

<b>Product name</b>	HOSTAFORM® C 9021 TF NATURAL	<b>Revision Date</b>	TNA/EN
<b>MSDS number</b>	8721006214	<b>Issuing date</b>	Dec.05.2009
<b>Revision Number</b>	0.01		Nov.22.2011

## 1. Identification of the substance/preparation and of the company/undertaking

<b>Product name</b>	HOSTAFORM® C 9021 TF NATURAL
<b>Material Number:</b>	21006214
<b>MSDS ID</b>	HF1005

### Manufacturer, importer, supplier

#### TICONA

Corporate Headquarters  
8040 Dixie Hwy.  
Florence, KY 41042  
United States  
<http://www.ticona.com>

### Transportation emergency phone numbers:

In USA, call 800-424-9300  
Outside USA, call 703-527-3887, collect calls accepted

### Product Information

1-800-833-4882  
[prodinfo@ticona.com](mailto:prodinfo@ticona.com)

### Synonyms:

Acetal copolymer  
Polyoxymethylene copolymer

### End Use:

Plastic processing industry.

## 2. Hazards identification

### Emergency Overview

Dust from this product can form an explosive organic dust cloud.  
Spilled pellets may present a slipping hazard.  
The molten product can cause serious burns.

### Potential health effects

#### Immediate effects

<b>Skin</b>	Polymer particles may cause mechanical irritation. The molten product can cause serious burns.
<b>Eyes</b>	Resin particles, like other inert materials, are mechanically irritating to eyes

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**Inhalation** Overheating in processing may generate hazardous, irritating vapours. Dust irritating to respiratory tract. Thermal decomposition may evolve hazardous fumes which can cause "polymer fume fever", which has flu-like symptoms.

**Ingestion** Low toxicity by this route is expected based on the biological activity of high molecular weight polymers.

**Other:** Formaldehyde, which is a degradation product, is listed as a potential cancer hazard by OSHA, a known human carcinogen by The International Agency for Research on Cancer (IARC, Group 1), and a substance which can reasonably be anticipated to be a carcinogen by The National Toxicology Program (NTP). Formaldehyde should not pose a risk if exposures are kept below the OSHA Permissible Exposure Limit.

**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.

**3. Composition/information on ingredients**

**Chemical characterization** Polyacetal Copolymer / POM; CAS-RN of the basic polymer: 24969-26-4 with Polytetrafluoroethylene / PTFE, CAS-RN. PTFE: 9002-84-0

Components	CAS-No	Percent %
Formaldehyde	50-00-0	< 0.1

This product may contain proprietary ingredients.  
 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. Immediate medical attention is required. Do not peel solidified product off the skin.

**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.

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## Notes to physician

This product is essentially inert and nontoxic. However, if it is overheated so that excessive off-gassing occurs, a condition called polymer fume fever may be seen in individuals exposed to the gases. Polymer fume fever is a flu-like syndrome (aches, chest pain, cough and fever) that clears within one to two days. 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 and the exposure occurred in an enclosed space, asphyxia (carbon dioxide replacing oxygen) is a possibility. Fluorinated hydrocarbons and hydrogen fluoride are respiratory irritants. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema. The greatest hazard is from respiratory tract irritation; specific antidotes for hydrogen fluoride (HF) are not recommended because HF is not likely to be present in high enough concentration for an antidote to be of use

## 5. Fire-fighting measures

### Suitable extinguishing media

Water, Foam, Dry powder, Gaseous extinguishing media, Dry chemical

### Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases

carbon monoxide  
carbon dioxide (CO<sub>2</sub>)  
Formaldehyde vapours  
Hazardous combustion products  
Hydrogen fluoride (HF)

### Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

### Other Information

Potential dust explosion hazard.

## 6. Accidental release measures

### Personal precautions

Remove all sources of ignition. Avoid dust formation.

### Environmental precautions

No special environmental precautions required.

### Methods for cleaning up

Use mechanical handling equipment. Dispose of in accordance with local regulations.

