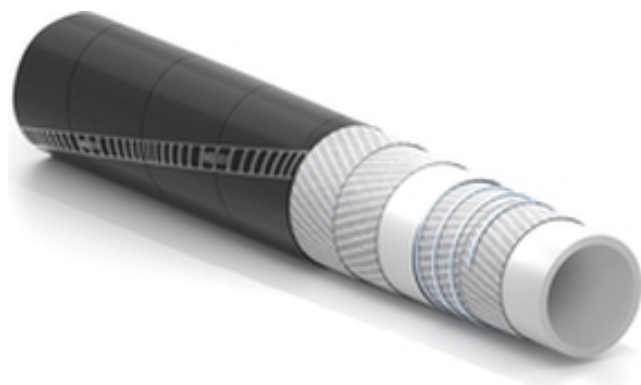


# Gordon LL



## Dissipative hose with white tube for dry abrasives



### Application:

hardwall, light, flexible and antiabrasive hose, suitable to convey with pneumatic system bulk abrasive products in the food industry, granules, dyes and PVC. Used in tank trucks, rail tankers and storage silos. Hose suitable for use in an ATEX environment. Tested by the notified body INERIS.

For suction and delivery of dry abrasive materials  
 Dissipative suitable for ATEX environment  
 Food regulation compliant

### Specifications:

BfR XXI Cat. 4. FDA tit.21 art.177.2600 dry foods.  
 Phthalates free (REACH Reg.). Reg. EC 1935/2004. Reg. EC 2023/2006.



### Tube:

white, smooth, dissipative, food quality, synthetic rubber, resistant to abrasive dust and foodstuff.

### Reinforcement:

high strength synthetic plies plus steel helix wire.

### Cover:

black, smooth (wrapped finish), dissipative, synthetic rubber, resistant to ozone and weathering.

### Temperature:

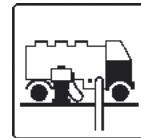
from -30°C (-22°F) to +80°C (+176°F).

### Electrical resistance:

$R < 10^8 \Omega/\text{lengths}$  for lengths equal to or lower than 60 m.

### Branding:

red transfer "IVG Truck (family logo)..."



# Gordon LL



| Code    | Inside diameter |         | Outside diameter |      | Working pressure |     | Burst pressure |     | Weight nominal |        | Bending radius |      | Vacuum | Length max |     |
|---------|-----------------|---------|------------------|------|------------------|-----|----------------|-----|----------------|--------|----------------|------|--------|------------|-----|
|         | mm              | inch    | mm               | inch | bar              | psi | bar            | psi | kg/m           | lbs/ft | mm             | inch |        | m          | ft  |
| 1488864 | 75              | 2-61/64 | 95               | 3,74 | 10               | 150 | 30             | 450 | 3,93           | 2,62   | 450            | 17,7 | 0,9    | 60         | 200 |
| 1490621 | 80              | 3 5/32  | 100              | 3,94 | 10               | 150 | 30             | 450 | 4,16           | 2,80   | 480            | 18,9 | 0,9    | 60         | 200 |
| 1481835 | 102             | 4       | 125              | 4,93 | 10               | 150 | 30             | 450 | 6,31           | 4,22   | 700            | 27,6 | 0,9    | 60         | 200 |
| 1496034 | 102             | 4       | 132,5            | 5,22 | 10               | 150 | 30             | 450 | 8,18           | 5,50   | 700            | 27,6 | 0,9    | 60         | 200 |

## Variants available on request:

1. Different diameters.
2. Softwall hose.
3. Hardwall hose with corrugated cover.

## Recommended Couplings:



Camlock



Flanges

## SPECIAL DETAILS

### CIP and advice to users on hoses in contact with food

#### Sanitation

- IVG recommends for the first use a wash cycle with potable water at a maximum temperature of 80°C/90°C and a hose sanitation as reported above before conveying food products.
- At the end of each cycle the equipment and hose assemblies must be cleaned and disinfected.
- Strictly follow the times indicated for each cleaning cycle.
- Do not immerse hose assembly in the sanitation fluid because only the inner tube is suitable for contact with the below mentioned solvents.
- Every cleaning cycle must be immediately followed by a complete rinse.
- Do not exceed 3 bar working pressure in CIP systems.

