

OPERATING AND SAFETY INSTRUCTIONS

FOR THE USE OF RESIN-BONDED, RIGID, SEMI-FLEXIBLE AND FLEXIBLE ABRASIVE PRODUCTS.

READ CAREFULLY AND SHARE WITH ALL OPERATORS.

For further information on: selection, features, use and safety of abrasive products, please refer to the general catalogue, our website www.globabrasives.com or contact us. Abrasive wheels can generate dangerous situations and/or create accidents. Read carefully the following information and the labels' indications; operators must be instructed to use abrasive product: operators must comply with the laws and decrees of their country and the safety/operating instructions of the machines on which abrasive wheels are mounted. Do not allow untrained/incompetent operators to use abrasive wheels. Abrasive wheels are relatively fragile: handle and use with care. The use of damaged wheels, the non correct use and the non correct installation can cause accidents, damages and serious injuries to persons. Cutting, grinding and polishing applications can free hazardous contaminants in the air. Use appropriate powder/fumes suction systems and wear protection devices for respiratory tract.

RECALLS ON PRODUCTION BATCHES.

Before using an abrasive product, check the page "recalled batch" on our website and, following the instructions, verify if the product is part of a recalled batch. Should this be the case, do not use the product, isolate it and all the other wheels coming from the same box/batch and contact our customer service.

EXPIRY.

Lifetime of resin-bonded abrasive wheels is **3 years** from production date **if reinforced** (BF on label) or **2 years if without reinforcement** (B on the label). The expiry date can be shown on the boxes, on the central metal hub, through cuts on the label perimeter or printed on one of the 2 sides of the disc. **Never use expired wheels.** These wheels are manufactured according the following norms: **EN12413 (EU), ANSI B7.1 (USA), AS 1788.1 (AUS).**

CHECKING, TRANSPORT, HANDLING AND STORAGE.

Verify packaging damages; refuse damaged packagings; handle with care and avoid shocks; store at temperatures between 10°C (50°F) and 30°C (86°F) and humidity around 45%; do not expose wheels to frost and high humidity conditions, water or chemical products such as solvents. Always use oldest wheels, but make sure they are not expired. For a correct choice, contact us, refer to our catalogue or our web site.

WHEEL INSPECTION.

Before mounting the wheel, make sure it is not cracked or damaged. Do not use wheels if damaged (fig.7) or expired. Carry out a sound check by striking one side of the disc with a non metallic object (screwdriver handle). If the sound is damp and not clear, reject the wheel. Do not use wheels that were exposed to too high/too low temperatures/humidity or that have been artificially or accidentally wet.

MACHINE INSPECTION.

Check flanges, backing pads, support pivots and adapters. Make sure the grinder is suitable for the type of work to be made and that the wheel is adequate for the grinder. Always use with suitable safety guard (fig.6). Always direct the open part of the safety guard to a direction opposite to the operator. Keep machines in an efficient state. Do not use machines that do not indicate the rotation speed on the nameplate or that do not have it.

EYES, FACE AND BODY PROTECTION.

Use eye and face protections as masks, screens and glasses (fig.2). Wear hats or head protection, heavy leather apron, safety shoes, tight fitting clothes. The noise generated by the wheels can exceed 80 dBA. A prolonged exposure can cause permanent damages to hearing. Use ear protection such as earplugs and anti-noise screens (fig.3). The vibrations generated by the wheels can cause damages to the human body. Adopt work turnover and resting breaks. Carry out a specific evaluation of the noise and vibrations risk and adopt suitable protection and precautions. Wear protective gloves that fully cover also wrists (fig.4). Carry out an evaluation of the physical, chemical risks associated with the use of abrasive products and adopt suitable precautions and protective measures. Protect the respiratory tract: use masks with special filters, air respirator systems, protective measures of the working environment such as ventilation systems, filtration and powder/fume suction (fig.5). Nearby personnel must be protected with all the above precautions/measurements.

ASSEMBLY INSTRUCTIONS.

