/m ³ Total Dust; 5 mg/m ³ Respirable Dust
Proprietary Filler B	15 mg/m ³ Total Dust; 5 mg/m ³ Respirable Dust

ACGIH Exposure Limits

Components	TWA
Proprietary Filler A	10 mg/m ³ Total Dust; 3 mg/m ³ Respirable Dust
Proprietary Filler B	10 mg/m ³ Total Dust; 3 mg/m ³ Respirable Dust

Mexico National Exposure Limits

No exposure limits established

Engineering measures

General: May not be adequate as the sole means to control employee exposure.

Local Exhaust: Recommended when appropriate to control employee exposure to dust or process vapors.

Protective equipment

A safety shower and eyebath should be readily available.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment

Skin protection:

When thermal or melt processing, wear long pants, long sleeves, well insulated gloves, and face shield when there is a chance of contact.

Eye/face protection:

Safety glasses with side-shields. Safety goggles.

Comments:

Operations involving grinding and machining of parts should be reviewed to assure that particulate levels are kept below recommended standards

9. Physical and chemical properties

Appearance

Form	Pellet
Odor	None
Flash point	Not applicable
Ignition temperature	No data available
Melting Point	> 160 °C (> 320°F)
Density	1.5 g/cm ³

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Bulk density	Not Determined
Specific Gravity	> 1
Water solubility	insoluble
VOC Content(%)	Not determined

10. Stability and reactivity

Chemical stability

Stable under normal conditions

Conditions to avoid

Flame Avoid prolonged heating at or above the recommended processing temperature.

Incompatible Materials

strong oxidizing agents
reducing agents
strong acids
strong bases

Hazardous Combustion or Decomposition Products:

Nitrogen oxides (NOx), Carbon dioxide (CO2), Carbon monoxide, ammonia, aliphatic amines, amides, ketones, nitriles, hydrogen cyanide., Boron oxides

11. Toxicological information

Potential health effects

Routes of exposure Skin, eyes, inhalation, ingestion.

Immediate effects

Skin	Polymer particles may cause mechanical irritation. The molten product can cause serious burns.
Eyes	Filament particles, like other inert materials, are mechanically irritating to eyes
Inhalation	Dust irritating to respiratory tract. Overheating in processing may generate hazardous, irritating vapours. Process in ventilated area.
Ingestion	Low toxicity by this route is expected based on the biological activity of high molecular weight polymers.

Medical conditions which may be aggravated by exposure: No specific information available on the product. Off-gases, which may be released if overheated, may affect those with chronic diseases of the respiratory system.

Toxicological data are not available. Observe the usual hygienic measures for handling chemicals.

12. Ecological Information

Environmental Fate/Information: This material is considered to be non-biodegradable.. Do not discharge product unmonitored into the environment.

13. Disposal considerations

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Disposal considerations

Recycling is encouraged. Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

This product as shipped is not a RCRA hazardous waste under present EPA regulations

14. Transport information

US Department of Transportation Not regulated

TDG Not regulated

Mexico Transport Information Not regulated

ICAO/IATA Not restricted

IMDG Not regulated

15. Regulatory Information

US State Regulations

Chemicals associated with the product which are subject to the state right-to-know regulations are listed along with the applicable state(s):

none

U.S. FEDERAL REGULATIONS

TSCA Inventory:

This product complies with the U.S. Toxic Substances Control Act (TSCA).

Environmental Regulations:

SARA 313 Chemicals

SARA 311:

Acute health:	No
Chronic health:	No
Fire:	No
Sudden release of pressure:	No
Reactive:	No

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INTERNATIONAL REGULATIONS

CANADIAN REGULATIONS

WHMIS Classification: Not a WHMIS controlled product.

WHMIS Ingredient Disclosure List IDL:

16. Other information

NFPA:	Health: 1	Flammability: 0	Instability: 0
HMIS:	Health: 1	Flammability: 0	Physical Hazard: 0

Color code(s)

WHITE

Sources of key data used to compile the datasheet

Information contained in this safety data sheet is based on TCPoly owned data and public sources deemed valid or acceptable.

Other Information:

Observe national and local legal requirements

This product is not intended for use in medical or dental implants.

The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. TCPoly makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. User has sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

Abbreviation and Acronym:

ADR = Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS = Chemical Abstracts Service (division of the American Chemical Society)

CLP = Classification, Labelling and Packaging

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial Chemical Substances

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IMO)

ICAO = International Civil Aviation Organization

IMDG = International Maritime Code for Dangerous Goods