| HOSE*                                                                                                                    | Hot Water        | Steam open end          | H2O2 1%                | H2O2 3%                | Peracetic Acid 0.1%    | Peracetic Acid 0.5%    | Phosphoric Acid 5%     | Chlorine 1%            | NaOH 2%                | NaOH 5%                | Nitric Acid 0.1%       | Nitric Acid 3%         |
|--------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| FOOD SCOTLAND<br>FOOD VINO FLEX<br>FOOD CANA<br>FOOD TUSCANY<br>FOOD PIEDMONT<br>FOOD CALIFORNIA<br>TRUCK FOOD FLEX/IIIR | 90°C<br>8 hours  | Max 130°C<br>30 minutes | Max 70°C<br>15 minutes | Max 30°C<br>15 minutes | Max 50°C<br>15 minutes | Max 30°C<br>15 minutes | Max 80°C<br>15 minutes | Max 80°C<br>15 minutes | Max 80°C<br>15 minutes | Max 30°C<br>15 minutes | Max 70°C<br>15 minutes | Max 30°C<br>15 minutes |
| FOOD MILLENNIUM<br>FOOD DIJON<br>FOOD DAMASCO                                                                            | 80°C<br>8 hours  | Max 110°C<br>15 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>15 minutes | Max 70°C<br>15 minutes | Max 70°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes |
| TRUCK FOOD FLEX<br>FOOD MERLOT<br>FOOD PARRY                                                                             | 80°C<br>8 hours  | Max 110°C<br>15 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>15 minutes | Max 70°C<br>15 minutes | Max 70°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes |
| FOOD ALICANTE<br>FOOD MILKSERVICE                                                                                        | 90°C<br>8 hours  | Max 130°C<br>30 minutes | Max 70°C<br>15 minutes | Max 30°C<br>15 minutes | Max 50°C<br>15 minutes | Max 30°C<br>15 minutes | Max 80°C<br>15 minutes | Max 80°C<br>15 minutes | Max 80°C<br>15 minutes | Max 30°C<br>15 minutes | Max 70°C<br>15 minutes | Max 30°C<br>15 minutes |
| FOOD PANAMA<br>FOOD ACAPULCO<br>FOOD OILMILL                                                                             | 80°C<br>8 hours  | Max 110°C<br>10 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>10 minutes | Max 70°C<br>10 minutes | Max 70°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes |
| FOOD ACQUABLU                                                                                                            | 80°C<br>8 hours  | Max 110°C<br>30 minutes | Max 80°C<br>30 minutes | Max 50°C<br>30 minutes | Max 70°C<br>30 minutes | Max 50°C<br>30 minutes | Max 80°C<br>30 minutes | Max 80°C<br>30 minutes | Max 80°C<br>30 minutes | Max 50°C<br>30 minutes | Max 80°C<br>30 minutes | Max 50°C<br>30 minutes |
| FOOD SHETLAND<br>CHEM THUNDER FLEX<br>CHEM SUPERTOP UPE                                                                  | 90°C<br>12 hours | Max 130°C<br>30 minutes | Max 80°C<br>30 minutes | Max 50°C<br>30 minutes | Max 70°C<br>30 minutes | Max 50°C<br>30 minutes | Max 80°C<br>30 minutes | Max 80°C<br>30 minutes | Max 80°C<br>30 minutes | Max 50°C<br>30 minutes | Max 80°C<br>30 minutes | Max 50°C<br>30 minutes |
| TRUCK DON/BN<br>TRUCK GORDON                                                                                             | 80°C<br>8 hours  | Max 110°C<br>15 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 30°C<br>10 minutes | Max 50°C<br>15 minutes | Max 70°C<br>15 minutes | Max 70°C<br>15 minutes | Max 30°C<br>10 minutes | Max 50°C<br>10 minutes | Max 30°C<br>10 minutes |

\*The indications regarding hoses on this list refer to the product code found in the IVG catalogue [www.ivgspa.it](http://www.ivgspa.it).

#### General advice

- Hoses are not meant to permanently contain the products they convey.
- Store hoses away from direct sunlight and heat. When not in use store hoses with perforated plugs at both ends.
- Before every use check the hose condition. The hose cover, especially in the fitting area, should show no signs of cuts, tears, or bubbles. There should be no hard or weak areas, signs of detachment or collapse.
- Remember to guarantee traceability of every single piece of hose put into the market (Reg. EC 1935/2004, EC 2023/2006).