Follow the assembly instructions supplied with the machine and the use restrictions shown on the wheel label (fig.1). Make sure the maximum turning speed (RPM) of the machine is always, in any operating condition, lower than or equal to the speed shown on the wheel label. A transversal coloured stripe on the wheel label indicates also its operating peripheral speed according to the following scheme: **TAB. 1:**

None	lower than 50 m/s	Blue	up to 50 m/s	Yellow	up to 63 m/s
Red	up to 80 m/s	Green	up to 100 m/s		

Check that dimensions and shape of the wheel correspond to those allowed for the machine. Check that the wheel is wholly contained within the safety guard of the grinder. Do not modify the clamping flanges. Before mounting or dismounting an abrasive wheel, disconnect the power supply (electric energy, compressed air, etc.). Do not force wheels during assembly. Avoid clamping with too high tightening torque. Once the wheel is installed, make sure that it rotates freely by turning it by hand. Check the presence, correct installation and securing of the safety guard. Connect the power supply, start the machine and make it turn for at least 30". During this test, do not keep the open area of the safety guard oriented towards the operator and other personnel. In case anomalies, vibrations, irregular rotation should occur, let the grinder stop naturally, disconnect power supply, remove the wheel and check its assembly. If the problem persists, reject the wheel and inform the supplier of the problem. Some types of wheels can be supplied with mounting blotters that have to be mounted between the flanges and each side of the disc to compensate slight irregularities of surfaces between flanges and wheels.

CLAMPING FLANGES.

Make sure the flanges are flat, clean and smooth. Always use suitable flanges **TAB.2**. Flanges must have the same diameter and the same shape (recesses) towards both faces of the wheel; make exception the raised hub flanges (mod. 1 of **TAB.2**).

Flanges diameter: for cutting and grinding wheels is normally equal to 1/3 of the wheel diameter.

Make exception: reinforced depressed center grinding wheels (Type 27), reinforced conical (Type 28), semi-flexible reinforced (Type 29), reinforced depressed centre cutting wheels (Type 42) and flat (Type 41) up to diameter 230mm, that must have the following flanges diameters: -19mm (wheel diameter ≤ 100mm and bore ≤ 10mm) -32mm (wheel diameter ≤ 100mm and bore between 10 and 16mm) -41mm (wheel diameter between 100 and 230mm, bore 22.23mm).

INDICATIONS SHOWN ON WHEEL LABEL.

Specifications characterizing the wheel: wheel dimension; Type of abrasive (A, Z, C, SG); granulometry of the abrasive (16, ..., 100) expressed in Mesh.

Hardness: scale of toughness shown with letters from A (very soft) to Z (very hard). Resin binder shown by "B" and reinforcement structure shown by "F" on label.

Maximum allowed turning speed (RPM) and maximum allowed peripheral speed (m/s): the most common peripheral speeds are 50-63-80-100m/s.

Reference norms: EN12413, ANSI B7.1.

Indications on the workable materials: steel, aluminium, cast iron, stainless steel, stone, marble, etc.

Shape types **TAB.3:** (Type 1) straight grinding wheel; (Type 27) depressed centre grinding wheel; (Type 28) conical grinding wheel; (Type 29) depressed centre semiflexible grinding wheel; (Type 41) flat cutting wheel; (Type 42) depressed centre cutting wheel.

Pictograms **TAB.4:** from fig. 1 to fig. 7 explained above; (fig.8) do not use for side grinding; (fig.9) do not use on portable machines (wheels made only for stationary machines); (fig.10) not suitable for wet grinding/cutting; (fig.11) only suitable for wet grinding/cutting; (fig.12) only for totally enclosed machines; (fig.13) only for grinding with angle greater than 10°.

USE INSTRUCTIONS AND RESTRICTIONS.

Use the wheels only and exclusively for uses, materials and type of machine for which they are intended; do not use cutting discs (Ex. Type 41 e 42) for grinding and not applying lateral loads on them; always keep the grinder with two hands; perform the sanding or cutting progressively, slowly and delicately; do not apply too heavy loads on the wheels; do not make curvilinear cuts; do not use the side of the disc for grinding unless expressly indicated (Es. Type 1); do not cut or grind objects subject to forces or pressures that could be freed as a result of the cutting/deburring action. Remove all combustible, flammable or explosive materials from the work area; firmly fix the workpieces before starting work. Allow the product to cool down during use by making it spin freely for a while. If the product hangs in the processed material, stop the machine and try to pull it out without straining and/or levering it. Check the integrity and flatness of the product before using it again. If a disk breaks during use, stop processing, isolate the disk and the entire lot and notify the distributor or manufacturer.

Dispose of the products according to the National laws in force in your country.

