Product name	HOSTAFORM® C 13021 NATURAL		TNA/EN
MSDS number	8720000206	**Revision Date**	Dec.03.2009
Revision Number	0	**Issuing date**	Apr.15.2011

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

Product name HOSTAFORM® C 13021 NATURAL
Material Number: 20000206
MSDS ID HF1000

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 Emergency
888-522-7816 Ticona - 24 hrs/day, toll free in USA and Canada

Product Information
1-800-833-4882
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

Inhalation Overheating in processing may generate hazardous, irritating vapours. Dust irritating to respiratory tract.

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

Components	CAS-No	Percent %
Formaldehyde	50-00-0	Trace level contaminant

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

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

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.

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

Notes to physician
This product is essentially inert and nontoxic. However, if it is overheated or burns, gases such as carbon monoxide and formaldehyde may be released. Those 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. Formaldehyde is a respiratory irritant gas. If patients may have inhaled high concentrations of irritating fumes they should be monitored for delayed onset pulmonary edema.

5. Fire-fighting measures

Suitable extinguishing media
Water, Foam, Dry powder, Dry chemical, Solid extinguishing agent

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
carbon monoxide
carbon dioxide (CO2)
Formaldehyde vapours
Hazardous combustion products

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.

7. Handling and storage

Handling

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
Respirable Dust	5 mg/m³
Total Dust	15 mg/m³

ACGIH Exposure Limits

Components	TWA
Respirable Dust	3 mg/m³
Total Dust	10 mg/m³

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/m³	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

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 goggles. safety glasses with side-shields.

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

Form	pellets
Odor	slight , specific .
Flash point	>93°C(>200°F)
Ignition temperature	320°C (608°F)
Method	ASTM D 1929
Melting Point	164 °C
Density	approx 1.4 - 1.8 g/ml @ 20°C
Bulk density	approx 770 - 890 kg/m³ @20 °C
Vapor pressure	not determined
Water solubility	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. Do not heat above 460 °F (238 °C) Recommended melt temperatures 360-390°F (182-199°C). Avoid prolonged heating at or above the recommended processing temperature.

Incompatible Materials
Polyvinyl chloride, strong acids, oxidizing agents.

Hazardous Combustion or Decomposition Products:
Trioxane, formaldehyde, paraformaldehyde, formic acid.

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

14. Transport information

TDG Not regulated

ICAO/IATA Not restricted

IMDG Not regulated

15. Regulatory information

U.S. FEDERAL REGULATIONS

TSCA Inventory
This product complies with U.S. Toxic Substance 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.