## SPECIAL DETAILS

**NOTES AND SUGGESTIONS FOR THE END USERS FOR HOSE ASSEMBLIES INTENDED TO BE USED IN ATEX ENVIRONMENTS 2014/34/UE**

Below are the notes for the proper use of the product in ATEX environments and warnings resulting from the risk analysis for the verification of effective ignition sources **regarding the hose assembly.**

Suggestions for a correct Risk Analysis are also given. There is no presumption that these suggestions could be exhaustive of every possible ATEX environment scenario in which the hose assembly could found, however the goal is to help the final user to carry out a correct Risk Analysis.

IVG Colbachini cannot, nor does it intend to, replace the Employer in his task of carrying out the Analysis. The aim is to help him in this activity.

The 1999/92/CE Directive (Minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres) obliges the Employer to:

1. evaluate the risks of explosion considering the following:
  - likelihood and persistence of explosive atmospheres;
  - likelihood that ignition sources will be present including electrostatic discharge;
  - scale of possible effects;
  - characteristics of the plant, substances used, processes and possible interactions;
  - places that are or can be connected via openings with areas where explosive atmospheres are likely to generate.

2.To issue a document “**Explosion protection document**” (Risk Analysis).

3.To always update the **“Explosion protection document”** (Risk Analysis)

**NOTE A – hot surfaces.**

The hose does not contain heat sources, so the surface temperature of the hose depends strictly on the use by the end user. In the pneumatic conveying systems periodically check the integrity of the hose and its layers.

Do not use the use if the inner layer is heavily worn. The range of the working temperature of the material for which we guarantee the properties is according to the technical data sheet of the product.

**Damage resulting from improper use of the product are not attributable to the manufacturer.**

**NOTE B – sparks of mechanical origin.**

The hose has no moving parts and it is not able to generate this source of ignition. In the pneumatic conveying systems, it is likely that sparks are carried from earlier process operations and not due to the hose itself. It is the end user's responsibility to operate so that this source of ignition is not present, internally and externally to the hose.

**NOTE C – electrical equipment.**

There are no electrical materials provided with the hose. The possible steel helix wire (if present between the layers of the hose) has been designed, to impart mechanical strength to the hose. The helix wire is not intended as an electrical conductor, but it can help the dispersion of electrostatic charges if and only if it is correctly connected to the ground line or to equipotential bonding jumpers with equipment already connected to the ground line.

NOTE D – eddy currents.

This ignition source is not applicable to the hose in question. The end user must operate so that the hose is not isolated from sections of insulating hoses. The hose, thanks to its conductive/dissipative characteristics is able to disperse possible electric/electrostatic charges accumulated during the process if and only if the hose is properly connected to the ground line.

**NOTE E – electrostatic charges.**

The hose does not contain or inherently generates electrostatic ignition sources. Eventual generation and accumulation of charges may depend on the material transported in the process and the ability of the material, properly connected with equipotential connections and/or connections with grounding, to be able to drain them. Care should be taken in the perfect cleaning and maintenance of connections and periodic assessment of the earth resistance that can detect anomalies in the system. The material the hose is made of has been designed to maximize the dispersion of electrostatic charges that can be generated due to the process. The nonapplication of these notes and improper use of the product as designed, absolve the manufacturer from any responsibility for any damage that may result. According to the characteristics and needs of the process that may generate internal and external hazardous atmospheres, detailed studies should be performed by experienced staff to guarantee a proper use of the product.

The concepts, recommendations, references and the limits reported in the following standards are extremely important in order to carry out a detailed study:

- CEI CLC/TR 60079-32-1:2016 – Electrostatics – Code of practice for the avoidance of hazards due to static electricity.
- NFPA 77 - 2014 - Recommended Practice on Static Electricity.
- UNI CEI EN ISO 80079-36:2016 – Explosive atmospheres - Part 36: Non-electrical equipment intended for explosive atmospheres - Basic method and requirements.
- UNI CEI EN ISO 80079-37:2016 – Explosive atmospheres - Part 37: Non-electrical equipment intended for explosive atmospheres - Type of non-electrical protection for constructive safety “c”, for ignition source control “b”, by immersion in liquid “k”.
- UNI EN 1127-1/2011 Explosive atmospheres. Explosion prevention and protection – Part 1: Basic concepts and methodology.

**NOTE F – adiabatic compression and shockwaves.**

It is not applicable to the supplied hose. The possible releases of gas at high speed can only be caused by the process. The user must assess the possible presence of this ignition source before putting the hose into use.

## SPECIAL DETAILS

**NOTE G - temperature increases due to chemical reactions or unstable materials.**

Chemical incompatibility of the materials of the hose with the product/s to be conveyed. Verify in the design phase and before use, the chemical compatibility of the substances used in the process with the material of the hose. For any questions or doubts, please contact IVG Colbachini for the necessary compatibility checks.

