

RECOMMENDATIONS FOR THE USE OF GELATINOUS DYNAMITE

Read the recommendations contained in this sheet very carefully before using this product. The manufacturer is not responsible for any improper use of the product. **ALWAYS READ THESE RECOMMENDATIONS ALONG WITH THE CORRESPONDING "SAFETY DATA SHEET". IT HAS IMPORTANT INFORMATION.** If you have any doubts, contact your distributor or the MAXAM technician who normally visits you.

Link: <https://www.maxamcorp.com/en/blasting-solutions/products/products-list>

These recommendations are based on the manufacturer's experience for the safe use of the products referred to and should by no means be used as a substitute for the current legal regulations and SAFETY DATA SHEETS. For the use of these products in countries belonging to the EU, these recommendations are mandatory.



QR code

EC DECLARATION OF CONFORMITY

The product referred to in point 1, is in accordance with the model subjected to the EC Type-examination, which gave rise to its certification in accordance with Directive 2014/28/EU, being subject to the production control established in the aforementioned Directive.
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1. MANUFACTURER AND PRODUCT IDENTIFICATION

Manufacturer

The information is printed on the packing.

Trade name / CE Certificate Number:

- **RIODIN HE** (RIODIN - GOMA 2 ECO) / LOM 99EXP4070
 - **RIODIN XE** (RIODIN PLUS – MYTREX - DYNAROC 9/E) / LOM 04EXP1183
 - **RIOPER G** (RIODIN 9) / LOM 99EXP4069
 - **RIOSEIS GX – RIOSEIS GH – RIOSEIS HE** (RIOSEIS PLUS) / 0589.EXP.1747/08



- UN / ADR / IMDG Classification: "EXPLOSIVE, BLASTING, TYPE A" / Class 1.1 / Compatibility group D / UN 0081 (UN: United Nations) / (ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road) / (IMDG: International maritime dangerous goods code).
- Basic components: Nitroglycol / Nitroglycerine / Nitrocellulose / Ammonium Nitrate / Fuels

2. HANDLING

General recommendations for all explosives

- Always follow ALL APPLICABLE regulations regarding the handling of explosives.
- All explosives are potentially dangerous and must be handled carefully and only by authorised personnel. Explosives can mass detonate by: impact, friction, fire, spark or by a secondary explosion, producing a strong overpressure and heat that may cause serious injuries or even death.
- Always keep the product away from all energy sources, heat, flames, or shock.
- Smoking is strictly PROHIBITED except in designated areas.
- Avoid subjecting the product to all types of impact or friction on the product or crushing it.
- Never try to alter the composition of the explosives.
- Always protect the explosives from dampness and keep in closed containers.
- The use of gloves and antistatic boots when handling explosives is recommended.
- If you suspect that the product may be in poor condition, do not use it. Contact your regular supplier, the MAXAM technician who normally visits you, or any MAXAM personnel.
- Explosives should be kept away from food, eyes, skin, etc. In the case of prolonged contact, you should wash your hands with abundant water.
- In well-ventilated areas or when handling in the open air or in a well-ventilated mine there is no need for breathing protection. In locations with insufficient ventilation, when prolonged exposure is expected, suitable personal protective equipment is needed (self-contained breathing apparatus, mask with an appropriate filter, etc).
- Do not eat, drink or smoke without first cleaning your hands well with soap and water.

Specific recommendations for GELATINOUS DYNAMITES

- Use: Neoprene (Np) / PVC gloves. Safety goggles to protect against possible projections. Anti-static work overalls. Standard safety footwear with a conductive sole and reinforced toe.
- These products contain Nitroglycol and/or Nitroglycerine. If they contact the skin or are inhaled, they can cause headaches, nausea, dilation of peripheral blood vessels and a drop in blood pressure. As such, when prolonged exposure is expected, suitable personal protection equipment is needed during handling.
- In addition to the above, contact with the skin may cause skin irritations and headaches. Contact with eyes may cause irritation of the eye mucus.
- If any of the symptoms indicated appear, take the affected person out of the area, into the open air. If there was contact with the eyes, wash them with abundant water for at least 15 minutes and call a doctor. If there is any contact with skin, wash the affected area with water and neutral soap.

