

MATERIAL SAFETY DATA SHEET
(acc. directive 91/155 EWG)

**1. IDENTIFICATION OF THE CHEMICAL AND OF THE MANUFACTURER,
IMPORTER OF OTHER UNDERTAKING**

Product: EDM-Wire
Cu-Zn-Alloy or Cu-Zn-Alloy (Zn-Coated, Zn-oxidized) or Cu-Zn-Alloy (Coated CuZn50)
or Cu-Zn-Alloy (Coated Silver)

Trade name: COBRA CUT , COBRA CUT A, SWA, COBRA CUT E, COBRA CUT D, COBRA CUT S,
BRONCO CUT HX, MEGACUT T, MEGACUT A, MEGACUT D, MEGACUT HS,
BERCOCUT, MEGACUT, TOPAS H + S, BERCO CUT 900, BERCO CUT SPEZIAL

Identification of the manufacturer

Berkenhoff GmbH
Birkenhoffstraße 14
D-35452 Heuchelheim
Phone: + 641 601-0
Telefax: + 641 601-222
Further Information: + 641 601 -143 or -179 or -115
Emergency telephone number: + 641 601-0

2. COMPOSITION AND INFORMATION ON INGREDIENTS

Description, Information of ingredients (single substance)

| | CAS-No. | EG-No. |
|-----|-----------|-----------|
| Cu: | 7440-50-8 | 231-159-6 |
| Zn: | 7440-66-6 | 231-175-3 |
| Ag: | 7440-22-4 | 231-131-3 |

3. HAZARDS IDENTIFICATION

4. FIRST AID MEASURES

General instructions:

No special measures necessary.

After inhalation:

Fresh air supply, if irritation persists, obtain medical attention.

After skin contact:

No adverse effects due to skin contact are expected.

After eyes contact:

Rinse immediately with plenty of water until irritation subsides.

After swallow:

If irritation persists, obtain medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

The material is not combustible. If packaging material, means of transportation or storeroom catch fire the extinguishing media is to be adapted to the surroundings. Suitable are CO₂, dry chemical powder and jet of water. Big fire is to be fought with jet of water or alcoholic resistant foam.

Extinguishing media which must not be used for safety reasons:

No restriction.

Special danger through material, its burning products or arising gas:

Special fire-fighting safeguard clause:

Not necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Not necessary.

Environmental protection procedure:

No special procedure necessary.

Methods for cleaning up:

Mechanical pick-up.

Other instructions:

No dangerous substances laid off.

7. HANDLING AND STORAGE

Handling/Instructions for safety dealing:

No special procedures necessary.

Fire and explosion hazards:

No special procedures necessary, according to Point 5.

Storage/Requirements for storerooms and container:

No special requirements.

Instructions for combined storage:

None.

Further statements for storage conditions:

None.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Additional notice for technical equipment

Ingredient with threshold value concerning work place to supervise

| CAS-No. | Substance designation | Method | Value | Unit |
|-----------|-----------------------|--------|---------|-------------------|
| 7440-50-8 | copper | | 1 E 4 | mg/m ³ |
| 7440-50-8 | copper - fume | | 0,1 A 4 | mg/m ³ |
| 7440-66-6 | zinc oxide - fume | | 5 A 4 | mg/m ³ |
| 7440-22-4 | silver | | 0,1 E 4 | mg/m ³ |

Additional remarks:

Base was the valid list of the date of issue.

Personal protective equipment

General instructions for protection and hygiene

Please note the usual precautions for the handling with chemicals.

| | |
|-------------------------|----------------|
| Respiratory protection: | Not necessary. |
| Hand protection: | Not necessary. |
| Eye protection: | Not necessary. |
| Skin protection: | Not necessary. |

During operation with this product for welding or brazing please note the corresponding industrial safety regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state, color and odour

Lump material (wire), brassy, no inherent odour.

9.3 Information on changes in the physical state

| Alloy | Melting point/-range °C | Density at 20°C g/cm ³ | Color |
|-------------------|-------------------------|-----------------------------------|---------------|
| COBRA CUT | 902 - 920 | 8,4 | light grey |
| COBRA CUT A | 902 - 920 | 8,4 | bright silver |
| COBRA CUT D | 970 - 1010 | 8,7 | yellow-brown |
| COBRA CUT E | 902 - 920 | 8,4 | silver |
| COBRA CUT S | 970 - 1010 | 8,7 | yellow-brown |
| BRONCO CUT HX | 910 - 965 | 8,5 | brown |
| MEGACUT T | 902 - 920 | 8,4 | light grey |
| MEGACUT A | 902 - 920 | 8,4 | light silver |
| MEGACUT D | 970 - 1010 | 8,7 | yellow brown |
| MEGACUT HS | 970 - 1010 | 8,7 | yellow brown |
| BERCOCUT | 902 - 920 | 8,4 | gold |
| MEGACUT | 902 - 920 | 8,4 | gold |
| TOPAS H+S | 910 | 8,4 | yellow-brass |
| BERCO CUT 900 | 910 | 8,4 | gold |
| BERCO CUT SPEZIAL | 910 | 8,4 | gold |

Flammability (solid/gas): The material is not flammable.

Solubility in/miscibility

with water (at 20 °C): negligible g/l

Explosion hazard: No danger of explosion.

10. STABILITY AND REACTIVITY

Thermal decomposition/Conditions to avoid

No decomposition at application as directed.

Substances to avoid:

Incompatibility with Hg, NH₃, chloric gas and various acids.

Hazardous decomposition products:

No hazardous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data:

Special symptom at animal experiment: None

Primary irritation effect: Skin: No irritation effect.
Eye: No irritation effect.

Sensitization: None.

Additional toxicity information:

Appropriate dealing with and use as directed, the product is not unhealthy, according to our experience and the existing information.

No duty to mark the product, according to the EG-lists at final edition.

12. ECOLOGICAL INFORMATION

Grade of water-danger: nwg (VwVwS)
In general no water-danger.

13. DISPOSAL CONSIDERATIONS

Recommendation for the Product:

Collect residues and give back to the producer or scarp metal dealer. Not in household waste.

Recommendation for Waste package:

Disposal according to official regulations.

14. TRANSPORT INFORMATION

Land transport ADR/RID and GGVS/GGVE (international and domestic):

ADR/RID - GGVS/E-class:

UN-Number:

No hazardous materials in sense of transport regulations.

Sea transport IMDG/GGV Sea

UN-Number:

No hazardous materials in sense of transport regulations.

Air transport ICAO-Ti and IATA-DGR:

No hazardous materials in sense of transport regulations.

15. REGULATORY INFORMATION

Designation according to EWG-Rules

No duty to mark the product, according to EG-lists or others literary sources, known to us.

Please note the usual precautions for the handling with chemicals.

No duty to mark the product, according to EG-Rule GefStoffV.

National regulations:

Technical Regulation Air:

Please take note of - Point 3.1.4, dust like inorganic substances - of the TA-air

Grade of Water-Danger: nwg (VwVwS)

In general no water-danger.

16. OTHER INFORMATION

This information and recommendations contained herein are, to the best of our knowledge and belief, accurate and reliable as of the date issued, but are offered with our guarantee or warranty. They relate to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Conditions of use of the material are under the control of the user; therefore, it is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.