| | | | |
|---|---|---|---|
| **Product name** | GUR®, GHR® | | NAGH/EN |
| **MSDS number** | 87050101 | **Revision Date** | Apr.07.2016 |
| **Revision Number** | 0 | **Issuing date** | Apr.07.2016 |

## 1. Product and company identification

**Trade Name**

### GUR®, GHR®

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

**Product Grade(s):**
2022, 2024, 2105, 2122, 2122-5, 4000, 4012, 4012 OVERS, 4017 , 4018, 4020, 4022, 4022-6, 4030, 4032, 4050, 4052, 4070, 4113, 4120, 4122, 4122-5, 4130, 4150, 4150-5, 4152, 4170, 4523, 4550, 8020, 8110, SL 180

**Color Code:**
See Section 16 for list of Color Codes
**Manufacturer, importer, supplier**

**Ticona Polymer, Inc.**
**A business of Celanese**
8040 Dixie Hwy.
Florence, KY 41042
United States
www.celanese.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
info-engineeredmaterials-am@celanese.com

**Synonyms:**
Ultra High Molecular Weight Polyethylene / PE-UHMW

**Identified uses**
Plastic processing industry.

## 2. Hazard Identification

**GHS Classification**

| **Hazards** | **Category** |
|---|---|
| Not classified | Not applicable |

**Label elements**
No Pictogram Required.

| | |
|---|---|
| **Signal Word** | Warning |
| **Hazard Statements** | May form combustible dust concentrations in air |

**Precautionary statements**
Handle in accordance with good industrial hygiene and safety practice

## 3. Composition/information on ingredients

**Chemical characterization** Ethylene, polymer CAS-RN. basic polymer: 9002-88-4

**Remarks**
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**
Wash off with soap and water. Cool skin rapidly with cold water after contact with molten polymer. If symptoms persist, call a physician.

**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 dust. 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

**Extinguishing media which must not be used for safety reasons**
Do not use a solid water stream as it may scatter and spread fire.

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases**
Carbon monoxide
Carbon dioxide (CO2)

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

**Other Information**
Keep people away from and upwind of fire. Potential dust explosion hazard.

**Dust explosibility class**
St-1

## 6. Accidental release measures

**Personal precautions**
Do not breathe dust. Avoid dust formation.

**Environmental precautions**
No special precautions required.

**Methods for cleaning up**
Avoid dust formation. Potential dust explosion hazard. Remove all sources of ignition. Do not create a powder cloud by using a brush or compressed air. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

## 7. Handling and storage

**Advice on safe handling**
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.. All equipment used when handling the product must be grounded. Ground and bond containers when transferring material. Take measures to prevent the build up of electrostatic charge. Emptying of bags of powder directly into vessels where flammable vapors exist should be strictly prohibited because static discharges can be generated of sufficient strength to produce an explosion. Use explosion-proof equipment.

**Technical measures/Storage conditions**
No special storage conditions required. Avoid dust formation.

**Material storage**
Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible products**
Halogene, strong oxidizing agents, Aromatic solvents

## 8. Exposure controls / personal protection

### OSHA Exposure Limits

| Components | TWA |
|---|---|
| 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 |

### Mexico National Exposure Limits

No exposure limits established

### 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.

**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.

## 9. Physical and chemical properties

| | |
|---|---|
| **Appearance** | |
| **Form** | powder |
| **Odor** | slight specific |
| **Flash point** | Not applicable |
| **Ignition temperature** | 350°C (662°F) |
| **Density** | approx 0,92- 0,95 g/ml @ 25°C |
| **Method** | EN ISO 1183-1, A |
| **Bulk density** | approx 0,1 - 0,5 g/cm³ @ 20°C |
| **Method** | DIN EN ISO 60 |
| **Water solubility** | insoluble |

## 10. Stability and reactivity

**Chemical stability**
Stable under normal conditions

**Conditions to avoid**
Flame. Avoid prolonged heating at or above the recommended processing temperature. Fine powder may present a dust explosion hazard. Appropriate measures should be taken to control the generation and accumulation of dust during conveying and processing operations. Electrical grounding of equipment and the minimization of ignition sources is required when handling powder to avoid possible dust explosion.

**Incompatible Materials**
Halogens
strong oxidizing agents
aromatic solvents

**Hazardous Combustion or Decomposition Products:**
Thermal decomposition products may include oxides of carbon.

## 11. Toxicological information

### Potential health effects

| | |
|---|---|
| **Routes of exposure** | Skin, eyes, inhalation, ingestion. |

**Immediate effects**

| | |
|---|---|
| **Skin** | Polymer particles may cause mechanical irritation. |
| **Eyes** | Resin particles, like other inert materials, are mechanically irritating to eyes |
| **Inhalation** | Dust irritating to respiratory tract. Overheating in processing may generate hazardous, irritating vapours. |
| **Ingestion** | Low toxicity by this route is expected based on the biological activity of high molecular weight polymers. |

Toxicological data are not available. When handled appropriately, even after long years of experience with this product, no adverse health effects are known.

## 12. Ecological Information

**Ecotoxicity:**Ecotoxicological data are not available.

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

**SARA 311:**

| | |
|---|---|
| **Acute health:** | No |
| **Chronic health:** | No |
| **Fire:** | No |
| **Sudden release of pressure:** | No |
| **Reactive:** | No |

**INTERNATIONAL REGULATIONS**

**CANADIAN REGULATIONS**

**WHMIS Classification:** Not a WHMIS controlled product.

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

## 16. Other information

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

**Color code(s)**
10/7000, 20/1000, 30/8200, 50/4100, 60/6006, 70/5000, 70/6000, 80/3000, 80/3300, 80/3400, 80/3500, NATUR, NATURAL

**Prepared By**
Product Stewardship Department
Celanese

**Sources of key data used to compile the datasheet**
Information contained in this safety data sheet is based on Celanese owned data and public sources deemed valid or acceptable..

**Other Information:**
Observe national and local legal requirements
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Changes against the previous version are marked by ***

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. Celanese 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