**NOTE H - combustion of a layer of powder or other combustible material: presence of dust between moving parts.**

The ignition source is not inherently present in the product supplied. Correct transport speeds could prevent accumulations of the dust. Periodic cleaning prevents dust accumulations that, besides modifying and make less effective the dissipative characteristics of the material, could promote this kind of ignition.

The use of the product / hose as pneumatic conveying equipment brings the transport of embers generated in the connected process equipment.

**SUGGESTION 1 - Fluid loss.**

We suggest considering as a possible foreseeable effect the possibility of a fluid loss of the system while in use. Therefore, all necessary precautions must be taken to contain/eliminate the possible negative consequences, in order to safeguard those workers exposed to possible explosive atmospheres.

A correct maintenance of the plants/installation helps minimizing the above mentioned risk.

**SUGGESTION 2 - Flames and hot gas.**

We suggest checking that there are no flames or hot gas in the potentially explosive zones, in particular assessing the risk that can accidentally arises from places that are or can be connected through openings to places where explosive atmospheres may occur.

**SUGGESTION 3 - Lightning strike.**

We suggest making sure that there is an adequate protection against the possible ignition of explosive atmosphere caused by the ground discharge of a lightning strike. We also suggest that the proper function of this protection is periodically checked. Furthermore, we suggest evaluating the possibility of ignition of explosive atmosphere caused by very high temperatures of the lightning-conductors.

**SUGGESTION 4 - Radiofrequency electromagnetic waves (RF) from 104 Hz to  $3 \times 10^{12}$  Hz.**

We suggest checking the presence of systems that generate and use radio frequency electrical energies, such as RF generator for medical use or industrial use for heating, drying or hardening, which produce electromagnetic waves. If the electromagnetic field amounts an important value and the antenna is big enough, these conductors can ignite the explosive atmosphere.

**SUGGESTION 5 - Electromagnetic waves from  $3 \times 10^{11}$  Hz to  $3 \times 10^{15}$  Hz.**

We suggest checking the presence of electromagnetic radiation in this range because it can become an ignition source as an effect of the absorption of explosive atmospheres or solid surfaces.

Sunlight can, for example, ignite an explosion through objects causing the convergence of sunlight (i.e. reflecting surfaces etc.).

**SUGGESTION 6 - Ionizing radiation.**

We suggest checking the presence of ionizing radiation, which can be generated from X-ray tube or radioactive substances since they can ignite an explosive atmosphere, especially in the presence of dust particles.

**SUGGESTION 7 – Ultrasound.**

We suggest checking the presence of ultrasonic waves as they may, in extreme cases, cause the ignition of a liquid or solid substance.

## SPECIAL DETAILS

### SAFETY INFORMATION – USER RESPONSIBILITIES

The service life of rubber hoses mainly depends on the dedicated use. Equipment and systems where the hose is installed must be designed safely. Since our hose can be designed for different applications, **IVG Colbachini** cannot guarantee the proper functioning of the product for all situations.

The analysis of the technical aspects related to specific uses must be performed by the users when choosing the product that meets their requirements. So, in relation to the variety of operating conditions and applications of the IVG hose, the user is solely responsible for the final choice of the product deemed suitable to satisfy the performance and safety requirements called for the application.

The information and technical data shown in the product data sheets must be examined by users with appropriate technical skills. IVG Colbachini is not responsible for other uses, identified by the end user, that are different from the one shown in its catalogues, product sheets, offers, order confirmations and any recommendations attached.

An inappropriate choice of the product or a failure to follow the procedures of installation, use, maintenance and storage of the hoses may lead to a hose break and cause material damage and/or serious injury to people.

For the selection and proper use of the IVG products you can also refer to the document "Recommendations for selection, storage, use and maintenance of rubber hoses" provided by Assogomma and available on [www.ivgspa.it](http://www.ivgspa.it). These recommendations are according to the international standard ISO 8331, "Plastic and rubber hoses and hose assemblies - Guidelines for selection, storage, use and maintenance."

**For safety reasons, never exceed the working pressure indicated in the product data sheet.**

For specific applications of rubber hoses, please refer to the legal requirements or specific standards; moreover, additional recommendations for particularly critical applications are available.

For further information, contact the Marketing department ([marketing@ivgspa.it](mailto:marketing@ivgspa.it)).