## 7. Handling and storage

### Handling

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**7. Handling and storage**

**Protection - fire and explosion:**  
Do not handle hot or molten material without appropriate protective equipment. Maintain good housekeeping in work areas. Do not exceed recommended process temperatures to minimize release of decomposition products.

**Advice on safe handling**  
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.

**Storage**  
**Material storage**  
Store in a cool dry place. Maintain dryness of resin.

**8. Exposure controls/personal protection**

**OSHA Exposure Limits**

Components	TWA
Formaldehyde	0.75 PPM

**ACGIH Exposure Limits**

Components	Ceiling Limit Value:
Formaldehyde	0.3 PPM

Components	Manufacturer Workplace Exposure Limit
Formaldehyde	0.75 ppm (TWA); 2 ppm (STEL)

**Mexico National Exposure Limits**

Components	Mexican Carcinogen Category
Formaldehyde	A2

Components	Mexican Ceiling Exposure Limit	
Formaldehyde	3 mg/m <sup>3</sup>	2 PPM

**Exposure controls**

**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

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### General advice

Do not breathe dust. Avoid contact with skin and eyes.

### 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

Ticona has decided not to adopt the ACGIH TLV for formaldehyde based on a scientific evaluation of all the available data. Ticona has decided to adopt the OSHA Standard. Ticona WEL is the Ticona Workplace Exposure Limit.

## 9. Physical and chemical properties

### Appearance

<b>Form</b>	pellets
<b>Odor</b>	slight , specific .
<b>Flash point</b>	>93°C(>200°F)
<b>Ignition temperature</b>	320°C
<b>Method</b>	ASTM D 1929
<b>Density</b>	approx 1.4 - 1.8 g/ml @ 20°C
<b>Bulk density</b>	approx 770 - 890 kg/m <sup>3</sup> @20 °C
<b>Vapor pressure</b>	not determined
<b>Water solubility</b>	insoluble

## 10. Stability and reactivity

### Reactivity

Stable under normal conditions.

### Conditions to avoid

Flame. Do not allow mixing of this material with PVC, other halogen containing materials, and partially and/or fully crosslinkable thermoplastic elastomers. Avoid prolonged heating at or above the recommended processing temperature.

### Incompatible Materials

strong acids, oxidizing agents, Polyvinyl chloride.

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**Hazardous Combustion or Decomposition Products:**

Trioxane, formaldehyde, paraformaldehyde, formic acid, Hydrogen fluoride, Fluorinated hydrocarbons.

**Possibility of hazardous reactions**

Polyvinyl chloride, Incompatible with strong acids and oxidizing agents.

## 11. Toxicological information

No data is available on the product itself

## 12. Ecological information

**Ecotoxicity:**

The effects of resin pellets on the wildlife that may ingest them is not well understood. In the case of seabirds, some marine biologists believe that the fowl may not be able to pass plastic pellets through their digestive tracts. Thus, large quantities of ingested pellets may cause intestinal blockage, false feelings of satiation or reduction in absorption of nutrients, causing malnutrition and starvation. The goal of SPI's Operation Clean Sweep is zero loss of pellets into the environment.

**Environmental Fate/Information:**

This material is considered to be non-biodegradable.

## 13. Disposal considerations

**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

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## 14. Transport information

**IMDG** Not regulated

## 15. Regulatory information

### U.S. FEDERAL REGULATIONS

#### **TSCA Inventory**

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

#### **SARA 313 Chemicals**

Contains no substances at or above the reporting threshold under Section 313.

### CANADIAN REGULATIONS

#### **WHMIS Classification:**

Not a WHMIS controlled product.

#### **WHMIS Ingredient Disclosure List**

This product does not contain substances required to be disclosed according to the Canada WHMIS Ingredient Disclosure List.

## 16. Other information

#### **Prepared By**

Product Stewardship Department  
Ticona

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

Changes against the previous version are marked by \*\*\*

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

Refer to the appropriate Ticona bulletins for specific processing guidance and good manufacturing practices (purging, processing parameters, shutdown, etc.).

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. Ticona 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 the 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.

# Material Safety Data Sheet



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## 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