3. STORAGE

General recommendations for all explosives

- Always follow ALL APPLICABLE regulations regarding the storage of explosives.
- Explosives should be kept in warehouses (magazines) that meet the ALL APPLICABLE regulations, referring to their construction, the amounts that can be stored, and the safety distances from other magazines, inhabited buildings, roads, railways lines, pathways, etc.
- Put up visible signs warning: "EXPLOSIVES – ENTRY PROHIBITED", outside of the store grounds (magazines)
- Cigarette lighters, matches, arms, or any other device which may cause a flame, spark or fire are prohibited inside or near the warehouses (magazines).
- The warehouse (magazine) should be perfectly clean, dry, and ventilated. It should be constantly cleaned, to stop dirt or dampness on the ground affecting the product packaging, or the explosive product.
- Only products from the same compatibility group (see ADR, ONU orange book, IMDG) should be stored in one single warehouse (magazine), endeavouring to keep them as similar as possible: type, calibre, class, manufacture date. This helps to monitor them and inspect their conservation state and the amount of one product class.
- Never store explosives with flammable products, oxidants, or primary explosives, such as detonators.
- The product should be stored in such a way that it is a minimum of 20 cm away from the warehouse walls, to enable ventilation of the product. It should be separated from the warehouse floor using stands or pallets so that it is not affected by possible dampness.
- Explosives should always be stored in their original boxes. The boxes of explosives that are partially empty should be tightly closed.
- Different classes of explosives should never be mixed in one box.
- The explosive should never be taken out of its container.
- Product containers or packaging may be broken, and products may spill on the floor if they are not stored or handled properly. Spilled material should be cleaned up using a broom made of non-synthetic material, and a non-metallic dustpan. The spilled material should be carefully swept up, and deposited in non-porous bags, to be later destroyed. The dirty area, whether it is a hard surface, concrete, asphalt or wood, should be carefully cleaned with a clean cloth that has been soaked with water, until no trace of the explosive can be detected. If the packaging is seen to be damaged, the product

contained within should be inspected, and if it is acceptable, the packaging should be changed for a new, original one. Broken or damaged containers or packaging should be carefully gathered in bags or sacks, to destroy them properly later. Prolonged storage and improper conditions may cause the explosive to deteriorate even before the expiration date recommended by the manufacturer.

- The product should be arranged and placed in the warehouse (magazine) in such a way that it can be moved and turned around, and also be quickly and easily identified - the boxes should be stacked so that their label, manufacture date, batch no., etc., are perfectly visible. Special attention should be given to placing the pallets in the warehouse to ensure maximum safety and order, making the best use of the available space without exceeding the capacity of the warehouse. To control the storage, movement, and conservation of the product stored, the following guidelines should be followed:
 - Place the pallets ordered by families of the same compatibility group.
 - Within one family, place the pallets ordered by date.
 - Rigorously control the order of consumption so that the oldest product always comes out first.
 - Do not pile up the pallets inside the stores (magazines).
- It is advisable to carry out frequent inspections of the stores (magazines) to ensure that the above recommendations are being followed. If you suspect that the product may be damaged or in poor condition, separate it from other products and contact your regular product supplier, the MAXAM technician who normally visits you, or any MAXAM personnel.

Specific recommendations for GELATINOUS DYNAMITES

- These products are stable under normal storage conditions, at least during their useful life.
- These products may exude, and therefore extra precautions should be taken.
- It is recommended that they be stored at a temperature ranging between -10°C to +30°C and, for RIOPER G, between -5°C to +30°C.
 - Action in the event of high temperatures:* Avoid prolonged direct exposure of the product pallets to sunlight. If the normal store temperature is greater than 30°C, consider that prolonged storage at this temperature could affect part of their properties.
 - Action in the event of low temperatures:* If the normal store temperature is less than -10°C (and, only for RIOPER G, -5°C), measures should be taken to prevent the product from reaching this temperature (by covering or insulating the pallets).
- When a product has been stored in extreme conditions (very high or very low temperatures for a prolonged period of time, or after having gone through a number of thermal cycles), the product must be analysed before being used, especially if there are signs of exudation.

