

Product name	GUR® 4152		TNA/EN
MSDS number	8721004255	Revision Date	Dec.03.2009
Revision Number	0	Issuing date	Dec.14.2011

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

Product name	GUR® 4152
Material Number:	21004255
MSDS ID	GUR101

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

Synonyms:

Ultra High Molecular Weight Polyethylene / PE-UHMW

End Use:

Plastic processing industry.

2. Hazards identification

Emergency Overview

Fine white powder with slight to no odor.
Fine powder may present a dust explosion hazard if suspended in air.
Spilled product may create a slipping hazard.
The molten product can cause serious burns.

Potential health effects

Immediate effects

Skin	Polymer particles may cause mechanical irritation.
Eyes	Resin particles, like other inert materials, are mechanically irritating to eyes

Product name	GUR® 4152	Revision Date	TNA/EN
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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.

3. Composition/information on ingredients

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

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. If symptoms persist, call a physician. Cool skin rapidly with cold water after contact with molten polymer.

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

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.

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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

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

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. Electrical grounding of equipment and the minimization of ignition sources is required when handling powder to avoid possible dust explosion.

Storage

Material storage

Store in a cool dry place.

8. Exposure controls/personal protection

Product name	GUR® 4152	Revision Date	TNA/EN
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Revision Number	0		Dec.14.2011

8. Exposure controls/personal protection

OSHA Exposure Limits

No exposure limits established.

ACGIH Exposure Limits

No exposure limits established.

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

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	> 210°C (662°F)
Method	ASTM D 1929
Density	approx 0,93- 0,945 g/ml @ 25°C
Method	ISO 1183, Process A
Bulk density	0,35 - 0,50 g/cm³ 20°C
Method	ISO 60

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Revision Number	0		Dec.14.2011

Water solubility insoluble

10. Stability and reactivity

Reactivity

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

No data is available on the product itself

12. Ecological information

Ecotoxicity:

No data is available on the product itself

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

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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

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 ***

Material Safety Data Sheet



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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.

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