



**GMP) Good Manufacturing Practice
for food contact materials (FCM):**





Essential information

What is Good Manufacturing Practice (GMP)?

Good Manufacturing Practice (GMP) is a quality system used in manufacturing around the world. This set of general principles guides the development, testing, production and use of materials that may come into contact with ingestible substances like food, potable water and pharmaceuticals.

In Europe, GMP is a regulatory requirement in the food industry and its associated markets. Directives EC No 1935/2004 and EC No 2023/2006 state that any material that touches food must be safe and must not transfer any component part in quantities that could endanger human health, change the composition or deteriorate the taste and odor of foodstuffs.

This legislation applies directly to plastics employed in food contact including production equipment e.g. conveyor belts, cables and wires; packaging and food wrap films; coatings for drink and aluminum cans; domestic appliances like microwaves and kettles; plus kitchen utensils like spatulas.

Why is GMP necessary?

The market for plastics in the food industry is as buoyant as ever. Hectic lifestyles mean there is a growing dependence on ready meals and domestic appliances that make life easier. GMP was introduced to ensure that the highest standards of food safety prevail at all times, particularly in the convenience food sector, which relies heavily on plastic packaging systems that help food stay fresh for longer and can even be used in the cooking process.

What does GMP mean to European plastic product manufacturers?

Under GMP regulations, plastic product manufacturers producing for the food industry have a legal responsibility to ensure that the materials they make only contain additives from an approved list of ingredients, for example the European Plastic Directive [EC No 2002/72]. They also have to make certain that all production processes are fully GMP compliant and governed by suitable quality control systems that clearly document operational procedures, staff training and any risk assessments conducted. This accountability extends throughout the supply chain with manufacturers needing to prove they have obtained raw materials from reliable partners that also adhere to GMP and have proper protocols and safety checks in place.





How can Huntsman Polyurethanes help?

Huntsman Polyurethanes is one of the world's leading developers of thermoplastic polyurethanes (TPU). Our products are widely used in the food contact industry, where we are regarded as a trusted GMP partner that adheres to the highest possible safety standards.

Supplying the food contact industry sector for many years, we have gained extensive experience that gives our customers access to:

- **Expert guidance on the impact of GMP legislation;** we can advise customers about their legal responsibilities and assist them in following GMP guidelines by providing compliant materials
- **A growing pipeline of GMP standard TPU grades;** based on materials approved in the European Plastic Directive (EC No 2002/72) our FCM (food contact material) products can be engineered for bespoke food sector applications
- **Robust, quality assurance;** our dedicated FCM production lines are strictly governed by GMP and we provide all the documentation necessary to prove our TPU materials and their ingredients have been sourced, developed and processed correctly.

Why Huntsman Polyurethanes?

In August 2008 we became one of the first TPU manufacturers to proactively put GMP into practice. Anticipating legal changes in the sector, we rolled GMP out across our dedicated FCM operations.

We made significant changes to relevant production, logistics and warehousing functions, trained key personnel in GMP best practice and put in place control measures to govern batch production, general handling and equipment cleaning. A robust GMP quality assurance system was also developed to give customers the confidence that they are using products of an exceptionally high standard, which are fully traceable and deemed safe for use with food.

What solutions are available?

Huntsman now only supplies manufacturers in the food contact industry with GMP standard TPU grades. Our IROGRAN® range currently contains three basic GMP level TPU grades. Each is manufactured in accordance with guidelines from the Plastic Europe Association and comes with the necessary documentation, expert technical support and our commitment to ongoing research and product innovation in the sector. (We are certified ISO 9001).

For more information:

To speak to a representative from Huntsman Polyurethanes about GMP, please contact for:

Technical requests:

Dr. Anja Weismann

Global Product Portfolio Manager TPU

E-mail: anja_weismann@huntsman.com

Tel.: +49 (0) 541 9141 300

Further information can also be found at:

EU:

http://ec.europa.eu/food/food/chemicalsafety/foodcontact/legisl_list_en.htm

Guidelines:

<http://www.plasticseurope.org/Content/Default.asp?PageID=1453>

Huntsman Polyurethanes is committed to your business and can offer fast and flexible response to your needs

Believing in confidential dialogue, we offer direct links into the laboratories with full technical backup. Commercial support and dedicated customer service is available throughout Europe, Asia and the US.

European Headquarters

ACE@Huntsman.com

Phone: 32 (0)2 758 9420

Fax: 32 (0)2 758 7420

www.huntsman.com/pu/ACE

The Huntsman story

Global resources for local needs Huntsman Polyurethanes is a business division of Huntsman Corporation. Huntsman is a global manufacturer and marketer of differentiated chemicals. Its operating companies manufacture products for a variety of global industries including chemicals, plastics, automotive, aviation, textiles, footwear, paints and coatings, construction, technology, agriculture, health care, detergent, personal care, furniture, appliances and packaging. Originally known for pioneering innovations in packaging, and later rapid and integrated growth in petrochemicals, Huntsman today has 12,000 employees and 78 operations in 24 countries. The company had 2008 revenues of over \$ 10 billion. Huntsman Polyurethanes warrants only that its products meet the specifications agreed with the buyer. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. While all the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NO GUARANTY, WARRANTY OR REPRESENTATION IS MADE, INTENDED OR IMPLIED AS TO THE CORRECTNESS OR SUFFICIENCY OF ANY INFORMATION OR RECOMMENDATION OR AS TO THE MERCHANTABILITY, SUITABILITY OR FITNESS OF ANY PRODUCTS FOR ANY PARTICULAR USE OR PURPOSE. IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. NOTHING IN THIS PUBLICATION IS TO BE CONSTRUED AS RECOMMENDING THE INFRINGEMENT OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT AND NO LIABILITY ARISING FROM ANY SUCH INFRINGEMENT IS ASSUMED. NOTHING IN THIS PUBLICATION IS TO BE VIEWED AS A LICENCE UNDER ANY INTELLECTUAL PROPERTY RIGHT.

Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Polyurethanes and Huntsman Performance Products containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards. Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent on the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users. IROGRAN® is a registered trademark of Huntsman CORPORATION or an affiliate thereof, in one or more countries, but not all countries.

Copyright © 2010 Huntsman CORPORATION or an affiliate thereof.

All rights reserved.



Sales Locations:

AMERICAS

Huntsman
2190 Executive Road Blvd.
USA - Auburn Hills, MI 48326
Tel.: +1 248-322-7394
Fax.: +1 248-322-7404
e-mail: TPU_AMERICAS@huntsman.com

EAMEI

Huntsman (Germany) GmbH
Hafenringstraße 1
D - 49090 Osnabrück
Tel.: +49 541 9141-0
Fax: +49 541 9141-395
e-mail: TPU_EAME@huntsman.com

APAC

Huntsman
Asia Technology Center
452 Wen Jing Road, Minhang
200245 Shanghai - P.R. China
Tel. +86.21.24.03.72.39
Fax. +86.21.24.03.72.00
e-mail: TPU_APAC@huntsman.com