4. TRANSPORT

- Always follow prevailing regulations regarding the transport of explosives.

5. USE

General recommendations for use applicable to any explosive

- Always follow ALL applicable regulations regarding the use of explosives as well as environmental regulations.
- Never dump explosive products in the natural environment.
- Do not store or transport incompatible products together.
- When explosives detonate, they generate smoke, dust, noise, and projections of flying material. Always use explosives in areas which are appropriately secured, protected and sufficiently far away from roads, railway tracks, buildings, transmission lines, inhabited areas and installations. Do not go near the area of the explosion until the smoke and dust have cleared.
- All blasting and products should be under the control and supervision of authorised personnel, in accordance with applicable regulations.
- Before blasting, ensure that the affected area has been cleared of people and equipment.
- **In case of detonator-initiated cartridges, unless the cartridge has housing for detonators, it is recommended that the detonator housing in the cartridge be prepared with a brass or wood punch. The detonator should be centred, well fixed and facing the rest of the explosive charge in the blast hole.**
- Never insert or squeeze the cartridges into the blast hole using force, nor dismantle them or remove their packaging. Consider the recommended load direction if printed arrows are on the product.
- The diameter of the cartridges used should be appropriate for the diameter of the blast hole, and there should be sufficient clearance between the cartridge and the wall of the blast hole so that the cartridges can be loaded easily into the blast hole without excessive force.
- When designing the blast, consider the regulatory requirements for noise, ground vibrations and fly rock.
- Detonating any kind of explosive or accessory in or near combustible materials may cause a fire. Clear the blasting area of dry vegetation or other combustible material and cover the accessories that detonate in the air completely with earth or sand.
- If the fire is very close to, or in the explosive itself, move away to a safe distance, isolate the area and warn the authorities. **NEVER ATTEMPT TO EXTINGUISH THE FIRE IN OR CLOSE TO THE EXPLOSIVE.**
- In the case there is a fire which is not near the explosives, use extinguishing agents suitable for the type of fire. Evacuate if there is a risk of explosion.
- Do not expose yourself unnecessarily.
- If the product spills, pick it up by hand, using non-sparking tools. Place the spill in plastic bags, and then place these inside cardboard boxes and seal them with adhesive tape, to be disposed of later.

Specific recommendations for using GELATINOUS DYNAMITES

- These products are explosives sensitive to electric or non-electric detonator - minimum 0.6 g of PETN. For RIOPER G use electric or non-electric detonator - minimum 0.6 g of PETN strength copper detonator. These explosives are water-resistant in compliance with the EN 13631-5 standard. They can be used in blast holes containing water. For RIOSEIS GX the maximum resistance to hydrostatic pressure admissible is 0,4MPa.
- RIOPER G is a permissible explosive suitable for blasting in underground coal mines. However, it must be used strictly in compliance with locally applicable mining regulations. **The other products are explosives that are NOT SUITABLE for use in the presence of firedamp or other combustible gases at the risk of fire and inflammable dust.**
- The recommended temperature of use is as between -10°C to +60°C. In case of RIOSEIS GX, between -40°C to +60°C and, only for RIOPER G, between -5°C to +60°C. The temperature of use refers to the temperature of the explosive paste, not of the environment. If you suspect that the explosive temperature is outside of this range, wait for it to adjust within the blast hole before detonating it.
- The fumes resulting from the detonation of these products are toxic, as they contain oxides of nitrogen and carbon. Inhaling these fumes may cause irritation in the respiratory system or even death. Therefore, any type of exposure to fumes should be avoided. Immediate medical attention is required following any exposure to these toxic fumes.

6. EXPIRATION

- The expiration period recommended by the manufacturer for these products is indicated on the packaging, whenever the storage conditions are appropriate. This recommendation is based on the manufacturer's experience.
- Check the expiration date of the product before using it. If you have any doubts, consult the distributor or the manufacturer.

7. DESTRUCTION

- Destruction of explosives shall be carried out by personnel properly trained in safe procedures of destruction, taking the necessary protection measures and in accordance to the regulations that are in force in each moment and place of use.
- In case of doubt, consult your manufacturer and/or distributor.