



EPOXY-BASED LIQUID METAL

KemisKIT Al21

TECHNICAL DATA SHEET 2016/01-02

KemisKIT Al21 liquid metal is a reinforced, two-component system based on epoxide resins, micronized metals and other fillings. Solidified KemisKIT is resistant to petroleum products, coolants, water and cold electrolyte solutions. It is not, however, resistant to ketones and hot electrolyte solutions.

Temperature range: –40°C to +200°C

TYPICAL APPLICATION

For cast repairs (mechanical damage, casting errors), filling technological and erroneous bores, repairs of cracks on pipelines, valves, engine blocks and casings, sealing of reservoirs, silos and bathtubs. Quick and fireproof repairs (substitute for solder and welding), protected against erosion and corrosion.

Solving other problems in industrial maintenance and hobby:

- castings repairment (nonstructural defects in castings; mechanical damages, fault due to castings);
- filling of technological or faulty bores; filling cavitated areas;
- repairment of cracks on linepipes, valves, motorblocks;
- housing, sealing of reservoires, siloses, tubs;
- quick and fireproof repair (substitute for welding or soldering);
- erosian or corrosian protection;
- making jigs/fixtures;
- realing tanks, vessels, and valves;
- resurfacing worn air seals.

TEHNICAL INFORMATION	
Weight mixing ratio	7A:1B
Volume mixing ratio	4A: 1B
Shear strength N/mm²	17-18
Working Life (pot life)/20°C	30min
Cure time	24h/20°C, 80 min/80°C
Bond temperature resistance/ °C	-40 °C ≤ +200°C
Viscosity mixture	thixotropic paste
Appearance/color	alluminium
Hardness (Shore D)*	90

** Values at 20°C and 50% r.F.*

KEY BENEFITS SUMMARY

- Harden practically won't sag or shrink.
- Rebuilds worn parts fast, reduces downtime.
- High steel content – cure to a metal-like finish.
- Excellent adhesion – forms a perma- nent bond.
- After hardening/solified can be maschined mechanically and is therefore most suitable for various repairs and applications.
- Fillers determine the technical properties.

This product is not recommended for use in pure oxygen nad/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

DIRECTIONS FOR USE

The surface needs to be thoroughly cleaned, appropriately coarse (preferably sandblasted) and degreased (KemisKOL degreaser). Apply both components in the prescribed ratio into a separate container or palette, but be careful not to enter component A into the original packaging of component B and vice versa. Total quantity of component B is equivalent to the total quantity of component A. Mix both components until the mixture becomes homogeneous.
If KemisKIT is applied in one application, the thickness should be 3-4 mm. With thicker coatings on vertical surfaces try to avoid spilling by applying in several layers. Apply the upper layer before the bottom layer is completely solidified (not later than after 2 hours, depending on the temperature). The process of solidification can be accelerated by heating in the oven or with a blow-dryer, but never with open fire! Reinforcement of KemisKIT with mesh glass fabric or with metallic mesh is recommended. A completely solidified KemisKIT can be processed if necessary (grinding, drilling, turning, lacquering).

PACKAGING

- 50g (30ml)
- 500g (300ml)

TECHNICAL TIPS FOR WORKING WITH EPOXIES

- Working time and cure time depends on temperature and mass: The higher the temperature, the faster the cure. The larger the mass of material, the faster the cure.
- To speed the cure of epoxies at low temperatures: Store epoxy at room temperature. Pre-heat repair surface until warm to the touch.
- To slow the cure of epoxies at high temperatures: Mix epoxy in small masses to prevent rapid curing. Cool resin/hardener components.

STORAGE & SHELF LIFE

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 15°C to 25°C unless otherwise labelled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact manufacturer.
Shelf life: 24 months when stored as recommended in original, unopened containers.

HEALTH & SAFETY PRECAUTIONS

WARNING: Due to possible irritation effect try to avoid direct contact with skin! Wash your hands with water and soap after work! For safe handling information consult the MSDS (Material Safety Data Sheet).

LABEL ELEMENTS



The product data is based on the results of years of experience, as well as research and testing in our own laboratory and by authorized institutions at home and abroad. Testing has been carried out applying standard laboratory methods, therefore the data and instructions serve merely as indicators for the user. We, however, cannot directly influence the choice and the manner of utilization of our products, therefore we do not accept any liability for the quality of splines. Our experts are always available for help and counselling.

Since 1983 Kemisplus, Slovene company has stood for the highest quality – even under the most extreme conditions. Kemisplus develops, produces and sells special adhesives and sealants, technical aerosols and high-performance assembly pastes and greases for all areas from production, repair and maintenance to servicing.

For additional information please consult
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